John Anderson

A GRAMMAR OF ENGLISH

THE CONSEQUENCES OF A SUBSTANCE-BASED VIEW OF LANGUAGE

VOLUME 2

John M. Anderson
A Grammar of English
Volume 2: Structures

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MOUTON

In doing this book my intention was to interest people in my vision of things which is indissolubly allied to the style in which it is expressed. ... I have attended to it conscientiously with the hope of being entertaining or at least not insufferably boring to my readers. I cannot sufficiently insist upon the truth, that when I sit down to write my intentions are always blameless, however deplorable the ultimate effect of the act may turn out to be.

Joseph Conrad,
preliminary note to *Chance*, 1920

to without whom this work would be FECkless

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Preface

This is the second volume of my 'A Grammar of English', a grammar based on the substantiveness of the categories and relations of the grammars of languages (in the wide inclusive sense), as well as acknowledging the existence of structural analogies between phonological and syntactic representations. Book 1, entitled 'Categories', attempts, in Part I of the work, 'Parts of Speech', to elucidate the substance-based categories appropriate to phonology and syntax, with a preliminary look at the configurational and sequential relations they enter into, while Part II of that Book, 'Modes of Signification', looks at the building of complex lexical structures out of syntactic categories and the synchronic consequences of 'derivation' for syntactic behaviour and semantic interpretation, as well as lexical structures whose complexity is not expounded overtly.

The first book also offers a detailed account of the background to the grammar and its relation to earlier as well as more recent work, and describes the role of the 'Commentary' that accompanies each chapter in referring to relevant previous work and offering more detailed exemplification of phenomena that are related to the discussion in the text. This mechanism is intended to allow the main text to concentrate on the evolving presentation of what are seen as the major aspects of the grammar of English. Another piece of apparatus is the listing initially in each chapter of its contents, which lists also appear as a guide to the contents that follows this preface.

I shall not replicate here other aspects of the substance of the Preface to Book 1, except to acknowledge once again my appreciation of the contribution of my editors, Birgit Sievert and Barbara Karlson, and of discussion with and comments from Fran Colman and Roger Böhm, both of whose scholarship is also an inspiration in itself. It remains, however, to describe a little of the contents and aims of this second book, which focuses on 'Structures' in all parts of the grammar.

Part III initiates this book, with a description of the structures that we can associate with the lexicon and the syntactic categories and structures that may be involved. Part II in Book 1 described the complex structures present or created in the lexicon via the subjunction of syntactic categories; these structures participate in the lexico-syntactic interface and some of the valencies of the categories in lexical structures may be satisfied in the syntax. The minimal lexical item is a word, thus the minimal sign. The exponents or signifiers of complex lexico-syntactic structure may consist of smaller units, called formatives, whose type may be read off from their place in the bracketing that constitutes morphological structure: we can differentiate crucially bases and affixes. Exponence of a word

may involve conversion rather than overt presence of affixation and other signifiers such as phonological alternations or the placement of phonological accents.

Different word forms, rather than different simple or complex words, are associated with inflectional morphology: the former are major-class-preserving; they expound minor categories of the major categories that differentiate word classes, parts of speech. The formatives or other exponents of these minor categories are set off from the exponence of word classes: such exponents in English are typically final in the word form, though we also encounter alternations different from those differentiating parts of speech. Morphological structure is almost entirely a bracketing.

This morphological bracketing encloses phonological representations, representations which may differ from the corresponding lexical phonological representation with which they are linked at the morphology-phonology interface. The lexicon also contains compound words, prototypically binary, and the regularities to which they adhere unless they are obscured in usage. The lexicon may also store extended signs: phrases, syntactic structures that are idiomatic or simply very common. Finally, we recognize that these signs are often figuratively-based; and Part III concludes with a classification of figures in terms of their effect(s) on linguistic structure, and with an exploration of some of the evidence for iconicity in linguistic structures.

Syntax is the concern of Part IV, which is constructed, once and for all, at the lexicon-syntax interface, and the construction is also sensitive to context. 'Once and for all' is intended to convey that the syntactic structure based on the selection of items from the lexicon is invariant once the re-representational additions are completed, in accord with valencies and the context. There is no mutation of this structure. This Part is divided into three 'Fits', which are linked by concern with placement, variable and covert, and the role of co-indexing as well as the expression of scope.

The first Fit is concerned with finite structures, both in subordinate as well as in main clauses, and the second with non-finites, thus continuing the focusing on the central relational role of verbs, finite and non-finite. And the book concludes in Fit III, entitled 'Placement, Alt-placement, and Sub-Placement', with, to begin with, a more explicit account of nominal structure (determiner-headed phrases) than was provided in Part I; and it thus complements the first two Fits, with their verbal focuses. What follows in Fit III is a sketch of what a full representation of the linguistic structure ready for implementation as utterance might look like, from mood (speech-act) structure to pre-utterance phonology (pre-implementation). This crucially includes a brief account of the accommo-

dation of the pre-utterance phonology that is fed by interfaces with syntax and lexical phonology. Perhaps appropriately as a conclusion, this area is not well understood (by me, at least). We are, however, at the end of our journey through the landscape of a substance-based grammar, without plunging into any more obscurity.

<div align="right">

John M. Anderson
Methoni Messinias (Greece), February 2021

</div>

Part III: **Lexicon**

Prelude to Part III: Formatives, words, compounds, and phrases

phonological structure and morphology – derived functional categories – derived contentives – morphosyntax and morphophonology – inflectional morphology – modes of signifying, and of troping – lexical structure and syntactic structure

Book 1 of this work offered an account of the syntactic and phonological categories that are essential to an account of English Grammar and its lexicon. In this Book we are concerned in Part IV with the structures that are projected from the content poles of the signs stored or created in the lexicon, the syntax. In the present Part we are concerned with the structures that determine the shape of lexical phonology: the morphological structure that expounds lexicosyntactic structures, and lexical phonological structure proper, as the output to the morphophonological interface. The two Parts of this book thus move away from the concerns of Part II in different directions, into syntax in Part IV and into exponence, morphological and phonological, in Part III.

Part II, in Book 1 on linguistic categories in general, focused on the syntactic categories appealed to in the lexicon and their significations, and in particular the changes in mode of signifying associated with derivation of one category from another, whether signalled morphologically or not. Recall that 'derivation' here involves addition of structure, not mutation. This followed on from the survey of categories, phonological and syntactic, and their relationship to parts of speech. Our concern was not with the morphological structures that expound derivations, the **structures of derivational morphology**. We have thus had even less concern with the resources of **inflectional morphology**, which signals the presence of secondary lexicosyntactic categories. However, the syntactic behaviour of these categories has been introduced in Book 1, and their morphological status will also be an important part of Part III.

However, exponence, both morphological and phonological, is crucially embodied in phonological structure, including suprasegmentals. So I want to recall and expand on the view of phonological structure arrived at in Part I, before we look at its role in morphological structure.

In Part I we established the set of minimal sequential units that are contrastive in one position, at least, and I offered internal structures for such units, firstly, in a notation where the minor phonological features overlap with the primary, so we have both {V} and {{v}} as members of the set of features, where this overlap is based on obvious perceptual similarity. However, I also offered a notation based on the recurrence of 'C' and 'V' throughout, at different levels of delicacy, again

intending to reflect perceptual similarities. Thus, we might represent the vowel in *bee* as {V{c{c}}, where the first {c} contrasts with the {v} of the low vowel and the second with the {{v}} of the high back rounded. In what follows here, I shall maintain the first, compromise notation, as easier for humans to work with, though it fails to capture generalizations embedded in the uncompromising CV notation (which would be easy to digitalize for bots).

Chapter 12 offered a table of the maximal system of contrasts among both vowels and consonants, i.e. those contrasts that are motivated in at least one situation, or part of spech. I cite these here again, for reference.

Table VI: Classification of English Consonants

		LABIAL	CORONAL	TONGUE BODY	MAJOR
PLOSIVE		{{u}}: [p]	{ }: [t]	{u}: [k]	{C}
	voiced	{v{u}}: [b]	{v}: [d]	{u,v}}: [g]	{C}
FRICATIVE		{{u}}: [f]	{ }: [s]	{u}: [ʃ]	{C;V}
	mellow		{c}: [θ]		{C;V}
	voiced	{v{u}}: [v]	{v{v}}: [z]	{u{v}}: [ʒ]	{C;V}
	voiced mellow		{v,c}: [ð]		{C;V}
AFFRICATE			{ }: [tʃ]		{{ }{ }}
	voiced		{v}: [dʒ]		{{ }{ }}
SONOB		{{u}}: [mp]	{ }: [ld/nd/nt/ns]	{u}: [ŋk]	{{V}{ }}
NASAL		{c{u}}: [m]	{c}: [n]	{c.u}: [ŋ]	{V;C}
LATERAL			{ }: [l]		{V;C}
RHOTIC			{v}: [r]		{V;C}
SEMI-VOWELS		{u}\{V}: [w]		{i}\{ V}: [j]	{V}

where SONOB CORONAL – coronal sonorant + obstruent – collapses various contrasting homorganic possibilities

Table VII: Classification of Vowels of Accented Syllables

TRANSITIVE {V/}
{i} [ɪ] *pit*   {u} [ʊ] *put*
   {i,v} [ɛ] *pet*   { } [ʌ] *putt*   {u,v} [ɒ] *pot*
                          {v} [a] *pat*

INTRANSITIVE {V}
{i} [i] *pea*   {u} [u] *pooh*
   {i,v} [e] *pay*   {u;v} [o] *po*
                          {v;u} [ɔ] *paw*
                          {v} [ɑ] *pa*

COMPLEX INTRANSITIVE {V{x}{y}}
{v}{i} [aɪ] *buy*   {u,v}{i} [ɔɪ] *boy*   {v}{u} [aʊ] *bough*

But these view the picture of contrasts through a very long lens. We need to recognize that in the first place contrast is a property of the subsystems operating at the different phonological parts of speech also distinguished in Chapter 12.

Each syllable displays some part of the linear pattern in (I.147a), where *N*(ucleus) is obligatory and the *P*(ost-)*O*(nset) presupposes an *O*(nset) and equally the *Pr*(e-)*C*(oda) presupposes a Coda; *S*(pecifier) has a special distribution, as investigated in Part I; and the exclamation-marked *!Pr*(e-)*N!*(ucleus) is to allow for words like *spew* – which I shall refrain from pursuing here.

(I.147) a. *PART OF SPEECH*

S	O	PO	!PrN!	N	PrC	C	S
{\}	{C>}	{V>}	{V\{V}}	{V}	C	{C>}	{\}

{<V,C>}

　　　b.　　　　　　{O}
　　　　　　　　　　　|
　　　　{PO} ⇔ {PO}

Each part of speech is associated with a phonological category or cross-class, except for the specifier whose content is merely a valency, filled out as {\C} in initial position. This specifies adjunction to the minimal plosives, those I have labelled [π, τ, κ], i.e. the neutralized set. The parts of speech are not in linear contrast, since linearity is determined by the extended sonority hierarchy, but each part of speech displays associative contrast, as with the neutralized plosives of the post-specifier onset. In the onset obstruents precede sonorants and semi-vowels. If an obstruent is lacking but there is a prenucleus sonorant or semi-vowel, the latter is converted to an onset, as indicated in (I.147b); the same is true in the coda.

As well as the neutralization associated with the specifier, there are other neutralizations affecting adjacent systems. I illustrate these from the pre-nuclear area again; I leave the more exciting happenings in the coda to the interested reader (if any there be) who can renew familiarity with chapters 11–13 in Part I. One instance from the onset was illustrated in (I.146).

(I.146) *SPECIFIER/ONSET*　　*ONSET*　　　　　*POST ONSET*

　　　　#s-　　　　　　　<π τ κ>　　　　j w <r> l
　　　　　　　　　　　　　　f (θ) (v) ≈ m n
　　　　#ʃ-　　　　　　　　　　　　　　(w) r (l) (m) (n) (τ)

The < >-bracketed symbols indicate a combination that is restricted to post-specifier position and the round brackets to post-onsets that are associated with

obvious loanwords. [ʃ] rejects most post-onsets, so that only the unmarked fricative [s] can occur in that context, except that the palatal can precede the [r] that the unmarked fricative cannot combine with. So can the [f] and [θ] fricatives, and the former can also precede [l]. [s] can also precede some fricatives, though typically loans. Against this background of the complexity and specifically poly-systemicity of phonological structure, let us now take up the exponence of lexico-syntactic structure in morphology, beginning with inflectional morphology, most in need of some attention.

The secondary features that are the terms, or alternative values, of minor categories are **elective**, such as the features of tense, and/or are **inherent** to each of the members of a subset of the members of a part of speech, as with those of gender. Inherent features may also participate in lexical derivation, so that, for instance, traditionally the agent noun based on *act* may, by the non-ideologically-inhibited speaker, be assigned alternative genders, in *actor* and *actress*. Both types of inflection can participate in **agreement**, which will also require our attention, as a manifestation of structural relations.

Inflections thus typically reflect the presence of secondary syntactic categories such as tense and number: the inflections signal alternative features belonging to these categories, e.g. {past} or {pl(ural)}. But, as we have seen (Chapters 14 & 15), inflections can also be a contingent signal of derivation. The absolute-tense-marking on the verb *arrived* marks conversion of {P;N} to {P}, as illustrated by (I.170b) from Chapter 15, in contrast with (I.170a), where the non-finite verb bears an inherent relative tense.

(I.170) a. {P{pres}/{P;N{past}}{loc{src}/{N{int,e}}}}

{ {abs}}　　　{ {loc{src}}}　　{P;N{past}/{src{abs}}}

{ {src{abs}}}　　{N{int,e}}

{N}

Dolly　　　　*hasn't*　　　　*arrived*

b. {P{past}/{P;N}{loc/{N{int,e}}}}

{ {abs}}　　{P;N/{src{abs}}} .... { {loc}}

{ {src{abs}}}　　　　　　　　{N{int,e}}

{N}

Dolly　　　*arrived*
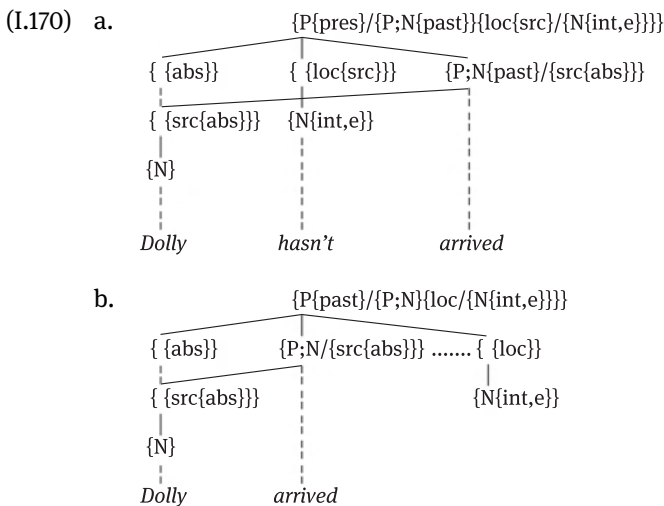
However, as we shall see, person-number on the verb is a manifestation of a functor path including a dependent locative {N} that is subjoined to – incorporated in – {P} (recall again Chapter 14 on derivation vs. incorporation). The latter is also illustrated by the presence of the existential locative in both (I.170a) and (I.170b), associated with the declared truth (or otherwise) of the sentence. The number marking on the noun *droves* or *drives* is again associated with conversion of {N;P} to {N}. Some such derivations to a functional category, however, are in themselves marked morphologically, as with the comparative *shorter*, based on the source *short*, or with morphological case.

The exploration of these familiar contentive/functional relationships, however, are focused on in Ch. 29, and at this point they provide merely a prelude to looking at the conversions and morphological expressions that manifest derivation of a contentive lexical item from another. Such derivations often concern a change of primary category (e.g. *shortness* based on source *short*), but possibly just a difference in inherent secondary category (for instance, from *short* to *shortish*). Thus we shall be looking in a general way at the morphological structures that expound lexicosyntactic derivations: i.e. the **derivational morphosyntax** of English. As anticipated, we can complement the morphologically-marked derivations just mentioned with **conversions** such as *cook* verb vs. noun (difference in word class) and *head* (of animate body) vs. *head* (of school).

The former of these involves metonymy, the latter metaphor, two of the commonest tropes that lexical derivation invokes. And characterizing the **figurative** basis of many such derivations, whether morphologically expressed or not, is another major concern of Part III: from one point of view, figures are a mode of exponence. We should not think of figures as a feature only of specialized registers, despite their prominence in literary works, for instance. Indeed, metonymic figurativeness in language in general is much more varied than standard literary types, such as Wharton's 'He plunged across the Promenade, leaving Selden to a meditative cigar' (*The House of Mirth*, p. 201, Library of America edn.).

Lexicosyntactic structure was explored in Chapters 19–26; and the morphosyntactic interface will occupy us in Chapter 27 and partly in Chapter 28, which is mainly concerned with morphology and its interface with phonology, i.e. morphophonology, and in general with the distinctiveness of morphological structure. I shall propose that morphology lacks both categories of its own and dependency relations between morphological units.

It is only later in Part III that we shall come to focus again on derivation of functional from contentive categories and its linguistic role compared with contentive-to-contentive derivations. However, what is common to all of these derivational relations is central to the expression of what was the major topic of Part II, as embodied in its title – 'Modes of Signifying'. The basic idea was that the different

parts of speech provide us with different ways of presenting the phenomena that are the concern of any discourse; this follows from the notional characterization of the syntactic categories invoked. Nouns present phenomena perceived as entities, verbs as scenes; these are different modes of signifying. Derivation provides means of presenting phenomena usually perceived as one kind of phenomenon, i.e. as involving one mode of signifying, as instead (part of) another kind. Part III is concerned with how the expression of this is achieved, including its interaction with **modes of troping**; and it also considers the consequences for syntactic structure, since the bases of derivations can still exercise syntactic demands.

We shall also again encounter items that are inherently complex in their lexical categorization. It is not just that there are nouns, for instance, that are derived from verbs morphologically or by conversion; there are also nouns that do not express any base with a source in a verb, but which are shown by their interpretation and their syntax to be complex in this way, to be verb-based.

Consideration of morphologically-expressed recategorization in Part II necessarily also introduced us to some of the common morphological exponents – particularly affixes and alternations. But it is only in Part III that we shall scrutinize more closely how derivational morphology expresses intercategorial derivational relations between syntactic categories. The latter is the concern of what I have distinguished as morphosyntax. But morphological expression, now taken up as a major focus in Part III, includes those alternations in expression of related items that form a part of what is manifested by derivational morphology, and the conditions under which they occur: such alternations I illustrated above with *kindness* vs. *kind*, *feed* vs. *food*, and *depth* vs. *deep*. This is pursued in Chapters 27–28, which also illustrate the role of accent-placement in derivation, as with noun vs. verb *permit*.

But also to be considered are alternations associated with the 'collision' of base and affix or affix and affix, which can occur along with the former, internal type of alternation that occurs in expression of morphosyntax, as in *food/feed*. In such as *veracious* vs. *veracity* there is a derivational alternation in the latter vowel of the base (if we take that to be *verac-*), but also the collision of base and post-posed affix – suffix – in the former form, results in what I refer to as **frotting**, manifested as the [ʃ] that masks the border between base and affix. Compare *felon/felony/felonious*, with no frotting, but base-internal alternation. With *veracious*/*veracity* we also have lexical morphosyntactic alternation between the second-syllable vowels, and in addition boundary alternation [ʃ] and [s(ɪ)], frotting. Moreover, the pair *veracious* and *veracity* both bear suffixes but also illustrate a base that that does not have a synchronic source lexical item.

Characterization of such peripheral frotting between the component **formatives** – i.e. affixes, bases, and the stems of inflectional morphology – of derived or inflected forms is the concern of the redundancies of another interface, the

morphophonology, which relates morphological representations, bracketed phonological sequences, to purely phonological structures that, for instance, manifest the results of frotting. The relationship between morphophonology and phonology proper has been rather controversial ever since such a distinction was envisaged. Here I take morphology and phonology to be levels of representation the differences between which are mediated at the interface, morphophonology.

Figure V presents how the morphology operates as an interplane between two interfaces that combines phonological categories with a bracketing determined by the lexicosyntactic representation.

REPRESENTATION   INTERFACE

lexicosyntactic categorization

morphosyntax

morphological representation

morphophonology

lexicophonological representation
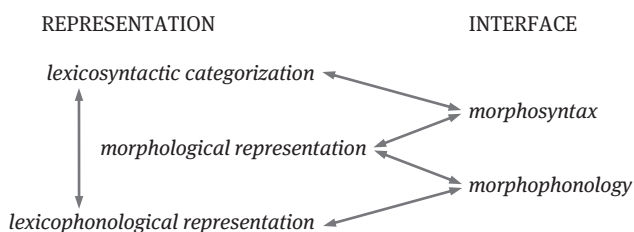
Figure V: The Place of Morphology

The direct link between lexicosyntactic categorization and lexicophonological structure on the left allows for items that lack a morphological structure. Not shown by the figure is that lexicosyntactic representations feed syntax via the lexicosyntactic interface and lexicophonological representations feed pre-utterance phonology via an interface that is also sensitive to syntax (in determining intonation, in particular).

As indicated, we return to inflectional morphology in Chapter 29 and to the place of its exponents in morphological structure, which is followed by the characterization of structures in Chapters 30–31 and lexical phrases that are not compounds in Ch. 32. Many such lexicalized phrases exemplify application of localism and other figurativeness, and some of these, and other constructions, involve lexical periphrases like *have a shower*. This Part, devoted to structures of exponence, concludes with two chapters devoted to structures of varying dimensions that are figurative or even iconic, and Ch. 34 attempts a classification of figurative types based on the aspects of linguistic structure that they enhance and the consequences thereof. In being manifested in structures of varying composition and size, these figurative explorations form a very suitable conclusion to this Part, devoted to lexical structures composed of formatives, words, compounds, and phrases, and it also combines with the preceding Parts in anticipating the syntactic structures that will concern us in Part IV.

Chapter 27
Derivational Morphology and Morphosyntax

modes of lexical expression – word-formation and derivational morphology – and diachrony – alternations – formatives – roots, bases and sources, and affixes – suffixes and prefixes – morphosyntax and morphology – morphological structure and exponential relations – transparency vs. opacity – productivity – blocking – the morphologicon – morphology and alternations – morphology, phonology, and word-accent – syllable weight – affix integration

In Part II morphological elements were used merely as a way of roughly identifying instances of the different types of complex syntactico-lexical categorial structure that the morphology expounds. This last word is important for understanding the nature of morphological structure, as conceived of here. That there is an exponence relation between the notional content of a lexical item, especially the categorial structures we have been looking at, and morphological structure means that morphology introduces a new set of basic elements and an associated new structure. It may be helpful to recall Figure V from the end of the Prelude, where there is indicated the place of morphology in the lexicon, such that morphology is an interplane sandwiched between two interfaces.

The new structuring introduced in the interplane are morphological units that enclose parts of the phonological pole of a minimal sign; these units are **formatives**. The phonological poles may show the results of frotting, which is a diachronic phenomenon; thus synchronically the boundary between base and suffix in *veracious* is obscured in the phonological representation proper. We are now embarking on an exploration of the lexicon-internal interfaces and the nature of morphological representation, rather than the derivation, or construction of complex lexicosyntactic categorizations, not all of which feed morphology.

Simple examples of morphological structure (and their sources) are given in (1a), with the suffix contained in the inner brackets, where I take the unmarked value of the vowel of the second formative to be 'reduced'.

(1) a. [kaɪnd[nəs]], [dʒɛntəl[nəs]] – [kaɪnd], [dʒɛntəl]

b.
$$
\begin{array}{c}
\{N;P\} \\
| \\
\{P:N\}\backslash\{N;P\} \\
\updownarrow \\
[\text{nəs}] \ \Rightarrow \quad [[\text{nəs}]]
\end{array}
$$

The suffix is an exponent of derived noun status: (1b) expresses how to use this suffix as a marker of this derivative status.

The morphophonological units in (165a) are represented, as a convenience also used elsewhere, in an abbreviated ('transcriptional') form which has no systematic status; morphophonological, as well as phonological, units are componential, as in syntax. The sequence of units is structured into a sequence of morphological units, complex in the derived forms on the left of (1a). These units, the formatives, are unlabelled, and it is unnecessary to talk in terms of morphological categories here: we simply have contrastive phonological units grouped by brackets into more or less inclusive (unlabelled) morphological units.

The most inclusive formative beginning with '[' and ending with ']' – e.g. '[kaɪnd[...]]' in [kaɪnd[nəs]] – expounds the basic category in the lexicosyntactic representation; its phonologically expressed content ignores included formatives, which are **affixes**. Prototypically in native English derived forms, it corresponds in phonological expression to an independent word form, which is usually the historical source of this **base**, and/or conceived of as such. And I shall use this term, **source**, more precisely **lexical source**, for the perceived synchronic relationship it bears to a base. Since I am not concerned here with history, or mutation, I continue to trust that the use of 'source', as indicating a potential synchronic relation, will not be confusing.

The other formative in the derived forms in (164), however, is associated with a unit, marked by '[nəs]', the includedness of whose bracketing signals an affix, here specifically a **suffix**, since it follows the phonological exponence of the base. And the base in the derived forms in (1) is a **root**, morphologically indivisible. In derivatives of derivatives this is not the case. We may refer informally here to a distinction between base and affix, and root (indivisible base), but these terms have no systematic status: the paired-braces notation itself expresses the status of each formative. Notionally, we might talk here of base as head and affix as dependent, as with primary and secondary category features. The brace notation in {N{def}} does represent a dependency relation. Moreover, the base is normally the only formative that can occur independently. But there is a crucial difference: dependency in {N{def}} relates syntactic categories, whereas morphological brackets enclose phonologically expressed exponents, not syntactic categories. And it is unnecessary to invoke anything more than the inclusiveness of the bracketing in the morphological structure in formulations of morphophonology, or morphosyntax. In formations involving native suffixes, as in (165), the base typically retains the word-accent placement of the source. This is a marker of base status in such forms.

It has been argued by various scholars that [nəs], on the other hand, is the head of derivatives like *goodness* because it 'determines' the category of the word. But [nəs] is not itself a word, it does not belong to a word class, and it is thus not eligible for syntactic headhood; and motivation for morphological headhood is lacking. The situation, instead, is as formulated in (1b) above. [nəs] signals deriva-

tion of a noun; it is a subsyntactic sign of a de-adjectival noun. As I've suggested, exponence involves transition to a new set of basic elements, representations of a different substance, here phonological elements, structured morphologically by an inclusivity hierarchy of square brackets. (1b) expresses a generalization about the role of *-ness*. The relationship on the right of (1b) is stored in the case of established formations, but the generalization is available for the development of fresh derived nominals. Morphological 'headhood' doesn't have an obvious role in the expression of morphological structure, however.

The same retention of the placement of the accent of the source as we observed with *kindness* seems to be true of formations with the non-native suffix in (2a), where the accent on the second syllable in the underived forms is maintained in the derivatives.

(2) a   [dɪvɪn[ɪtɪ]], [səɾɛn[ɪtɪ]], [prɒfan[ɪtɪ]] – [dɪvaɪn], [səɾin], [prɒfeɪn]
     b   [sɪvɪl[ɪtɪ]], [[mɒd[al]][ɪtɪ]], [salɪn[ɪtɪ]] – [sɪvɪl], [mod[əl]], [selaɪn]

But in (2b), with initial accent in the independent word, there is no such correspondence, and what (2) shows overall is that in these cases the accent in the derived form is always on the base syllable immediately preceding the suffix. The assignment of accent here is part of the morphosyntactic interface whose formulation we attempt later.

The notation of (2) differentiates inclusive bases and included affixes, with suffixes appearing within at least '[ ]]', depending on how many suffixes there are. The sequence of formatives in (2a) is determined by the notation assigned by redundancies like (1b). But there can be further suffixes added to derived, suffix-bearing bases, illustrated by *modality* in (2b). The sequence of suffixes is determined by the hierarchy of notional categories that is expounded. The higher the category in the lexicosyntactic structures we have been looking at, the larger the base to the affix that expounds it. So the fundamental morphological representation lacks not just categories but also independent sequencing, except for those built into the paired-brackets notation, where, as well as base, '[(...)X(...)]' and suffix, '[[Y]]', we also have prefixes, '[[Z]'. Infixes would be '[X-[W]-X]', where the base is discontinuous. This limitation in the capacity to determine sequence further illustrates the primitiveness of the structures of the interplane of morphology. Even dependency has a minimal role, if any. Crucial are morphosyntactically determined sequence and inclusivity.

There are also **vowel-alternations** between the pairs in (2). And in other cases, particularly native forms, the derivative relation is indicated by vowel-alternation alone, as with the verb *feed*, the source of which is the noun *food*. In other forms, derivative status is signalled solely by accent-shift, alternation of accent as with

permit the noun vs. *permit* the verb. There may be only one undifferentiated formative in **conversions**, as well as in underived words. Such is *man* the verb, whose source is the noun. Status as both a form derived by alternation only or as a converted form is indicated by an additional pair of brackets around the base, as with the verbs [[man]], [[fid]]. But any kind of alternating form, including where the alternation is not the only exponent of derivation, is also marked as such, as formulated below. What we have briefly surveyed are alternative morphosyntactic **modes of expression**. Strictly, though, in conversions the source and the derivee is not signalled morphologically.

What is not shown in (2b) is the possible further complexity of alternation in base/source relation in [sal[in]] ≈ [sel[aɪn]], where the former is the complex base of the noun form [[sal[ɪn]][ɪtɪ]]. The two vowel alternations can obscure for speakers the relation between *saline* and *salinity*. But both these form also exemplify a more serious problem already noted in Part II: namely, the many bases, particularly in loanwords, that lack a source for many speakers, and may indeed not be recognized as a base by many speakers – as with [sal] – unless the relation to *salt* is apparent to them.

Consider further *premonition*, for instance. A *-mon(i)-* component does recur, as in *admonition* or *monitor*, but it does not occur as an independent lexical item. However, as with many other such formations, on notional grounds, and consistently with the affixes, which are typically found, in the present case, in deverbal noun formations, we can assign such a base to exponent of the category verb in this case. There is also a verb *admonish*, such that one might suggest that *admonition*, which also shares a prefix, is derived from it by suffix-substitution, or alternation; but such a proposal does not extend to *premonition*. Moreover, there remains the status of the *-mon(i)-* component: *admonish* itself is derived from a base that corresponds to a verbal category that does not occur independently, but is associated with what is vaguely notionally in common and verb-like among these forms. However, perception of such connections is presumably not to be associated with all mental lexicons. In many, *premonition* etc. may be unanalysed or only as being marked as belonging to an overall category, and possibly with some awareness of the role of *pre-*, another transparent prefix.

Morphological structures thus expound notionally-based structures, in terms of phonological entities grouped into a hierarchy of units indicated by bracketings of less and more inclusivity, and this hierarchy is determined by height in the path of categories that is expounded; but an alternation may be part of the exponence, and there may be no exponence, no morphology, if we acknowledge conversions. These exponence relations constitute the **morphosyntactic interface**. The relation between morphological units and their exponence as purely phonological structures constitutes the **morphophonological interface**. We have seen

that in some cases the result of this involves accommodation between the formatives, as with *confusion*, say, where the medial [ʒ] apparently conflates [z], as in *confuse*, and the initial segment of the suffix, as observed in *opinion*. Our task in this and the following chapter is to make explicit the nature of the regularities at both these interfaces.

We now begin to look in more detail at morphosyntax, regularities concerning the exponence of some of the lexicosyntactic categorial structures we have looked at. **Diachronic word formation**, the creation of the representations for new lexical items, is an event that involves the establishment of new words by means of overt morphological structure, or by conversion, or compounding, or by invention of a distinctive new lexical item, unrelated in form to other lexical items by any of these correspondences. Idiosyncratic creations also derive from clippings, of phrase (*mobile (phone)* or word (*(tele)phone*), blends (the iconic *geep* 'offspring of a goat and a sheep', or the unbalanced *blog* from *weblog* – not to mention, please, *vlogger*), acronyms (*unicef*), and of course so-called loans – items copied from other lexicons of varying exoticness. These are thus different **modes in expansion** of the lexicon, and they involve different modes of expressing relatedness of words, including a null mode, conversion. Absent from exponential expression are those signs related purely notionally, so with non-overtness, as with *buy* and *sell* – though their equivalents in German, for instance, are morphologically related. And in a number of languages the equivalents of *die* and *kill* are overtly related.

Synchronic word-formation reflects the consequences of the preceding. In the preceding chapters we have focused mainly on the word formations associated with vocabulary expansion via change in primary syntactic category. As indicated, we look here more explicitly at the exponence relation between morphological forms and such categorial structures. Thus, we shall not be looking further in this chapter at categorially complex items that do not signal this complexity either by morphology or by conversion. We take up the question of 'compounds' separately in Chapter 30, however. Morphologically complex items are prototypically associated with the synchronic existence of a lexical item cognate with the base of the complex form, its synchronic lexical 'source', or cognate, but (change of) usage or 'foreignness' may disrupt this.

We have noted also, however, (overtly derived) formations with no such synchronically accessible source item for their base. But we have seen that a patently non-affixal formative that shows some constancy of meaning and sound may be identified as a base. We shall return to these and also their role in compounding in Chapter 31. What we shall not be concerned with there and here is the non-derivational complex categorizations and correspondences that were exemplified in the preceding chapter by causative directionals in English that are of this character, such as *teach* and *buy*.

Morphology, in particular, can be said to mediate between the notional syntactic categories of complex lexical items and their phonological structure. In this chapter we are concerned specifically with derivational morphology, where the morphology of a lexical item indicates that it has been derived from another lexical item or, in the case of what is derivationally a neologism, is being derived. Derivation in the lexicon is (the result of) an event in real time, not a stored synchronic process; it is the recognition of a derivationally based relation that is included in the lexicon. There it may remain apparent that the base of the derived form and its source 'correspond', notionally and in expression, but, as I have stressed, this is a relation that is not always salient to the individual language user, and may become less so. Over time the connection may become obscure, on account of developments in meaning and/or phonology. And even initially relations expressed by blends, clippings, or acronyms may be obscure to many.

Thus, the diachronic source of the base of a derived item is not part of its structure, nor is the history of any phonological processes that have affected base or source and perhaps differentiated them. So the vowel in the second syllable of *divinity*, for instance, is simply [ɪ], not [aɪ] as in *divine*, the cognate lexical item, nor has it some other value shared with the corresponding vowel. In relating the two lexical items the user must acknowledge an **alternation**, [ɪ] ≈ [aɪ]; neither is a variant of the other, nor are they both synchronic variants of a third phonological type; and, again, any process that gave rise to such relationships is a diachronic phenomenon. Perception of the alternation is part of the recognition of a lexical relationship. I shall elaborate on the status of this and other alternations below. Derivational histories are often complex and may involve other languages than that whose morphology we are concerned with, and thus, to varying extents, the relationship may be synchronically opaque. Notionally or structurally, how many users of English associate *dilapidated* with *lapidary*?

As we have seen, the core of derivational morphosyntax relates a complex syntactic categorial structure to a set of formatives, whose brackets enclose phonological units which express the morphophonological content of the formative. As with the nouns in (2), the verbs in (3a) also bear an affix that signals their categorial complexity.

(3) a. [[ɛm]bɛd], [[dɪs][[ɪn]stɔl]]
     b. [[kʊk]], [[wɔk]]
     c. [titʃ], [gɪv]

But here we have prefixes, represented '[[Z]'. The representations in (3a) again reflect the internal lexicosyntactic structure of the derived form. And again, the root of the second verb has no obvious corresponding lexical item.

In cases of conversion, there are of course no affixes or alternations, but, as with derivation marked by alternation, double brackets indicate that the representation expounds a complex lexicosyntactic categorization that shares its expression with a less-complex item, as in the case of the nouns of (3b) vs. the verbs of (3c). The verb *walk* of (II.149b) (from Chapter 26), but not (II.149a), will be given such a representation, assuming that the directional is indeed perceived as being derived from the activity verb:

(II.149) a. Bobbie walks (a lot)
          b. Bobbie walks to the club

The verb in (II.149b) includes within its own the syntactic categorization of the verb in (II.149a). On the other hand, the covert complex categorization of the verbs in (3c), discussed in the previous chapter, is not reflected in the morphological representation. The double braces around a form, then, are a sign that it is often possible to identify a lexical item, or at least a recurrent formative – as with the (for many speakers) source-less base in *saline* and *salinity* – that correlates with the base of that form; a single bracketing encloses a simple independent form that may nevertheless be categorially complex. But let us now look at the explicit formulation of exponence relations between lexicosyntactic structure and morphology.

If we continue with the examples in (2), then we might associate with *divinity* the lexicosyntactic categorization in (4a), at least, along the lines of other de-adjectival nouns cited in Chapter 20 (though further complexity has emerged in subsequent chapters).

(4) a.   {N}
            |
          {N;P{abstract}}
            |
          {P:N}
            ⋮
          divinity

     b.   {N}
            |
          {N;P{abstract}} ◄---⌐
            | ┊
          {P:N}   ┊
            ↑   ┊
            ┊   ┊
          [dɪvɪn   [ɪtɪ]]
            ┊
            ≈
            ┊
            aɪ
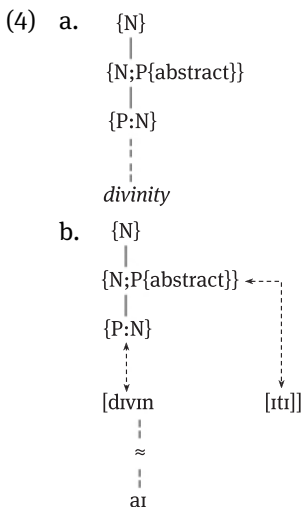
[ɪtɪ]] is a suffix that seeks to expound, whatever else, a configuration like that headed by the {N;P} in (4); the derivational formulation in (4b) creates a noun that is redundantly {abstract}; the base has an adjective source.

As well as the expounding suffix in (4b), there is in this instance a vowel-alternation, indicated in that representation by '≈', and which we shall return to. The non-continuous lines ending in arrows of (4b) that associate the crucial syntactic-categorial with the exponding morphological elements are what constitute a **morphosyntactic** redundancy, based on exponence, where the base is merely representative of a set of adjectives. In this way morphosyntax constitutes, within the lexicon, the interface between syntactic categorization and morphology. Its redundancies express attested relationships between lexicosyntactic complex categories and morphological representations, and form a template for fresh formations. With well-established examples, like that in (4) for some speakers, the whole configuration in (4b) will be stored in the lexicon. The morphological representation is linearized, unlike the lexicosyntactic categorizations that it expounds, in (4b) and the like. But the status of the formatives is associated with height of the category they expound and the resultant morphological bracketing. The exponence, as expressed in the notation, determines status as prefix vs. suffix. (4b) is merely a skeleton, and ignores restrictions on eligibility of sources, including the preference of this suffix for Latinate sources.

In (I.51), with two suffixes, the *-ness* suffix expounds the upper {N;P}.

(I.51)   {N}
             |
           {N;P}
             |
           {P:N}
             |
           {N;P}
             ┊
          tearfulness
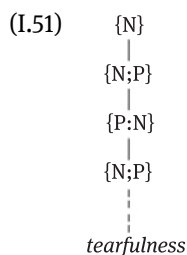
Accordingly, it is expounded by the formative attached to a derived form, as in [[*tear*[*ful*]][*ness*]]. And in (II.40) from Chapter 20 the *un*-prefix has a wider base than the suffix, in that it expounds the last (topmost) derivation, of a negative: so, [[*un*][*defin*[*able*]]] (where I ignore the status of *-de-* component of the verb, which seems, indeed, to derive the verb.

(II.40)   Beauty is undefinable

In (II.48) the lexicosyntactic categorization includes an adjective stage, on the assumption that *heroism* has its source in *heroic* and undergoes suffix alternation.

(II.48)
```
        {N}
         |
     {N;P{attribute}}
         |
       {P:N}
         |
    {N;P{human}}
         |
  {P;N/{src<abs>}}
         |
   { {src<abs>}}
         |
        {N}
         ⦙
      heroism
```
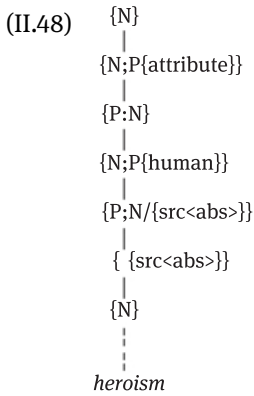
This gives us, roughly, [*hero*[*ic*≈[*ism*]]], with suffix alternation as the morphological structure, if we ignore vowel alternations, which, again, we shall return to.

A similar relationship to those preceding between categorial and morphological structure is associated with the deverbal nominalization in (II.22) (from Chapter 19), as suggested in (5).

(II.22)
```
    {N{def}}
       |
    {N/{src}}
       |⎺⎺⎺⎺⎺⎺⎺⎺⎺⎺
  { {loc}}        { {src}}
     |               |
  { {N{def}}        {N}
     |               |
  {Nᵢ/{src}}       {N;P}
     |⎺⎺⎺⎺           |
     ⦙  { {src}}  {P;N/{src{abs}}}
     ⦙     |          |
     ⦙    {N}     { {src{abs}}}
     ⦙     |          |
     ⦙   {N;P}      {Nᵢ}
     ⦙     ⦙          ⦙
    the  girl's    arrival
```

(5) a.   {N{def}}
       |
      {N{src}}

     { {loc}}   { {src}}
       | |
    {N$_i${def}/{src}}   {N}

       { {src}}   {N;P} ←--------
        |
       {N}   --→{P;N/{src{abs}}}
        | |
     {N;P}   { {src{abs}}}
                |
              {N$_i$}

    the girl's   [əraɪv   [əl]]
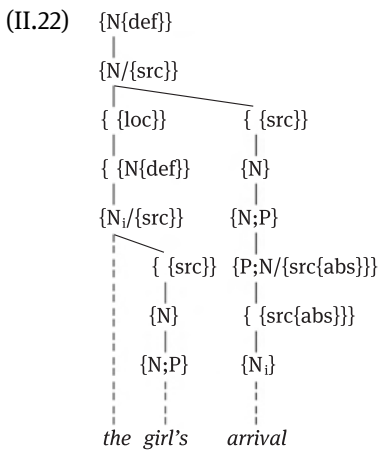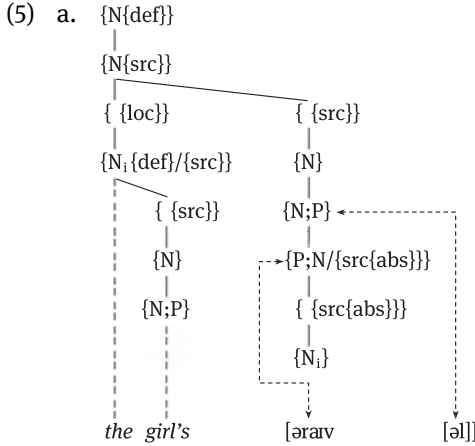
Again, (5) expresses that [əl] is a suffix that relates to the categorial representation headed by {N;P} in the manner indicated, and again the event feature (in this case) of the derived noun is redundant. The base here is a verb with a specific valency.

However, something slightly different is required when the suffix is associated with a particular argument of a verb, as in (6a).

(6) a.   a student of history

    b.   {N{sg}/{src}}

                { {src}}
                 |
              {N$_i$}
               |
             {N;P}
              |
             {P;N}

       ---------→{P;N/{abs}{src}} { {abs}\{P;N}}
       { {abs}}..... ....{ {src}}   {N$_j$}
         | |
       {N$_j$}   {N$_i$}

    a   [stjud←--------[ənt]] *of* *history*
           ≈   ≈
          [ʌ   [ɪ]]
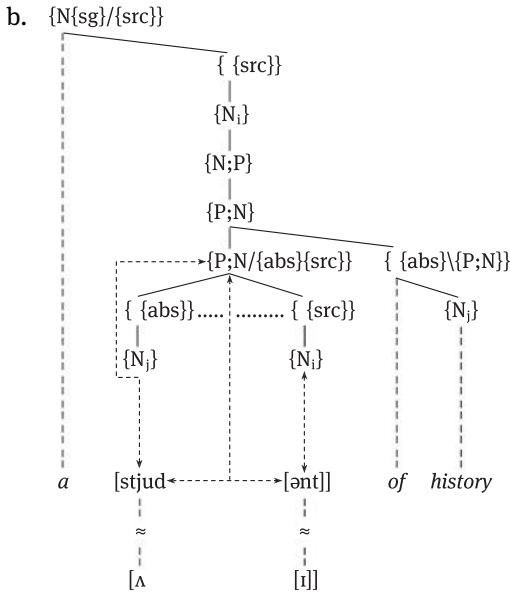
It's not only that we have affix alternation, as well as source/base alternation, and thus a phonologically obscured base form. But in this case the derived suffix seeks the whole configuration as far as the upper $\{N_i\}$, as required by the subscripting. And something similar seems to be appropriate for typical prefixes.

However, (6b) as a whole is unlikely (and a mutative account even more so) as part of the linguistic knowledge of most users of English. How much of the relationship spelled out by (6b) may be accessible to users is no doubt variable. Typically, as far as the derivational relation is concerned it is enough, I suspect, for the user to recognize a notional connection and some similarity of expression, and to 'know' that, at the most basic level, a referent of *student* is someone who has enrolled in an educational institution or practises a hobby or occupation where the student is supposed to engage in what is signified by *study*. But also the arguments associated with the derived noun clearly signal its verbal basis.

(II.150) in Chapter 26 suggested lexicosyntactic categorial structures for prefixes, one of them where the prefix expresses a circumstantial and one realizing a participant. How these might be related to morphological structure is respectively indicated in the compressed representations in (7) – which, at this point, ignore the inflectional suffixes.

(7)   a.

$\{P\}$

$\{\ \{abs\}\}$ $\{P;N/\{src\{abs\}\}\}$ ←----

$\{\ \{src\{abs\}\}\}$ ---→ $\{\ \{loc\}\backslash\{P:N\}\}$

$\{N\}$ $\{N\{\text{MANN}::bad\}\}$

Peggy   [[mɪs]   bɪhevd]

b.

$\{P\}$

$\{\ \{abs\}\}$ $\{P;N/\{abs\}\{loc\{gol\}\}\}$ ←----

$\{\ \{abs\}\}$ ---→ $\{\ \{loc\{gol\}\}\}$

$\{N\}$ $\{N\{\downarrow\}\}$

his anger [[sʌb]   saɪdəd]
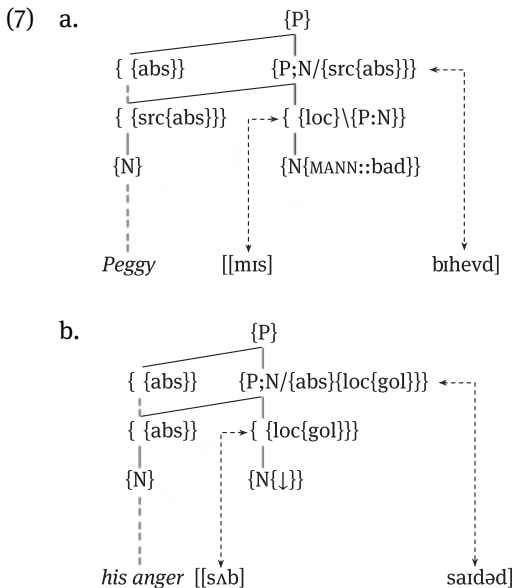
(7a) also ignores the second prefix in *misbehave*, which is a common native verb-deriving suffix that has developed a range of significations. However, the contribution of this prefix and the root (etymologically related to *have*) to the

overall meaning of *behave* is obscured in present-day English. The verb in (7b) is also obscure.

For the individual user the introduction of a new lexical item is a perfective event, but its establishment among users takes time (though less so if introduced by social media). In either respect, as suggested above, its production is an event in real time: the capacity for new formations based on a particular mechanism, **productivity**, is exhibited diachronically. However, though production of particular derivational kinds of lexical items fluctuates with changes in fashion – as with the already mentioned short-lived formations of a few years (decades?) ago based on acronyms denoting certain social groups (*nimby*, *dinkies*, for instance) – there are inherent linguistic factors that are reflected in relative productivity.

Affix-based formations with numerous established exemplars many of which remain **transparent** notionally and phonologically are normally favoured; notional opacity is associated with idiosyncrasy in the relationship between the meaning of a complex morphological form and those of its component formatives, or semantic inconsistency in the meaning of a formative. But phonological obscuration associated with phonological change is also an important potential factor. The Latinate affixation patterns *-(i)fy and -ize* and *-ification* and *–ization* remain productive, despite the variation in *-(i)fy* and the ambiguity in the latter two of the *-(at)ion* ending (as looked at in Chapter 19). And the most obscuring factor is often the opacity of the base, a particular feature of borrowed or (post-classically) manufactured morphology.

The native nominalizer *-ing*, despite similar ambiguities, is very productive, despite also its role in verbal morphology. But the noun forms ending in the native suffix *-th* and usually also involving vowel alternation (*depth, filth*, *growth, length, mirth, wealth*) or variation in shape of the suffix (*height, sleight*), in particular, are not numerous and limited to native bases, and of varying opacity. And deployment of the suffix is extended only jocularly, as with, in my experience, *cleanth*, with vowel [ɛ] (encouraged perhaps by the pronunciation of *cleanliness*, as well as *wealth* etc.).

The non-Germanic formation associated with the notorious vowel-shift pairs like *divine/divinity* is also non-productive for many users of English. The internal structure of these is no longer salient, except for students of linguistics. But this relationship does illustrate some of the complexities of the inter-plane and its interfaces in at least some mental lexicons, and for this reason we shall focus on it in what follows.

Clearly, factors associated with the origins of formatives, both bases and affixes, are important. For instance, some Latinate suffixes, such as *-ity*, have been slow to attach to native vocabulary – though this inhibition is less so in the case of affixes involved in transparent formations. And this restriction on the

spread of *-ity* may be related to its being in competition with native nominalizers such as *-ness* and *-hood*, which, like adjectivalizing *-full*, have penetrated even into non-native vocabulary. Thus, limitations in productivity may in part involve instances of **blocking**, where a new formation is impeded by an existing lexical item with the approximately appropriate sense, as well as the complicated morphology of *-ity*-formations, for example, vis-à-vis its relationship with the source of the base in established instances: this relationship involves accentuation and participation of derivatives in alternations.

Non-native *-able* is preferred in new formations to its (also non-native) alternatives *-ible* and *-uble*. The initial vowel in established instances of the latter of these is in alternation with the [v] of the source, as in *solve* vs. *soluble*, also found in such as *revolution* vs. *revolve*, and the results of the etymology of *-ible* is similarly not straightforward. Another kind of alternation associated with formative boundaries is illustrated by the final consonant in the source vs. the base in the non-native causative relation in *italic* vs. *italicize*. We shall return below to such formative-boundary alternations as [k] vs. [s], frottings, as instances of the role of morphophonology, the interface between morphology and phonology. The complexity introduced by this alternation may, along with the existence of the other non-native agentive-verb formations we have noted, discourage some potential formations, as part of the complex history of causatives in English. The vestiges of causative formatives in Old English almost disappeared in later English, and, as we've observed, (particularly verb-based) causatives are generally created by conversion or are covert.

The above repeated references to alternations draws me out of further concern with the historical complexities and indeed mysteries surrounding what determines productivity, to return to the characterization of the different types of morphological exponency that reflect changes in syntactic categorization, and their associated morphological structure. As we have observed, some derivations are marked by internal change in the base, i.e. alternation in relation to the source of the base. The causatives *feed* and *bleed* illustrate this: cf. *food*, *blood*. But this particular formation-type is scarcely productive, and even the cited examples differ in the character of the alternation.

Somewhat more widely attested – certainly, as observed, among ex-students of undergraduate courses in linguistics – are the alternations illustrated in (2a), where the alternations between source and base are associated with the presence or absence of the derived environment, while those in (2b) differ in various ways:

(2) a   [dɪvɪn[ɪtɪ]], [səɾɛn[ɪtɪ]], [prɒfan[ɪtɪ]] – [dɪvaɪn], [sərin], [prɒfen]
    b.   [sɪvɪl[ɪtɪ]], [[mɒd[al]][ɪtɪ]], [salɪn[ɪtɪ]] – [sɪvɪl], [mod[əl]], [selaɪn]

I presume that the environment in the derived form that is associated with the change is synchronically morphologized. A range of disparate suffixes is involved besides the -*ity* of (2a): for instance, [-ɪəs] (*bilious/vicious* ≈ *bile/vice*), [-(et)ɪən] (*admiration/revision* ≈ *admire/revise*). And we shall encounter another relevant suffix in a moment. The alternation is a redundancy that holds over the morphological structure of pairs of source and base. Let us look at how the alternations involved and the redundancy may be expressed.

We can fill out the general patterning of these alternations due to the historical vowel shift sound change if we add to (2a), in particular, the further two pairs illustrated in (8), where the source in both these cases, unlike those in (2a), has an eligible syllabic containing the feature **u** – and the first example involves a suffix not encountered so far:

(8)   [abʌnd[ənt]], [[vɜb[ɒs]][ɪtɪ]] – [abaʊnd], [vɜb[os]]

(The reader will observe that I have assumed a non-rhotic variety, though this is not relevant at this point.)

In all these types we have recurrent alternations in the forms of the base and its source. These alternations between transitive and intransitive vowels belong to the set in (9), where the derived form has the transitive vowel on the left.

(9)   *'VOWEL-SHIFT' ALTERNATION*

base		source	base		source
ɪ	≈	aɪ	ʌ	≈	aʊ
ɛ	≈	i	ɒ	≈	o
a	≈	e			

Thus, we can say that if a word with an accented final intransitive vowel is the source for a base with suffix [ɪtɪ], or a base bearing a number of other suffixes, the base is likely to have in the same position as this intransitive the transitive vowel on the left in the corresponding pairing in the table.

Overall, continuing to ignore the of non-rhoticity, and also ignoring the historical quality change in the vowels on the left of a pairing, whereby historically [ʊ] has subsequently developed to [ʌ] in most varieties, and in some dialects [ɒ] is unrounded, the alternations show the result of a variant of the set of changes traditionally referred to as 'Great Vowel Shift' on the vowels of the sources in the examples we've looked at. Its main effect in most varieties was, to simplify somewhat, to 'raise by one step', the intransitive member of the corresponding intransitive-transitive pairs, except the high vowels, which diphthongize. (9) is

the basis for a morphological look-up table that formulates the synchronic regularity that results from a variant of this history.

There may indeed be two alternations associated with such source-base pairs, as illustrated by [mɒbɪl[ɪtɪ]] vs. [mobaɪl] and [salɪn[ɪtɪ]] vs. [selaɪn], but they will include the final (secondarily accented – ictus) vowel of the base and the vowel corresponding to the fully-accented vowel of the source. Arguably, in non-rhotic varieties *fertility* and its synchronic source show such a double alternation: [fɜtaɪl] vs. [fətɪl[ɪtɪ]]. In this instance the first, sporadic alternation is, of course, not a reflex of the historical 'Great Vowel Shift'.

We formulated one of these alternations in (4b) above, where the association between the vowels is triggered by the presence of the suffix.

(4)   b.   {N}
               |
          {N;P{abstract}} ◄- - -┐
               | ┊
           {P:N}   ┊
              ▲   ┊
              ┊   ▼
          [dɪvɪn   [ɪtɪ]]
              ┊
              ≈
              ┊
             aɪ
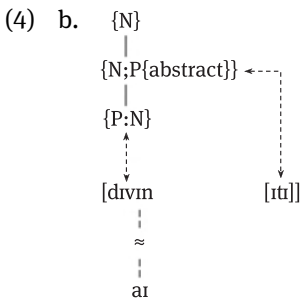
Further, the source vowel here bears the tonic, or primary accent, which is retained in the base; and in all these pairs the final vowel of the source bears at least an ictus, or secondary accent. The sources of *civil(ity)* in (2b) as well as *morbid(ity)* and *fecund(ity)* have transitive final vowels and these do not bear an accent: there is no vowel alternation but there is accentuation of the final vowel of the base in the derived item. Thus, the environment constituted by suffix [ɪtɪ]] accentuates the final vowel of the base, but there is not necessarily vowel alternation. Presence of alternation requires that the final vowel in the source be an accented intransitive. The intransitivity requirement is part of the alternation relationship introduced by the presence of the sequence introduced by the suffix. But the accentuation is in accord with independent phonological regularities.

In characterizing the relation between base and source, we thus can modify (9) as in (10a), where '/<' indicates lack of stress on the source vowel, and we can introduce (10b) as part of the formulation, though the accentuation is independently determined.

(10) a. *'VOWEL-SHIFT' ALTERNATION*

	base		*source*		*base*		*source*
(i)	ɪ	≈	aɪ/ɪ<	(iv)	ʌ	≈	aʊ/ʌ<
(ii)	ɛ	≈	i	(v)	ɒ	≈	o
(iii)	a	≈	e				

  b. Final vowels in the base bear the tonic accent, as does that in the source unless it bears only an ictus and is preceded by a tonically accented intransitive that will also participate in alternation.

If a word is to form a source for the base of an *-ity* word, then any vowel that is at least an ictus and belongs to the right-hand set in (10a) must in the base be the vowel that corresponds in the left-hand set to that source vowel. And in any case the base-final vowel is fully accented by (10b). This allows for the exponency in *civility* (different from the source only in accent-placement), of *divinity* (the final vowel of the source of the base meets the conditions), and of *mobility* (two eligible vowels in the source). This is an informal characterization for the formation of these nouns on the basis of sources of an appropriate type that combines the alternational relations with accentual requirements.

    We might represent the syntactic-category change and vowel-alternational demands of *-ity* more explicitly, as in the expression of morphosyntactic relations in (11), which abbreviates the accentual aspect informally as '4' and '3' – tonic and ictus, respectively– more fully represented in the two highest {V}s in (153a) from Part I.
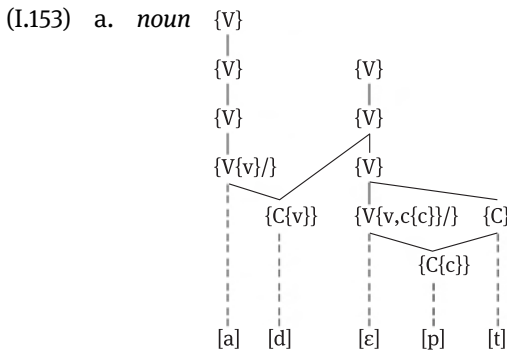
(I.153) a. *noun* {V}

{V}   {V}

{V}   {V}

{V{v}/}   {V}

{C{v}}   {V{v,c{c}}/} {C}

{C{c}}

[a] [d]   [ɛ]   [p]   [t]

(11)   -ITY *ALTERNATION*

$$\{N;P\{abstract\}\}$$

$$\{P:N\} \Leftarrow \qquad\qquad\qquad \Rightarrow \{P:N\}$$

```
         4        3/4                       4
   [  {Vm}     <{Vn}>*V]        [  {V/m}      <{V/n}>[ɪtɪ]]

      s  e  l     aɪ  n             s  a  l      ɪ  n  ɪtɪ
      d  ɪ  v     aɪ  n             d  ɪ  v      ɪ  n  ɪtɪ
```
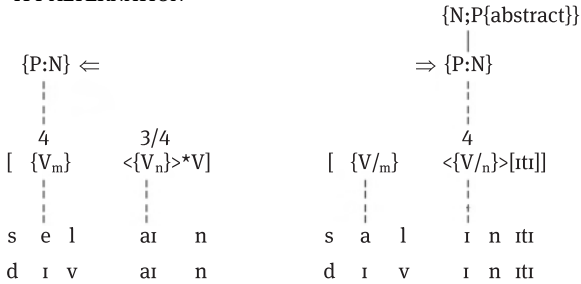
where the subscripted *m* and *n* are variables over the (i)-(v) sets
of alternation pairs in (10)

Placement of the accent in the derived form in (11) is independent of the vowel
alternation, of course; it is a property of the phonological sequence extended by
presence of the suffix – as we shall see. The '*V]' is intended to indicate that there
is no vowel between the subscript vowel and the formative boundary.

At the bottom of (11) are abbreviated phonological representations for a
couple of examples, the first involving two alternations, and thus two relevant
vowels in the source and the base. At the top is the lexicosyntactic categorial
relation, between adjective and derived noun in the case of *-ity*. The syntactic
category change shown in (11) is appropriate for the *-ity* suffix, but, of course,
may be different with different suffixes (think of *abundant*, for instance). Below
the syntactic categories is the associated linearized morphological structure of
both items, where the formatives are included in square brackets, and the braces
enclose phonological units. As indicated, the two vowels in (11) (other than those
of the suffix) do not have another vowel to their right in the source, but there
may be vowels to the left. The eligible second vowel on the left in the source may
be absent, as in *divine* vs. *mobile*. In the source but not the base the vowels are
intransitive (no '/' following 'V'); in the base the vowels are marked as transi-
tive ('V' followed by '/'). Which vowels they are is identified with reference to
Table (10): the corresponding subscripts on (11) indicate that vowels with the
same subscript belong to the same pair as one of those in the table.

There are instances, as with *obesity*, where (11) typically does not apply, so
that the base retains the intransitive vowel of the source; it is thus more trans-
parent, but morphologically irregular. And there is variation between the two
alternatives with *plenary* and other forms, and the difference between *centenary*
and *centennial* is signalled in the spelling. Further, as we have seen, absence of a
source for a base, as with much prefabricated morphology, increases the opacity
of a derived form, particularly if the base is not well testified to elsewhere, as

with, say, that in *satisfy/satisfaction* or *platitude*, or if the notional connection between forms with a base in common is slender, as, for some users perhaps, in the case of *beatify/ beatific/beatitude*. Often the derivative and source forms were borrowed at different periods in the history of English, and a relationship is recognized retrospectively – or not. But simple density of regular morphosyntactic and morphophonological adjustments also contributes to opacity of the relationship between source and base and of the structure of the derived form, inhibiting productivity, as in the present ('vowel-shift') case.

The fragility of the 'vowel-shift' alternations and the associated accent regularities is also illustrated by the preference in most contexts for the form *callousness* (with a native suffix) over the derived form in the accent-alternating pair *callous/callosity*, particularly in the common 'behavioural' sense. A similar illustration of the vagaries of usage is provided by the presence of both *otioseness* and *otiosity* as nouns (with, certainly, different ranges of meaning) whose base in each case has the adjectival source *otiose*. And this adjective, allowing for the difference in mode, largely encompasses both the semantic ranges of the nouns. *Otious* is rare and its sense corresponds to that of *otiosity* (cf. *curious/curiosity*) rather than that of *otioseness*.

Moreover, the placement of the accent is not to be associated with the presence of the suffix qua suffix. Accent placement in all these forms accords with a phonological – not a morphophonological – redundancy; this phonological redundancy refers, if to anything, directly to the lexicosyntactic categorization, as noun – i.e. it is syntacticophonological. They thus apply to morphologically simplex words as well as derived forms: the accent is also on the prepenultimate vowel in such nouns as *cinema* and *cinnamon*. *-Ity* has no morphophonological effect on accent placement. (10b) is merely an instance of a syntacticophonological, not morphophonological, regularity. Let us turn our attention briefly to phonological accent-placement, in anticipation of the following chapter. Here this diversion will serve to introduce us to the degree of morphophonological integration of an affix with its base. But we have also not finished with the 'vowel-shift' alternations – as the reader will be aware.

As economically illustrated above, many polysyllabic nouns have the prepenultimate stress of the derived words in (2), given the 'lightness' of the final two syllables, with transitive vowels that have to share their complement with the following syllable, or have none. At best the final vowel will receive secondary accent, as an ictus, if this vowel is intransitive, whether the tonic accent is prepenultimate or penultimate, as in *pedigree* or *inferno*, i.e. with a **heavy** final syllable. Primary accentuation of even satisfied, or complemented, final transitives (*catamarán*, *courtesán*) is a mark of the 'exotic', as are fully stressed final intransitives with post-vocalic adjuncts, or **superheavy** syllables (*magazíne*, *cavalcáde*); such

forms often adopt 'normal' stress. With nouns, the penultimate syllabic will bear the word accent if its valency requirements are uniquely satisfied, i.e. it is intransitive, as in *aroma* or *horizon*, or a transitive that is complemented by a segment that is not potentially shared (i.e. not ambisyllabic), as in *innuendo*. Such syllables, where valencies are satisfied uniquely, can be said to be heavy – heavy enough to bear the accent. A **light** syllable is a syllable that ends in {V/} or {V/} plus a shared segment, i.e. a (not uniquely satisfied) vowel, ambisyllabic. The system of reduced vowels, consisting of the 'central' ([ə,ɪ]), in particular, is associated with light syllables. If the penultimate is light, primary accent normally falls on the pre-penultimate, even if the latter is a sharing transitive, as in *camera, caravan*, *America*, *divinity*, *civility*, *mobility*, etc. conform to these regularities: the final syllabic is not intransitive, thus bears no ictus, and the penultimate is a transitive that shares its complement with the final syllable. The accentuation in *divinity* etc. is **syntacticophonological**, not morphophonological; it is associated with nouns (as discussed more fully in the following chapter).

In most of the corresponding (disyllabic) adjectives in (2) the accent is final, as expected for a simple adjective with a final vowel that has a rhymal adjunct, whether intransitive, as in (12a), or transitive, as in (12b), where the first vowel in the first example in each of (12a) and (12b), for instance, is even intransitive.

(12) a.   opaque, mundane, serene
      b.   direct, overt, forlorn, superb, absurd, rotund, corrupt, alert
      c.   wanton, handsome, common, mellow

These final syllables are superheavy, with an adjunct to the vowel, whether intransitive or transitive. We have initial accent if this is not so, as in (12c), even though the final form has a heavy syllable. Some of the forms in (12b) contain etymological prefixes. But even if an individual mental lexicon registers them as synchronic prefixes, they have no morphophonological effect on accent placement; accentuation here is phonological, for simple adjectives: so syntacticophonological. In this respect the prefixes are **passively integrated** with their bases, as with suffixes such as *-ity*.

Moreover, in the adjectives *saline* and *mobile*, with super-heavy final syllable, it is nevertheless the first syllable that is primary-accent-bearing. We find the same in all of the disyllabic forms in (13a), whatever their syllabic structure, and there are initial primary accents in the trisyllabics in (13b).

(13) a.   saline, docile, servile, virile
      b.   serpentine, mercantile, volatile

All these items end in-*ile/-ine*, which are etymologically suffixes. All of the words in (13) are also adjectives. Say we treat the endings as synchronically an adjective deriving suffix, despite the lack of an obvious source for the base in many cases; indeed, many such forms have a plausible collateral partner (such as *virile*/*man* – and cf. the semantically similar native formation in *manly*). We can associate the 'deviant' accent pattern of (13) with the presence of these suffixes (as with a number of others): they appear to reject primary accent. The accentual distribution in (13) is not merely syntacticophonological in this instance.

We saw that the suffix -*ity* merely integrates itself with the base passively: together the phonological contents of the base and suffix conform to the phonologically general pattern of accent associated with particular word classes, here nouns. -*Ic*, on the other hand, seems to determine the pattern; it demands tonic accent on the immediately preceding syllable: *atómic* (cf. *átom*), *psychótic, peripatétic*. It appears to **actively integrate** itself; accentuation is morphologically determined here. However, suffixes such as -*ness* and many other native ones, do not affect or interact with the accent pattern associated with the source of the base: in this respect they are **not integrated**. This also seems to be the role of adjectival -*ile* of *tactile, facile, juvenile*, in simply rejecting primary accent on themselves, but retaining an ictus. But that of -*ine* is more variable – so *elephántine* as well as *élephantine* and *Býzantine* beside *Byzántine*. Integration of either sort has a morphophonological effect on placement of the accent.

We shall pursue these distinctions among suffixes, and similar ones among prefixes, as well as giving a more explicit account of accent-placement, in the chapter that follows. The morphological disruption of the normal accent pattern of the source of the base by suffixes such as -*ic* and -*ity* is obviously more systematic than the persistence of isolated alien patterns, as in *umbrella* – which, in this and other cases, are perhaps helped by awareness of spelling. And the actively-integrating suffixes warrant careful consideration.

However, let us fill out here our picture of the correlations of accent placement with syntactic categorization. There are many adjectives, and also verbs, that bear final word accent, which is restricted in nouns. Indeed, non-final stress may be substituted for final in loans – as, for many speakers, with *perfume*. Occasionally, this accent shift occurs in some varieties even when the initial in a disyllabic noun or name is light and unaccented and the final accented and heavy: there are some varieties of English in which the accent in *July* is initial though the final is heavy: *Júly*, with final [aɪ]. Nouns/names seem to flee final accent. Adjective disyllables, on the other hand, are reluctant to accord secondary accent even to an initial heavy syllable (*obscene, sincere, opaque*), and maintain final accentuation. Consider too noun *pérvert* vs. adjective *pervérse*. And, as is familiar, there are verb/noun pairs that are differentiated by accent placement, such as *permít*

vs. *pérmit*, *escórt* vs. *éscort*, *survéy* vs. *súrvey*, *digést* vs. *dígest*. We see again that word class is another factor in the characterization of patterns of accentuation – as indeed indicated by the discussion that precedes the present paragraph; but in the present examples it is even clearer that word class affects word accent independently of the morphology. Indeed, in such cases accent-placement does not interact with morphology, but is introduced directly in the lexical syntactic-phonological interface, morpho-syntax.

There are in English various word-formational patterns to which many items conform, as sampled here, but scarcely a tightly organized system of rules of derivation and accent placement. However, in the following chapter we shall, as indicated above, also return to the formulation of the most pervasive redundancies associated with phonological determination of lexical accent placement, but taking into account these various non-phonological considerations, syntactic and morphological, affecting the placement of accent. Let us now return to (11), however, having established the independence from (other) aspects of morphophonology of the accent phenomena associated with the forms related by (11).

(11), repeated here, but without the accentual information, constitutes a set of redundancies that applies to a number of established lexical items.

(11)   -ITY *ALTERNATION*

$$\{N;P\{abstract\}\}$$

$$\{P:N\} \Leftarrow \qquad\qquad \Rightarrow \{P:N\}$$

4	3/4		4
[$\{V_m\}$	$<\{V_n\}>*V]$	[$\{V/_m\}$	$<\{V/_n\}>[ɪtɪ]]$

| s | e | l | aɪ | n | | s | a | l | ɪ | n | ɪtɪ |
| d | ɪ | v | aɪ | n | | d | ɪ | v | ɪ | n | ɪtɪ |
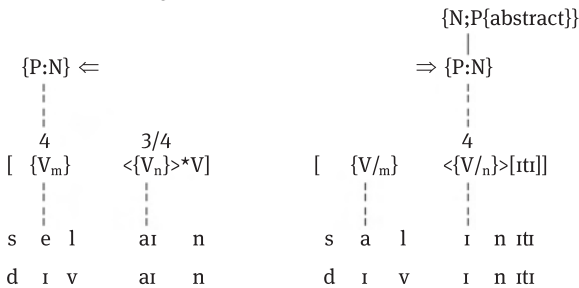
where the subscripted *m* and *n* are variables over the (i)-(v) sets
of alternation pairs in (10)

Such items may individually contain an instance of this formulation in their entries in the lexicon. A redundancy like (11) itself, as well as generalizing over these, establishes a template for fresh derivations that will also play a role in interpreting forms that are novel to the user.

Recent user applications of (11) in expanding the lexicon do not seem to be common, however, and they have indeed been almost absent at certain periods; and no doubt in many current individual lexicons these precise structural relationships are unacknowledged. Nevertheless, (11) is potentially to be included,

for some users, among the set of morphosyntactic redundancies that collectively we might term, as part of the lexicon, the **morphologicon**. Many of these redundancies, such as -*ee* formation are, despite the inclusion of morphologically-determined accentuation, less complex than (11), with its set of possible alternations (only some of which we have sampled), and more productive.

This is also true of (non-integrative) -*ness* formation, despite some idiosyncratic individual developments, as with the salient sense of *business*. Compare the preference for the suffix in *callous/callousness* with *callous/callosity*, for instance, discussed above. Even the double derivation of (51) from Part II requires only the redundancies suggested in (14a).

(II.51)   {N}
            |
          {N;P}
            |
          {P:N}
            |
          {N;P}
            ┆
          tearfulness

(14) a.   {N}
                                                             |
                                                           {N;P}
                                                             |
                             {P:N} ⇐   ⇒ {P:N}
                               | |
        {N;P} ⇐   ⇒ {N;P}   {N;P}
          ┆   ┆   ┆
        [tɪə]   +   [fəl]   [tɪə[fəl]] + [nəs]   [[tɪə[fəl]][nəs]]
          ┆   ┆   ┆
        [tɪə]   [fəl]   [nəs]

      b.   {N;P}
                                |
                 {P;N} ⇐ ⇒ {P;N}
                    ┆   ┆
                  {V₄}   {V₄}
                    | |
            [{V/} {V/}] [[{V}   {V/}]]
              ┆   ┆   ┆   ┆
              p ə m ɪ t   p ɜ m ɪ t

Similarly, (14b) shows the simple morphosyntactic accent alternation that expounds the complex categorial relation (not shown in full in (14b)) between

the verb and noun *permit*. {V$_4$} is again the primary accent (tonic) level. The representation in (14b) also ignores any potential (though opaque) internal morphological structure, which is explored in the following chapter. The only relevant morphological structure here is the double square brackets around the exponent of the noun. (14a) also reminds us graphically that, just as a root need not be a base, so a base need not be a root.

In so far as there is an awareness of a non-affixal relationship between *food* and *feed*, the alternation is associated directly with the change in primary syntactic category, as indicated in (15), with the result that the change in category is indicated in the morphological structure, as with conversions, by the double brackets around the abbreviated phonological content.

(15)   {P;N/ {src}}
         | ┊
       {P;N/{{src}}{abs}{loc}}
         |
        { {abs}}
         |
       {N;P}
         ↑
         ┊
         ↓
       [[fid]]
         ┊
         ≈
         ┊
         u
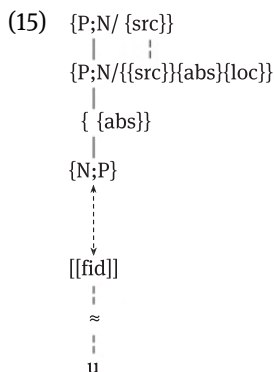
This entry for *feed*, however, is isolated; and for almost all users, even if their lexicon contains such an entry, it scarcely warrants the inclusion of a redundancy in the morphologicon. However, after this range of illustration of morphological and phonological exponence, there is still more to be said about the 'vowel-shift' alternations in the table in (10a).

For it is a familiar observation that there are other instances of at least some of the alternations included in the table where in their case it is the intransitive vowel that occurs in the derived form. This is illustrated by the adjective-deriving examples in (16a), involving different lexicosyntactic categorial relations and a different set of affixes, and the last examples shows affix-alternation.

(16)   a.   [mɛndil[ɪan]], [kaned[ɪan]], [hɑmon[ɪəs]] –
            [mɛndəl], [kanada], [hɑmɒn[ɪ]]

b. -IAN (etc.) *ALTERNATION*

$$\{P{:}N\}$$
|
$$\{< N;P>\} \Leftarrow \qquad\qquad \Rightarrow \ \{<N;P>\}$$
┆ ┆
$$[\qquad \{V/\} ... <\{V\}>] \qquad [\qquad\qquad \{V\} ... <\ >[\text{ɪən}]]$$
┆ ┆
$$(10_m) \qquad\qquad\qquad (10_m)$$
┆ ┆
m ɛ n d ə l   m ɛ n d i l ɪ ə n
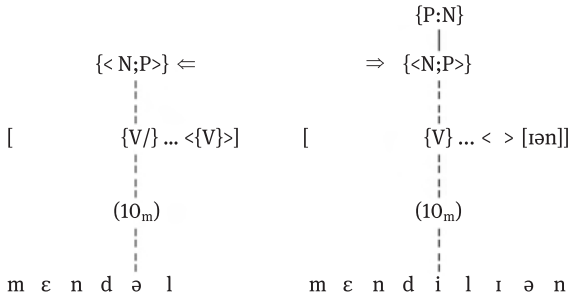
The redundancy for one of these is illustrated in (16b), where the final unstressed vowel of the source is detransitivized and has the corresponding vowel in (10a), repeated here.

(10) a. *'VOWEL-SHIFT' ALTERNATION*

	base		source		base		source
(i)	ɪ	≈	aɪ/ɪ<	(iv)	ʌ	≈	aʊ/ʌ<
(ii)	ɛ/ə	≈	i	(v)	ɒ	≈	o
(iii)	a	≈	e				

Compare the 'directionality' in (16b) with the alternations in (11), repeated above. (16b) has a noun or name as source ({<N;P>}). *Canada* is eligible for the derivation if its final vowel is dropped in the base as a result of formative-boundary interaction; this is indicated by the absence of the angle-bracketed source-final {V} in (16b) in the derived form. The alternating unaccented vowels in the lexical sources of (16a) are often subject to reduction in casual speech, but this possibility is parasitic on the 'full' form. Such low-stress alternations are not uncommon. However, if the presence of the reduced vowel is obligatory in many cases for some speakers, then this will involve in these instances a minor addition to the alternation types in (10a). Again, however, since accent placement is syntacti-cophonological, reduction can be seen as a realizational consequence of absence of accent on a transitive vowel.

And vowel reduction seems to be pervasive in family-name forms. Often the spelling of the simple name retains an indication of the vowel to be expected in derived forms, as in *Anderson/Andersonian* vs. *Andersen/Andersenian*. And this may in certain cases help users to pronounce a (for them) coined derived form.

There is once more a variety of suffixes associated with such alternation in the preceding vowel. And we can observe that the {ɪəs} suffix of *bilious* and the {ɪ}{əs} sequence of *harmonious*, involving the same phonological sequence, reverse

the (in)transitivity value of the preceding vowel. This suggests that the motivating environments for the shifts are not simply phonological.

The alternations tabulated in (10a) thus serve two different sets of suffixations, but the directionality of derivation of the pairs in the table is reversed between the two sets, as in the combined redundancy in (17a).

(17) a. *'VOWEL-SHIFT' ALTERNATIONS*
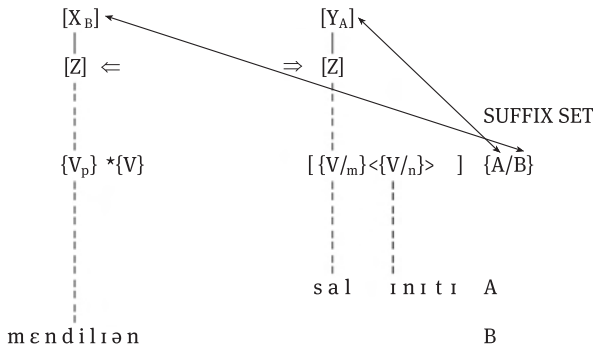
$$[X_B] \qquad\qquad [Y_A]$$
$$[Z] \Leftarrow \qquad\qquad \Rightarrow [Z]$$

SUFFIX SET

$$\{V_p\}\ *\{V\} \qquad\qquad [\ \{V/_m\}<\{V/_n\}>\ ]\ \{A/B\}$$

s a l   ɪ n ɪ t ɪ   A

m ɛ n d i l ɪ ə n   B

b.
	{V/}	{V}		{V/}	{V}
(i)	ɪ	≈ aɪ	(iv)	ʌ	≈ aʊ
(ii)	ɛ	≈ i	(v)	ɒ	≈ o
(iii)	a	≈ e			

c. *COMPLEX FOOT TRANSITIVITY (A)*

$$\{V_3\}$$
$$\{V_3\}$$
$$\{V_1\} = \{V/\}\ /\ \underline{\qquad}\ \{V_2\}\ \{V_2\}$$
C   C

d. *COMPLEX FOOT TRANSITIVITY (B)*

$$\{V_3\}$$
$$\{V_3\}$$
$$\{V_1\} = \{V/\}\ /\ \underline{\qquad}\ \{V_2\}\ \{V_2\}$$
<C>   <C>
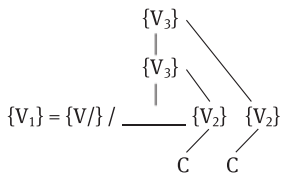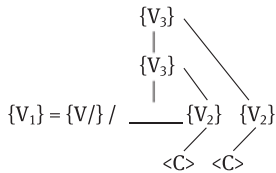
where either or both instances of <C> is/are absent

The values of X and Y and Z in (17a) range over the word classes, but principally involve noun/name and adjective, and vary with the derivational suffix. The long single lines with an arrowhead at each end link the category change to its expounding suffix. Suffixes A are those that involve transitivization of the source vowel (as in (11)), and B the set with the opposite effect (as in (16b)). And *m* and *n* again range over the numbered pairs, (i)-(v), in the generalization of (10a) suggested in (17b). (17c–d) formulate the phonological environments created by addition of some of the common suffixes associated with respectively the A and the B types. (17c) is illustrated by *-ity* and (17d) by *-ian/-ious*.

(17) illustrates perhaps the most common phonological patterns among the two different sets of suffixes, but there are divergences, as exemplified above and in the chapter that follows. (17c–d) cannot be generalized to the full sets of A and B affixes. *Bilious*, for instance participates in an A-type alternation with *bile*, but its final foot structure conforms to (17d) rather than (17c), which is not unexpected if the alternations are morphologically driven. These phonological characterizations cannot be maintained. And there are other details of (17) that require adjustment, as the further look at morphological phenomena in Chapter 28 will show. But (17a–b) spells out the core of a conception of the synchronic phenomena associated with the historical 'vowel-shift', as involving not a mutative (morpho-) phonological rule or rules but a complex morphosyntactic relationship.

But we should also note that there are some bases which can undergo both A and B depending on the suffixes, as with the 'substitution' relation in *ferocious/ ferocity* and *pertinacious/ pertinacity*. Here, as elsewhere with the alternations we have been looking at, the affixes do not determine the accent-placement, which is simply in accordance with word class and the sequence of syllables made up of the base and affix: i.e. accent-placement is syntacticophonological. This is true of much affixation, especially with non-native suffixes. But we have noted already that there are such suffixes, notably *-ic*, that, exceptionally, are also a suffix associated with type A vowel alternations – but not consistently (cf. *Hellene/Hellenic* and *academia/academic* with *scene/scenic*). However, the suffix *-ic* does seem to insist consistently on placement of the word accent on the final vowel of the base, whatever the character of its syllabic structure – as will be illustrated in the chapter that follows. In the mean time the reader might ponder further on such pairs as *pious/impious* or *apostate/apostatize*.

In Chapter 28, as already intimated, we shall pursue the relationships between morphology and word accent, as well as the role of lexicosyntactic category in the determination of placement of lexical accent. This will lead to a consideration and classification of different types of affix from the perspective of word accent and of (other) morphophonological relationships. We contrasted affix-determined accent with lexical syntactic-phonological accent, associated

with word category. And we have seen that morphophonology also formulates the effects of morphology on phonology, particularly the result of their interaction at the boundary between them.

In this chapter we have looked mainly, however, at the morphosyntax, the interface between lexicosyntactic categorization and morphology. I introduced the representation of the latter, as well as describing distinctions among different modes of word-formation. As an event, word-formation as such is not part of linguistic knowledge, though it draws on it and changes it. The modes include particularly the deployment of the broad categories of morphological structure, conversion, and neologism. Thus far we have seen that morphological means of marking word-formation comprise affixation and alternation of phonological elements. Alternations, including in accent placement, that act alone in marking derivation are often included as morphological means: a kind of internal modification of the base of the formation compared with the source. A combination of affixation and alternation was illustrated by the combination of certain suffixes with vowel alternations resulting from the historical Great Vowel Shift. We shall now pursue further the means for morphological structuring of phonology and its effects on phonology as such.

Chapter 28
Word Accent, Morphophonology, and Phonology

lexical phonological accent placement – phonology, morphology, and word-accent – sourceless bases – extrametricality – of some prefixes – of some final rhymes in nouns – of some suffixes – integrative affixes, passive and active – formative-frotting and alternation

While mainly concerned with derivational morphology and its relation to accent placement, we have encountered throughout Chapter 27 various appeals to syntacticophonological redundancies relating the placement of word-accent to the position and internal structures of the syllables of minimal lexical items, words, in accordance with the part of speech. These have anticipated some of the concepts and generalizations which will be central to this chapter. My basic assumption here is that, as concerns adjectives in the first instance, unmarked placement of word accent is on the penultimate syllabic – if, of course, there is more than one syllabic. The last two syllables are **trochaic**, but the second ('dip') part of the trochee may be unfilled.

The trochaic structure may be assigned as in (18a), where, as before, $\{V_1\}$ is a rhyme-head and $\{V_4\}$ a phonological word-head, and the hatch indicates the end of the word concerned in the lexicon.

(18) a.

$$\{V_4\}$$
$$|$$
$$\{V_1\} \quad <\{V_1\}> \quad \# \Rightarrow \quad \{V_1\} \quad <\{V_1\}> \quad \#$$

    b. cívil, cómmon, dísmal, mínor, shállow, hóllow
    c. illícit, dismíssive, clandéstine, disgústing, allúsive

In the examples in (18b–c) placement of lexical tonic is indicated by the acute accent The disyllabic adjectives in (18b) conform to the full expansion of (18a), as do the trisyllabic in (18c); the minimal alternative is illustrated, trivially, by any monosyllabic adjective.

However, there is the option of a third syllable following what would otherwise constitute the trochee, provided that this syllable is **superheavy**, i.e. the rhyme head has a segment adjoined to it – as in (19a).

(19) a. mánifèst, dífficùlt, érudìte, rétrogràde

    b.

$$\{V_4\} \qquad\qquad \{V_3\}$$
$$| \qquad\qquad\qquad |$$
$$\{V_1\} \quad <\{V_1\} \quad <\{VS_H\}>> \quad \# \Rightarrow \quad \{V_1\} \quad <\{V_1\} \quad <\{V_{SH}\}>> \quad \#$$

c. $\{V_{SH}\} = \{V_1\}$
    |

d. $\{V_4\}$
    |
    $\{V_3\}$ $\{V_3\}$
    |‾‾‾‾‾‾‾‾‾ |
    $\{V_2\}$ $\{V_2\}$ $\{V_2\}$
    | | |
    $\{V_1\}$ $\{V_1\}$ $\{V_1\}$
    ⋮   ⋮ |
    ⋮   ⋮ $\{V_1\}$

In these conditions we have a weak (secondary) accent following the trochee. To accommodate this, we can extend (18a) as in (19b), where the basic trochee permits a following superheavy syllable bearing secondary accent. (19c) interprets the subscript $_{SH}$, such that it is attached to a rhyme-head, $\{V_1\}$, that has a subjunct, which can only be another (V_1); that is, $\{V_{SH}\}$ is a head inserted by the presence of an adjunct to the basic (V_1), as indicated by the representation of the resultant configuration of vowels of *manifest* in (19d).

Now, presence of this secondary-accented syllable presupposes a preceding unaccented syllable. In disyllabics such as those in (12a–b) (from the preceding chapter), where there is a final superheavy syllabic and part of the trochee is, as it were, absent, the trochee is converted to an iamb to accommodate the final accent, whether the initial syllable is transitive or intransitive, and the former may reduce.

(12)   a.   opaque, mundane, serene
       b.   direct, overt, forlorn, superb, absurd, rotund, corrupt, alert
       c.   wanton, handsome, common, mellow

The disyllabic adjectives in (12a–b), whatever the nature of the first syllable, have final accent if the syllable concerned is superheavy – i.e. has again a rhyme that contains a vowel with an adjunct.

That is, we have the regularity formulated in (20).

(20)   a.
                                  $\{V_4\}$
                                    |
       # $\{V_1\}$ $\{V_{SH}\}$ #   ⇒   # $\{V_1\}$ $\{V_{SH}\}$ #

       b.   *ACCENTUATION IN ADJECTIVES*

                                                           $<\{V_4\}>_{*1}$
                                                            |
                                   $<\{V_4\}>_1$ $<\{V_3\}>_1$
                                           | |
       $\{V_1\}$ $<\{V_1\}>_1$ $<\{V_{SH}\}>_2$ #   ⇒ $\{V_1\}$ $<\{V_1\}>_1$ $<\{V_1\}>_2$ #

The formulation in (20b) amalgamates (19b) and (20a). What is added to (19b) is an indication of the consequences of the absence of the second part of the trochee and the presence of a final superheavy rhyme: the former, original possibility is marked in (20b) by optionality brackets linked by subscript '1', the latter by a subscript '2'. The consequence of the presence of both or the presence of only '1' is that the word accent falls on the first syllable. If both are present the superheavy final bears a secondary accent. If only '2' is present then the final superheavy syllable bears the word accent and the first syllable may or may not bear a secondary accent, depending on weight: in (12) initial intransitive rhyme heads and transitives that do not share their complement are heavy enough for secondary accent. And *overt* (and *covert*, even if the first vowel is [ʌ]) may even bear primary accent in preference to the final syllable.

The preceding account presents final placement of word accent as a departure from the unmarked. The components of (20b) are all (syntactico)phonological (not morphophonological) redundancies that are illustrated by the adjectival examples in (12), (18b–c), and (19a). Morphology can introduce other considerations, or not, as we have seen in Chapter 27 and shall look at further below, in exploring the different factors determining accentuation. (20b) is intended to characterize the template for accent placement as evidenced by the adjectives cited above. But now let's consider if the same regularities characterize other parts or speech, especially contentives, in which case reference to (contentive) part of speech would be irrelevant.

Much the same phonological regularities, indeed, characterize verbs, as illustrated by (21), disyllabics, and (22), trisyllabics.

(21)   a.   cáncel, mérit, bórrow, fóllow
       b.   ignóre, baptíze, maintaín, patról, equáte, usúrp, tormént

(22)   a.   mánifèst, márinàde, énervàte, órganìze
       b.   beleáguer, detérmine, solícit, astónish

(23)   agreé, dený, belié, dismáy

However, the syllables with final stress in (23) are merely heavy, intransitives without an adjunct, not superheavy – unlike those in (21b). On the other hand, there are the last two examples in (21a), where the simple final intransitive does not attract accent.

However, initial *a-*, *de-*, *be-*, *dis-* of (23) and various other initial sequences may be treated as prefixes that do not accept the accent; here morphology supervenes, negatively. Even if the following syllable is weak, prefixes such as those in the

examples in (24) do not integrate with their (possibly sourceless, synchronically) verbal bases to form an accentual domain; they are uniformly accentually **extra-metrical** (as are the suffixes *-ness* and *-ful* discussed in Chapter 27), indicated by the 'E' subscript to the formative bracketing.

(24)   [[an]$_E$nul], [[be]$_E$head], [[re]$_E$pel], [[de]$_E$mit], [[per]$_E$mit], [[dis]$_E$pel], [[com]$_E$bine], [[un]$_E$pick], [[in]$_E$stil]

This is a lexical property of these verbalizing prefixes, a sign of non-integration. The examples in (23) thus do not provide evidence for the acceptance of accented final syllables that are merely heavy (not superheavy). Such disyllabics are mon-osyllabic as far as accent placement is concerned. The *ob-* of *obeý*, etymologically the same as that in *obstrúct*, is now obscured, but nevertheless seems to have retained or been assimilated to the prefix pattern, in terms of extrametricality, and accented finally despite its final syllable being not superheavy. Thus, the accentuation regularity in (20b) apparently extends to verbs, provided we allow for extrametricality of the relevant prefixes. Morphological structure is only neg-atively pertinent, in terms of extrametricality.

Some prefixes are also extrametrical with other parts of speech, as with the *a-* of the adverbs in (25a), compared with adverbs such as *aptly, angrily*, *after(wards)*, *likely*, where, indeed, the suffixes seem to be inert.

(25)   a.   akin, abed, afoot
       b.   alike, around, alone, awake, asleep, alive
       c.   { {loc}}
             |
            {N}

The prefix here is the residue of a distinct native locative functor, and it remains synchronically an expression of a lexical locative, as in the minimal regular lexical representation for an adverb (as discussed in Chapter 7) in (25c). The prefix rep-resents this locative morphologically, unlike in adverbs like *down* or *now*, but as does the suffix in *slowly* and other *-ly* adverbs. However, in relation to (25b), with superheavy bases, it is not necessary to appeal to extrametricality: final accent here is phonologically regular; appeal to extrametricality is unnecessary.

However that may be, more commonly, some of the same prefixes as in (24) where part of an adjective or noun, appear to receive the accent, if the final vowel is not a superheavy intransitive, as it is in (26a), in relation to which it will emerge that final accent is the normal pattern for all contentive word classes, unlikely as it might seem for other nouns.

(26) a. desíre, desígn
      b. permít (verb) – pérmit (noun), deféct – défect
      c. pervérse (adjective) – pérvert (noun)
      d. perféct (verb) – pérfect (adjective)

Compare the verb/noun pairs in (26b): in the second example, even the heavy transitive of the final syllable of the noun fails to attract the accent away from the prefix. We return to this also below. At this point we merely note that with nouns this prefix is not extrametrical.

Extrametricality is a feature of morphology that interferes with phonological accent-placement, but the distribution of extrametricality also depends on the lexicosyntactic category of the form concerned. Adjective and noun may be contrasted in the same way as verb and adjective, as in (26c), again with a super-heavy transitive final – though these examples do not differ only in accent placement, of course. On the other hand, the verb and adjective in (26d) again differ as do the verb and noun in (26b). The prefixed adjectives in (26c) and (26d) seem to accord with different principles, involving, respectively extrametricality and its absence. The compositionality of the (26c) examples and the relation between the members of the pair are far from transparent: is prefix status for the initial sequence at all salient? It turns out that the pair are accented as you'd expect of a simple adjective and noun.

Derived adjectives, however, show a number of extrametrical suffixes, particularly where the single vowel of the suffix is transitive and onset-less – as notably in the suffixes *-ous -al*, *-ant-/ent*. Thus, we find familiar regularities to hold in (27), provided the suffix is ignored, i.e. is regarded as extrametrical.

(27) a. [vígor[ous]$_E$], [víscer[al]$_E$], [cónfid[ent]$_E$]
      b. [treménd[ous]$_E$], [parént[al]$_E$], [impórt[ant]$_E$]
      c. [desír[ous]$_E$], [retír[al]$_E$], [assaíl[ant]$_E$]

In (27a) extrametricality leaves behind the basic trochee. The extrametrical syllable in (27b–c) leaves the superheavy-syllable-accented iamb.

Also, however, the penult in an example like [defí[ant]$_E$] is merely heavy rather than superheavy, which latter seems otherwise to be the norm in final accented syllables. What might make the difference is that the intransitive of *defiant* is only final by extrametricality of the following formative, and the prefix is extrametrical in the verbal source of the base. Extrametricality is also characteristic of the *-ly* suffix mentioned above, which is mainly adverb-forming, however.

But perhaps we need to recognize that there are asymmetries in the determination of heaviness, particularly between final and medial syllables. The group-

ings that are relevant here are roughly diagrammed in (28), which appeals to varieties of rhyme structure.

(28) *SYLLABLE WEIGHT*
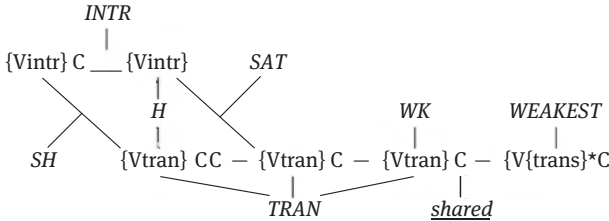
where *SH*= superheavy, *INTR*= intransitive, *H*= heavy, *SAT*= satisfied,
TRAN= transitive, *WK*= weak;
the first C following a transitive is its complement

The different groupings indicated by the italic capitals may be appealed to at different points in the phonology. In the case of *defiant*, it may be that the grouping appealed to in absolute final position would be different from that associated with pre-extrametricality. However, as suggested above, it may rather be that the prefix in *defiant* is also extrametrical, as it is in the verbal source. But in other instances extrametricality is not transmitted derivationally. Overall, the question of the universality and consistency of appeals to weight remains open. (28) is merely a repertoire of likely weight-measuring groupings.

Considerations of extrametricality lead on rather naturally, as will emerge, to the placement of accent in nouns and simple names, i.e. non-functional entitatives, {<N;P>}. For with nouns and names in general there are certain word-concluding phonological sequences that are extrametrical. Leaving these out of account, a noun or name follows largely the pattern of accent placement we have looked at in relation to the other contentives. How closely nouns and names will be seen to conform to this general pattern depends on how the extrametrical sequence is delimited.

Notice firstly, however, that final syllables like those in the examples in (29a) are as we would expect for other contentives, i.e. in accordance with the relevant aspects of the accent generalizations of (20b), now titled as applying to both adjectives and verbs.

(20) b'. *ACCENTUATION IN ADJECTIVES AND VERBS*

$$
\begin{array}{cccccccc}
 & & & & & & & <\{V_4\}>_{*1} \\
 & & & & & & & | \\
 & & & <\{V_4\}>_1 & & & & <\{V_3\}>_1 \\
 & & & | & & & & | \\
\{V_1\} & <\{V_1\}>_1 & <\{V_{SH}\}>_2 & \# & \Rightarrow & \{V_1\} & <\{V_1\}>_1 & <\{V_1\}>_2
\end{array}
$$
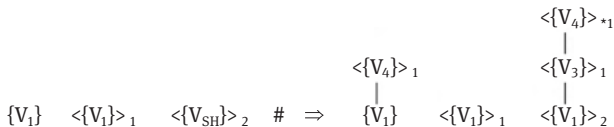
(29) a. ántelòpe, fárthingàle, domaín
      b. fíligreè, pédigreè, canoé, tattoó, degreé, decreé
      c. casíno, attórney, alúmni, búffalo, bróccoli, rádio

(29a) contains superheavy finals that, for instance, behave as we expect, But the final syllables in the forms of (29b), despite the secondary and even primary accents, are not superheavy, merely intransitive. Is it then the case that in the case of nouns, instead of superheavy, the relevant vowel in (20b') is merely heavy intransitive, in terms of (28)? However, the heavy final transitives in, for instance, *élephant* and *córmorant* do not normally bear any accent. Do we then substitute in (20b') merely 'intransitive' for 'superheavy' in the case of nouns?

But consider now the trisyllabics in (29c). For the accentuation to conform to (20b'), these forms appear to have an extra final syllable compared to typical verbs and adjectives, and it is indeed intransitive. Given that other form-types, illustrated by *cámera* and *aróma*, conform to (20b') provided that we ignore their final syllables, we might suspect the presence of another kind of extrametricality, involving phonological sequences, not necessarily formatives, in both these forms and in (29c). If the rhymes of the adjunct-free final intransitives in (29c) and others, particularly those in *-o*, are extrametrical, then the accent is regularly on what is the effective penultimate or superheavy final. We have again a direct syntacticophonological regularity; morphological structure is irrelevant here; it is indeed a general phonological regularity, where syntactic class is relevant only 'negatively', in imposing extrametricality.

However, extrametricality scarcely seems appropriate to the final rhymes in the disyllabic forms in (29b), which are simple and disyllabic, and bear final primary accent. And the other forms in (29b) might be given other interpretations. *Filigree*, for instance, is plausibly a compound, though the components lack synchronic sources, to the detriment of transparency. Such source difficulties are also true of *metronome* and many others with even superheavy finals. As discussed in Chapter 31, often the components of such sourceless compounds occur elsewhere, with a fairly consistent interpretation. And, in the present case, *fil(i)-* also occurs as a suffixed base in the semantically related *filical*, and *-gree* certainly occurs as a prefixed base elsewhere, though with differences in origin, as in *agree*, *disagree*, or, indeed, as a potential compound component in the second example in (29b), *pedigree*. This in turn provides support for a view of this last as a compound, in accord with evidence for *ped(i)-* as a sourceless compound component – even though any meaning of *-gree* in common is totally obscure. These sourceless (and other) compounds often have the accent pattern of *filigree*, with an accent for each component but the primary on the first. Notice in this respect

those like *gastropod*, which have a second monosyllabic component that also has an accent, though the rhyme is a simple transitive.

Such an interpretation suggests that the accent pattern of *filigree* and *pedigree* does not depend on the heaviness of the rhyme, nor need extrametricality be invoked. The same suggestion of compound status might also be said to be appropriate in a large number of cases beyond those already considered above, such as, for instance, *retrograde* in (19a), analysed there as prefixed, or *multidisciplinar(it)y* or *trichotilomania*, whatever the differences in accent placement. *Retrograde* and the obscured compound *nightingale* illustrate the not uncommon coincidence between the compound accentuation and the phonological regularity expressed by the full expansion of (20b') above. Choice of which is involved in particular instances depends on recognition vs. non-recognition of sourceless compound components. As indicated, this and other facets of sourceless compounds are pursued in Chapter 31. Frequently, however, such words may be simply unanalysed in mental lexicons.

I have also some doubt as to the treatment to be given the disyllabic forms in (29b), *canoé* and *tattoó*. The final accentuation of *referee*, *detainee*, *devotee*, *refugee*, etc. is a property of the suffix *-ee*, which integrates actively with the base in attracting the accent. *Canoe* and *tattoo*, however, have instead 'exotic' etymologies and complex histories, with variable spelling some of which might involve variant pronunciations. Perhaps they are exceptional forms whose accent, as with some affixes, must be marked in the lexicon. Loan words not infrequently introduce competing patterns of accentuation. Other 'exotica' are the trisyllabic *kangaroó* and *manateé*, and a few other metrically unabsorbed forms. The accentuation *mánatèe* has an accommodation to an English pattern, as with some other 'exotica' such as *bárbecue*.

Degree and *decree* from (192) do not seem to be exotic, however. Even if we attribute to the former, unetymologically, the *-gree* of *agree* and *disagree*, this simply underlines the synchronic obscurity of the putative *-gree* element. And appeal in their case, and also with *delay* to the extrametricality of *de-*, as in the case of verbs, is almost equally desperate. It is beginning to seem simplest and most realistic to regard all nouns with final intransitive vowels as not subject to nominal extrametricality, with the 'foreign' final intransitives in (29a) marked as exceptionally extrametrical. However, apart from the 'exotic' *canoé*, and *tattoó*, accented non-superheavy intransitives that are not extrametrical all involve the vowel represented as *-ee*, including the suffix of *divorcee*. This rhyme is exceptional, along with some 'exotica', in counting as superheavy. Perhaps, even, the *-ee* suffix has gained some unhistorical members.

Such phenomena and variation elsewhere in accent placement – e.g. with the adjectives *overt* (cited in (12) above) and *covert* – illustrate the problems in offer-

ing 'rules' of phonology rather than common tendencies, conventions, in relation to generalizations extracted from lexical entries. Of course, the lexical, and thus stored, status of established lexical items renders such uncertainties a natural expectation.

Say that the final rhymes in (29c) do not participate in the general regularities concerning the placement of the accent: they are extrametrical. And this is also true of other types of final rhymes in nouns and names (other than those that are superheavy, even if exceptionally counting as such), as with the others in (30).

(30) a. casín/o/$_E$, attórn/ey/$_E$, alúmn/i/$_E$, búffal/o/$_E$, bróccol/i/$_E$, rádi/o/$_E$
      b. aróm/a/$_E$, horíz/on/$_E$
      c. veránd/a/$_E$, atténd/ant/$_E$
      d. Améric/a/$_E$, cámer/a/$_E$, tóler/ance/$_E$ córmor/ant/$_E$

Notice that throughout these examples the accentuation is in accord with (20b') once we exclude what is extrametrical, the final rhyme. But extrametricality of the final rhyme of *attendant* (30c) seems to depend on the suffix being so, rather than it being purely phonologically extrametrical, given that the rhyme is superheavy. Or, more likely, in the light of e.g. *cormorant* in (30d) only intransitive superheavies are exempt from extrametricality. Noun forms ending with such a superheavy syllable in (29a) thus are not extrametrical, and conform to (20b'), as it stands, as with final superheavies expounding other contentives.

(29) a. ántelòpe, fárthingàle, domaín

But these do not include transitive superheavies, only intransitives.

Given final-rhyme extrametricality in other nouns, the effective final rhyme as far as accent placement is concerned is the penultimate. Thus, we find accent placement on the effective ultimate syllables in (30b) and (30c) in accordance with a superheavy status; but these are superheavy only if the onset of the extrametrical $\{V_1\}$ is not included in the extrametrical sequence, as shown by the bracketings. And this is also the case with the first three examples in (30a). It is strictly the final rhyme that is extrametrical. The effective finals in (30d) and in the last two examples in (30a) are not superheavy, and the word accent is on the penult – though *salámi*, for instance, preserves the Italian placing of accentuation.

These observations concerning nouns suggest that we can include nouns in the formulation in (20b') if we extend it as in (31a) to include an extrametrical rhyme – with the exceptions in (31bi).

(31)   a.   *THE PHONOLOGY OF WORD ACCENT*

$$\{V_1\} \quad <\{V_1\}>_1 \quad <\{V_{SH}\}>_2 \quad \# \quad \Rightarrow \quad \{V_1\} \quad <\{V_1\}>_1 \quad <\{V_1\}>_2$$

with the structure:

$$
\begin{array}{ccc}
& & <\{V_4\}>_{*1} \\
& & | \\
& <\{V_4\}>_1 & <\{V_3\}>_1 \\
& | & | \\
\{V_1\} \quad <\{V_1\}>_1 \quad <\{V_{SH}\}>_2 \quad \# \quad \Rightarrow \quad \{V_1\} & <\{V_1\}>_1 & <\{V_1\}>_2
\end{array}
$$

   b.   *FINAL EXTRAMETRICALITY IN ENTITATIVES*

i. $\{V_{INTR,\,SH}\}$ $= \,^*(31bii)$

ii. $\{N;P\}$

          $\{V_1\}_E\,\#$ $=$ _____

iii. $\{V_3\}$
                              |
          $\{V_{1,\,INTR,H}\}_E =$ $\{V_1\}$

(31a) needs to be complemented by (31b), which via (bi) excludes superheavy intransitives from extrametricality in nouns, with the latter being associated with word final rhymes of nouns by (bii); and (iii) assigns secondary accent to intransitive extrametricals.

(31) as a whole has nothing to say concerning secondary-accent in sequences, in longer (non-compounded) forms, that precede the domain of (31a). Of these, the sequence preceding the primary accent in *pànoráma* is typical; as indicated there, the sequence is again trochaic, with initial ictus. The primary (tonic) accent is preceded by trochees, where possible. The favouring of the trochee reflects in the first instance the left-headed-ness of the foot. The foot is the basic accentual unit; the tonic (primary accent) is a right-headed more prominent ictus. Simple functional categories are prototypical in that respect, and prototypically monosyllabic or trochaic, unless they are compounds, as are *someone, into*. One might suggest *over* and *under* have an extrametrical suffix. However, in the case of simple disyllabic nouns, final extrametricality has the same result in accent placement as the basic regularity concerning phonological accentuation in (31a): we get a trochee. We can thus dispense with extrametricality for disyllabics that do not have a superheavy final.

(31) and the remarks that follow it conclude this brief survey of phonological accent phenomena and the role of final extrametrical rhymes in nouns Against this background, let us return to morphophonology and differences in affix metricality and, in particular, our classification of the differing behaviour of sets of affixes in relation to placement of accent, which, as we have already seen, may interact in various ways with the phonological.

In terms of metricality, a particular affix may or may not be integrative with its base as far as the accent-placement is concerned. We have just been looking at extrametrical, or accentually **non-integrating**, rhymes; now we return to affixes. It was observed in the preceding chapter that the accent in sequences ending with the affix *-ity* forms, unlike non-integrative rhymes in nouns, simply conforms to the phonological regularities for assignment of accent that also apply to simple forms. Such a suffix I have described as **integrating passively** with its base in this respect, i.e. showing accent metricality. But Chapter 27 ended by introducing one of the suffixes that determine placement of the accent as a property of that particular suffix, one that thus might be described as **actively integrative** with the base. Both kinds, unlike non-integrative, or extrametrical affixes, can introduce an accentual alternation between the base and its source. The same affix may behave differently with different parts of speech (as with some prefixes discussed in Chapter 27), involving a combination of morphosyntactic and morphophonological relations.

Active integration appears to be illustrated by the range of examples in (32) of the adjective-forming *-ic* suffix introduced in the last chapter, as well as the *-ee* suffix alluded to above in this chapter, which latter attracts the accent to itself.

(32) a. cláss, átom, ártist, Íceland – clássic, atómic, artístic, Icelándic
       b. róbot, móron, Sátan, Éros – robótic, morónic, satánic, erótic

The range of *-ic* forms in (32) warrant some more attention, however. With *-ic* the accent in the derived form is uniformly on the penultimate syllable, i.e. the final syllable of the base, whatever the placement in the source. However, the first form in (32a), for instance, meets the accent requirement for the *-ic* vacuously; it coincides with that associated with disyllabic adjectives with second vowels that lack a rhymal adjunct consonant generally (cf. the synchronically simple forms *common*, *solid*), as well as coinciding with placement in the source. Moreover, the following forms in (32a), though differing from their sources in accentuation, again are trochees, conforming to the regularity in (31). And the same is true of the other examples in (32). Where the accent 'shifts', it is merely because of the addition of a final transitive rhyme: the integration is, after all, like *-ity*, passive in this respect, even in *peripatétic*.

None of the forms in (32a) manifest vowel alternation with respect to the source (except for possible reductional differences due to the difference in accent placement). Those in (32b) do show an A-type direction of vowel alternation, as in the example in (17a) in Chapter 27. The vowels concerned precede a CVCV sequence like that in *City*, though the alternating vowel is not the accented source-/base-final. And here this direction of alternation is associated with the direction of cate-

gorial change that often goes with type B (nominal to adjective). Nevertheless, this suffix triggers an A-type alternation – since the CVCV sequence is present?

(17) a. *'VOWEL-SHIFT' ALTERNATIONS*
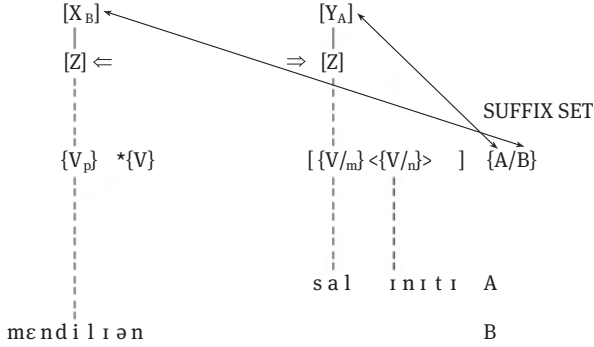
$[X_B]$ ← → $[Y_A]$

$[Z] \Leftarrow$ $\Rightarrow [Z]$

SUFFIX SET

$\{V_p\}$ $*\{V\}$ $[\{V/_m\} <\{V/_n\}> \ ]$ $\{A/B\}$

s a l   ɪ n ɪ t ɪ   A

m ɛ n d i l ɪ ə n   B

b. $\{V/\}$ $\{V\}$ $\{V/\}$ $\{V\}$
   (i)   ɪ   ≈   aɪ   (iv)   ʌ   ≈   aʊ
   (ii)   ɛ   ≈   i   (v)   ɒ   ≈   o
   (iii)   a   ≈   e

c. *COMPLEX FOOT TRANSITIVITY (A)*

$\{V_3\}$
|
$\{V_3\}$
|
$\{V_1\} = \{V/\} /$ _____ $\{V_2\}$ $\{V_2\}$
C   C

d. *COMPLEX FOOT TRANSITIVITY (B)*

$\{V_3\}$
|
$\{V_3\}$
|
$\{V_1\} = \{V/\} /$ _____ $\{V_2\}$ $\{V_2\}$
<C>   <C>

where either or both instances of <C> is/are absent

This illustrates that there remain, in some cases, at least, phonological conditions on this morphologized phenomenon. Also, the derivatives in (32b) violate the $*\{V\}$ requirement of (17a): the offender is underlined in *mor͟onic*, which follows the alternating vowel, though it is accented.

This observation, together with the non-generalizations mentioned in the preceding chapter, suggests that (17a) should be modified as in (33).

(33) a. *'VOWEL-SHIFT' ALTERNATIONS*

b.
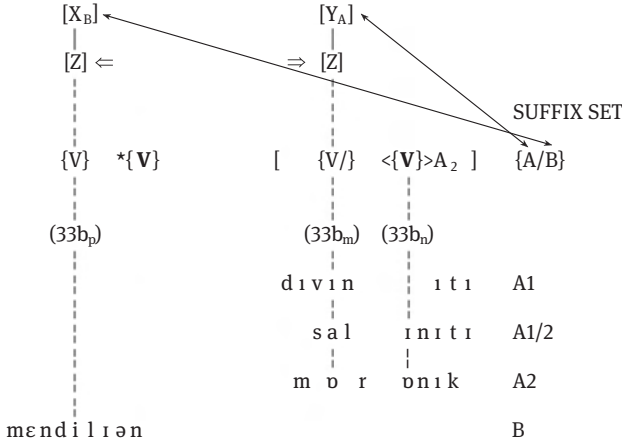
	{V/}	{V}		{V/}	{V}
(i)	ɪ	≈	aɪ	(iv)	ʌ	≈	aʊ
(ii)	ɛ	≈	i	(v)	ɒ	≈	o
(iii)	a	≈	e				

The optional transitive or intransitive vowel <{**V**}> in (33a) is present in *moronic* (type A2) and absent in *divinity* (A1); in *salinity*, where there are two alternating vowels, in one instance the <{**V**}> is absent, as in A1, in the other present, as in A2. The subscripts 'm/n/p' again range over the values (i)-(v) in (33b), so that *Mendelian* is associated with alternation (ii), direction B.

There are what seem to be eligible alternating vowels in *-ic* formations that do not participate in the vowel alternation, however, as shown in (34a), where the second example also shows suffix alternation.

(34) a. Býron, írony – Byrónic, irónic
      b. mimésis, míme – mimétic, mímic
      c. Pláto – platónic

And there are other variations, some of them displayed in (34b–c). (34b), unlike (32b), show the alternation in the final syllables in the source/base; in these examples the <{**V**}> of (33a) is absent. In the first example there is a discrep-

ancy between the final consonant of the exponent of the base and the end of its apparent source: we have what is for native forms idiosyncratic interaction at the boundary – though this Greek-based phenomenon is not isolated (cf. *neurosis/ neurotic* etc.). *Mimic* and *mime* behave as expected, but *mimic* is representative of those *-ic* forms that are more common as a noun, or verb, than an adjective. The example in (34c) not only shows a junctural insertion, but also alternation in both base syllables, like *salinity*.

As concerns metricality elsewhere, with the adjectivalizing or nominalizing suffix *-al* of (35), on the other hand, accent is assigned to the penultimates in (35a) and, of course, in the disyllabics of (35b), as expected of a passively integrated suffix, but it seems to be extrametrical in the trisyllabic adjectival derivatives of (35c), where, unlike in (35a), the penultimate is light.

(35) a. paréntal, fùndaméntal, recítal, arríval
  b. pédal, réntal, pénal
  c. oríginal, márginal, ephémeral, séminal
  d. cómical, sphérical, hystérical, métrical

But an extrametrical status for the suffix is compatible with all of the accentuations in (35a–c): the contrast between (35a) and (35c) reflects the presence vs. the absence of a superheavy final rhyme in the base. In (35d) we have combination of the last two suffixes looked at, giving us instances of *-ic*, *-al*. Accentuation of the base here follows the pattern of simple *-ic*. Thus, the *-al* is again extrametrical.

The sequences *-e/i/u-al*, like *-i*, *-ous* and *-i-an*, are associated not only with accent on the preceding syllabic, but also in (36a–b) that vowel conforms to the intransitivity redundancy (17c) (repeated above) and takes part in type B of the 'vowel-shift' alternation.

(36) a. bárony, cólony, ártery – barónial, colónial, artérial
  b. matérial, congénial, màgistérial, bactérial
  c. celéstial, terréstrial, prándial
  d. corpóreal, aéreal, funéreal, venéreal
  e. perpétual, contínual, mánual, rítual, resídual

The *-al* part of the suffix sequence is again extrametrical, but when added to the noun-marking suffix, the final vowel in the base is intransitivized and undergoes alternation B of (33). In (36a) a *-y* is found in the source, but only in *barony* is the (nominal) source for the base of the noun transparent. In (36b) morphological parsing is unclear. We might imagine that *bacterial* involves suffix substitution (cf. *bacteria*, which is also accented on the same intransitive syllable). And *màgis-*

térial also has a rather rare source in *magister* (so that it appears to introduce a vowel when compared with *magístral*, with simple *-al*). Compare the rather more transparent *mínister/mìnistérial*. The source of some of the other bases is also obscure, in present-day English, at least. (36c) illustrate that, as expected, there is no alternation if the final transitive vowel of the base precedes a complex consonant cluster.

The *-eal* of (36d) behaves as the forms in (36b) – and compare *funéreal* with *fúneral*, where both *-al*-suffixes are again extrametrical, but the combination of suffixes in the former behaves as in *colonial*. With the forms in *-ual* in (36e), there is sometimes evidence of *-u-* elsewhere, in related forms; and there is no evident vowel alternation – except in the last two items, whose base vowel alternates with the vowel of *ríte*, according to the A type (though the foot structure is that of (17c)).

As we have seen, the suffix *-ee* bears the word accent itself; it is apparently actively integrative. It has spread from its early use in legal language to be quite generally used to derive, typically, 'experiencer', or at least 'affected', nouns. These often start as jocular extensions of the vocabulary. It normally indicates a noun based on a verb whose goal experiencer (or 'receiver') it denotes, as in (37).

(37)   addresseé, legateé, payeé, devoteé, refereé

But, as illustrated by the last two examples, such formations may develop rather specialized senses. The phonologically identical suffix also bears the accent when it marks a diminutive noun, as in *bootee* and (?) *goatee*. In some examples in common use, however, the suffix can lose its accent to the base, suggesting the normal extrametricality of final rhymes in nouns: in *employee*, for instance, the accentuation varies between final and penultimate; the latter accentuation is perhaps on analogy with *employer*. But, typically, suffix *-ee* is actively integrative, even in the etymologically bizarre *marquee*.

All of the preceding gives, I hope, some indication of the complications and irregularities of affix behaviour as far as accent placement and related phenomena are concerned. Some of the examples offered in our look at affixation also illustrate a further kind of source/base alternation and of integration, different from what has been focused on above. This difference between source and base is associated not simply with the presence or absence of a particular affix, but with the phonological content of the base and affix, particular the segments at the boundary between them, where we have the results of what one might call, as I have, 'formative-frotting'. The results of frotting are again alternations between source and base + affix.

We can, however, illustrate this type of morphophonological, rather than morphological, alternation once more from instances of derivations many of

which manifest also the source/base-internal morphological vowel alternations given in (17/33b).

(33) b.   {V/}   {V}   {V/}   {V}
      (i)   ɪ   ≈   aɪ   (iv)   ʌ   ≈   aʊ
      (ii)   ɛ   ≈   i   (v)   ɒ   ≈   o
      (iii)   a   ≈   e

They thus obey the redundancies embodied in (33a), though not each necessarily involving the same parts of speech or affixes, or 'directionality'.

(38a) provides some examples with a more obvious natural phonological motivation than attaches to the relation between the base of *mercantile* in (13b) and its apparent source, if we associate that status with *merchant*.

(38) a. publicity/public, election/elect, division/divide, nobility/noble

b. $\{V_4\}$
                   |
     [p ʌ b l {V{i}}   {C{u}}   [{V{i}}   t ɪ]]   MORPHOLOGY

                            {C;V }   PHONOLOGY
                              |
                              s

c.   [ə l ɛ k {C}   [{V {i}} ə n]]   MORPHOLOGY

                    {C;V{i}}   PHONOLOGY
                       |
                       ʃ

d.   [d ɪ v ɪ {C{v}}   [{V {i}} ə n]]   MORPHOLOGY

                    {C;V{v,i}}   PHONOLOGY
                        |
                        ʒ

e.   [n ɒ b l [{V {i}} t ɪ]]   MORPHOLOGY

                   {V_i}   PHONOLOGY
                     |
                     ɪ

Formulations of the morphophonological alternation relations involved in (38a) are represented as in (38b–d) respectively. The results of these historical frottings are a sign of one kind of integration. Some explanatory comments concerning the historical developments that they reflect are in order, I think.

I have included the accent in (38b) to underline that here we have a classic **weakening** environment for the final consonant, [k], in the first formative: it occurs intervocalically and foot-medially, where the following vowel is provided by the suffix. [k] is weakened to [s], the unmarked fricative. In (38c) there is also weakening, as far as the base-final [t] is concerned, but there is also 'marginal merger', or **amalgamation**; resulting from the (assimilation to and) merger with a consonant of the suffix, the result is a compromise. In terms of Chapter 12 [ʃ] is also **u** as well as **i**; but absence from its specification of either **i** or **u** still leaves the segment uniquely represented, as with the [ʒ] of (38d). And the same kind of amalgamation can also be associated with (38d), except that, as the final plosive of the base is voiced, [d], so is the resultant amalgam, [ʒ]. The second vowel in *division/divide* also manifests the appropriate alternation in (33b), of course, despite the current, post-frotting final foot structure in the derived form. Indeed, this and similar cases confirm that the synchronic circumstances favouring A vs. B type alternation have less to do with the final foot structures formulated in (17c–d) than with the identity of the suffix itself.

The base of *nobility* in (38e), or *ability,* similarly involves an A-type (33b) alternation of the first vowel with their sources, but also a distinctive type of formative frotting is manifested by insertion between the last two consonants of the base of a vowel of the same type as the first vowel in the suffix. This is indeed not quite frotting at the morphological boundary. Moreover, it not only creates the appropriate foot structure for an alternation in the first vowel of the *mobile/mobility* type, but the insertion also makes possible the morphological structure of the derived noun that assures appropriate accentuation. It is a morphosyntactic rather than a morphophonological phenomenon, and it feeds the syntacticophonological accentuation we associate with the passively integrated suffix *-ity*. *Contrast* the corresponding vowel in *mobility*, a form which is also associated with two of the (33b) alternations, as shown by comparison with *mobile*. (38e) also manifests a variant of the accent placement we have encountered with the suffix *-ity*, but here the accent, as morphophonologically determined, is associated with the vowel whose presence reflects the frotting.

As a result of these frottings, the terminal segment of the base in (38c–d) is involved in a morphophonological alternation with the corresponding consonant in its source; and, in the case of a historical amalgamation, the affix shows synchronic alternation with other occurrences, involving the absence vs. presence of the initial segment of what in the above cases is a suffix. The morphophono-

logical alternation resulting from the juxtaposition in (38e) involves the internal presence vs. absence of an [ɪ].

Another kind of more orthodox frotting is the morphological simplification at formative boundaries of some morphologically-created geminates. Compare here the Latinate *innocent,* with an integrated prefix and de-gemination (unrecognized in the spelling, which reflects a pre-morphophonological state) and *unnerving*, with no integration, and coincidence of what would be pre-morphophonological and phonological gemination, as in the spelling. Simplification is associated with particular prefixes and their history.

Frotting in general is also often associated with morphological pre-fabrication and the often associated lack of a source of the base in an independent lexical item. In such a circumstance a recurrent sourceless base with some semantic core in common among the items containing it provides some transparency. With both prefixes and suffixes, these frotting effects themselves are often inherited from a loaning language; and again they will be varyingly perceived by users. Perhaps the most striking instance of such frotting alternation is the variation in the *ad-*prefix, largely taken, often as part of a later prefabrication, from Latin, and often via French, thus complicating the intervening history.

Consider the variants in (39), mainly verbs but also nouns like *adage.*

(39)   a.   adore, adage, adumbrate, admire, advance, adhere, address
       b.   adduce, adjoin
       c.   aspire, astringent, ascend
       d.   appear, attract, accuse, assist, assault, affront, annul, abbreviate,
            aggravate, alleviate
       e.   accept

In (39a) the historical [d] of the prefix is retained, but *adore* and *adage/adumbrate* are exceptional in that, while retaining the final consonant of the prefix, it syllabifies with the following base vowel, fully in the case of the foot-initial [d] of *adore*, but shared with the unaccented base-initial vowel in *adage* and *adumbrate*. In the other examples in (39a) the final consonant of the prefix is retained before base-initial consonants, though in the last example, despite an obscure history, it appears to have merged morphophonologically, via degemination, with the identical initial consonant of the base, and presence of ambisyllabicity and accent placement varies with part of speech and with variety of English.

This prefix is otherwise associated with a set of synchronic alternations; as with most of the suffixes in (38), it is a set of alternations that often obliterate the

boundary between prefix and base. Let us look at the frottings that produce these alternations.

In the examples in (39b) the boundary-spanning sequence is often affricativized morphophonologically, segmentally amalgamated. On the other hand, as exemplified in (39c), the final consonant of the prefix is absent before all the *s*-clusters, as they already were in Latin, though the base-initial cluster in the last example has been simplified subsequently. Before most consonants, however, there is assimilation, as suggested by the spellings in (39d). But the results are simplified and they fall together with the forms in (39c), in simply lacking the final consonant of the prefix. Thus, *assist* and *ascent* have the same (simple) medial consonant. The group in (39d) includes the form in (39e) historically, but the latter does not simply simplify subsequently. *Alleviate* in (39d) bears a final ictus, with primary accent on the antepenult, in accord with the accent generalization in (31), which is also generally not violated elsewhere in (39). But in *aggravate*, and for many users *adumbrate*, the primary accent is on the prefix, even though elsewhere in verbs it seems to be extrametrical.

Loss in many forms of the final consonant of *ad-* leads to homophony with the *a-* (as in *avert*) variant of Latin *ab-* (*abuse*), the native reduced locative *a-* (*abed, adrift*), and the (ultimately Greek) negative *a-* (*amorphous*), as well as *a-* from a number of other sources; and there is much historical (and continuing) confusion, or indifference, among users in this area.

Loans involving Latin *ob(s)-* are also variably obscure (!), even when there is no phonological obscuration, as illustrated by the range of interpretations appropriate in *obverse, obsequious, observe, obdurate, obsolescent, obstacle*. But there is also assimilation or loss before certain base-initial consonants: *offer, office, oppose, occult, occur, ostensible, omit,* etc.

As elsewhere, given morphosyntactic and morphophonological complexity, as well as semantic divergence, the manifestations of the relationships between the structures of categorially-related lexical items will be varyingly salient to different users of English. Indeed, for some users such items will be related holistically, ignoring morphological structure, but vaguely based on some resemblance in exponence and meaning. For others they may be understood as unrelated. For yet others the regularities manifested in (38), for instance, form templates for innovatory formations. Such is the variety of mental lexicons; there is no definitive set of morphological and morphophonological regularities, or definitive lexicon in general, of course – or syntax and phonology, for that matter, though in the extensive storage-based lexicon this variation is more strikingly intrinsic.

Finally, after much concern with integration and its manifestation accentually and by frotting, let us now focus on non-integration. We have seen that suf-

fixes such as *-ee* align themselves with suffixes like *-ity* in so far as they integrate themselves with the rhythmic structure of the word as a whole. They contribute to the rhythmic structure either passively, as with *-ity*, or they deflect it, in the case of *-ee*; both contribute to the determination of the accentuation associated with the phonological representation of the derived form. Loss of cross-formative gemination is another, rather different, indication of integration, as are the results of other frottings. But we have already encountered in other contexts another set of suffixes, mostly native, that are non-integrative in any of these respects: they neither contribute to the determination of accent placement nor do they show the results of frotting.

Compare the familiar **integrative** vs. **non-integrative** suffixes in (40a–b), respectively.

(40) a. lacrimosity, electricity   INTEGRATIVE
      b. tearfulness   NON-INTEGRATIVE

Extrametricality is the major manifestation of non-integration. Rhythmically, the final suffixes in (40b) might be said to be 'appendix' formatives. Similarly, the extrametrical rhyme associated with nouns is such an 'appendix' as far as metricality is concerned, but syntacticophonological rather than morphophonological. 'Appendix' is a term that we have come across elsewhere in relation to phonology. What they have in common is in standing outside types of generalization, but with respect to different types, differences that may warrant different treatments. Appendix status begs for some explanation, but different types of appendix require different attempts at explanation.

Recall from Chapter 11, as a further instance, the role as 'appendix' segments of coronal obstruents, in relation to rhymes. These include those consonants manifesting the inflectional suffixes of English, which we turn to as such in the following chapter. Such structures were represented as in (I.136).

(I.136) a.

b.

```
                                            {V}
                          {C{v,u}\{V}}      {V}
                              {V;C\C,\{V}}  {V}
                                    {V{i}/}                      {C}
                                                         {C{{u}}}    { \{C}}
                                 {V;C{c{u}}\C,\{V}}

          [g]     [l]          [ɪ]     [m]              [p]        [s]
```
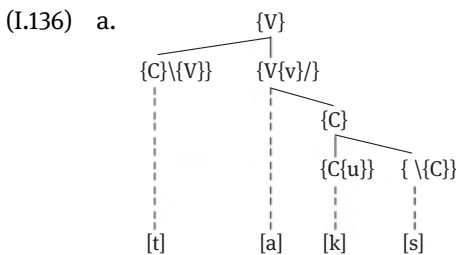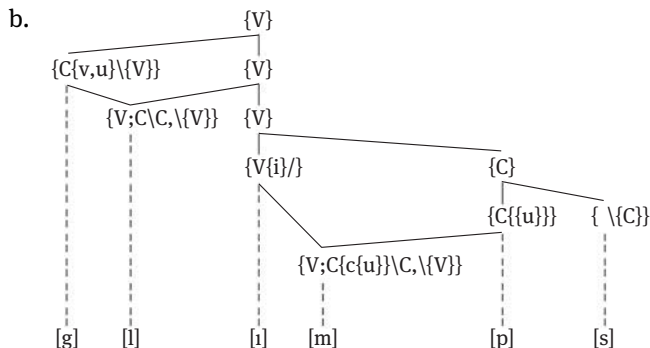
The 'appendix' [s] was interpreted as a specifier, which is 'non-integrative' and, as such, is on the wrong side of a less sonorous consonant, and it comes above other modifiers of its head, and doesn't enter into a dependency relations with them. Is the representation of non-integrative suffixes in at least some aspects the same, given that they both also lie outside an integrative element when both are present? It is tempting to suggest that there is sufficient similarity to justify the application of the term 'appendix' in both cases – indicating some degree of structural analogy.

There aren't, however, quite the same strict limitations on morphological complexity, particularly as concerns the multiplication of suffixations, as there are on the size of the rhyme. And morphological structure is primitive compared with phonological, in lacking even dependency, as well as categorial labelling. We represented the item *modality* in (2b), repeated here as (41a), and I add a slightly more complex item, *impossibility*, in involving pre- as well as suf-fix, as in (41b).

(41) a. [[mɒd[al]][ɪtɪ]]
      b. [[[im][poss[ibil]][ity]]

Suffixation, like a coda vs. an onset, is certainly more extended than prefixation. But another piece of non-analogy that follows from morphological-structural starkness is the lack of the invariant hierarchical relationship between onset and coda evidenced in (I.136), as well as of invocation of anything that is analogous to the extent that it would merit the label 'specifier'. However, as in all of (41) and (42), the distance from the root reflects height in the lexicosyntactic categorial tree. Even in (41b), with a mixture of affixes, and whose formatives are all loaned, the root is closest to the immediately following suffix, and together they form a base for the prefix to which new base the final suffix is attached.

(42) a. [[mass[ive]][ness]]
      b. [[thank[ful]][ness]]

As concerns (42a), also the native non-integrating suffix therein lies further out from the base than the borrowed integrating suffix. But, as countless examples, including (41), show, such ordering is scarcely always indicative of integrative-borrowed vs. non-integrative native. And in (42b) there are two non-integrating native suffixes.

Also, the native suffix *-th*, for instance, integrates with its (native-only) base in so far as typically provoking alternations between source and base (as we have seen). And it does not allow any other derivational suffix to precede it. And, indeed, in general a variety of factors influence deployment and placement of an affix. These include variable relative productivity, etymological-source language and age of a formative, the lexicosyntactic category of the base and of the derived item, which reflects the communicative function of using a particular formation, blocking and unblocking of potential coinings, integrative or anti-integrative status, as well as the routinization that particularly affects items that are stored or to be stored in the lexicon.

Specification, on the other hand, is (indeed) a very specific kind of 'non-integration', particularly its role in identifying a unique sub-class of modifiees. Certainly, phonological and syntactic specifiers behave differently, necessarily so given the difference in plane and their mutual relation. If, in view of this, we envisage that there is any sort of morphological analogy to the phonological – or syntactic – specifiers, it is perhaps inflectional affixes – whose character, as already anticipated, we shortly turn to in Chapter 29.

These two last chapters have mainly tried to build up a picture of the interfaces between syntactic categorization and morphology – morphosyntax – and phonology and morphology – morphophonology. A diagram of this was presented in Figure V, which gives a picture of the internal organization of exponency in the lexicon, where there is also acknowledged direct lexicosyntactic exponency by phonology (absence of morphology in particular items).

REPRESENTATION   INTERFACE

lexicosyntactic categorization

                                                morphosyntax

            morphological representation

                                                morphophonology

lexicophonological representation

Figure V: The Place of Morphology

This last is not limited to the (syntactico)phonological placement of accent we have focused on here, of course.

From the point-of-view of the speaker, the outputs to lexical syntacticophonology and morphology provide lexical phonological representations that, along with syntax, feed the construction of the pre-utterance phonological representation, which has lain outside of the scope of this chapter – which is already long enough. Another thing that has notably been neglected is (the traditional idea of) inflectional morphology; and, as diachronically much threatened, I shall try to remedy this in the chapter that follows.

But, in relation to Figure V, finally, it is worth emphasizing that the content of morphophonology as discussed in this chapter is essentially sets of alternations: alternations between source and base, in terms of both segment interchange, and of differences in accentuation; and frotting associated with boundaries of formatives can differentiate between morphophonological representations and phonological. These regularities or (at least) recurrences embody the basis of the phonological contribution to recognition of relatedness. The above figure embodies only part of the various and varied phenomena covered in this chapter, which I shall now briefly review.

Thus, specifically in this chapter we have looked at the morphophonology of derivational morphology and its interaction with lexical phonology, particularly accent placement, which is also sensitive to syntactic category. I have offered in (31a) a phonological formulation of English accent placement, which generalizes over the contentives and non-monosyllabic functional categories.

(31) a. *THE PHONOLOGY OF WORD ACCENT*

$$\{V_1\} \quad <\{V_1\}>_1 \quad <\{V_{SH}\}>_2 \quad <\{V_1\}_E> \quad \# \quad \Rightarrow \quad \{V_1\} \quad <\{V_1\}>_1 \quad <\{V_{1SH}\}>_2 \quad <\{V_1\}_E> \quad \#$$

with, on the left, above $<\{V_4\}>_1$; and on the right $<\{V_4\}>\star_1$ over $<\{V_4\}>_1$ (omitted) — as printed:

$$<\{V_4\}>_1$$
$$<\{V_4\}>\star_1$$
$$<\{V_3\}>_1$$

b. *FINAL EXTRAMETRICALITY IN NOUNS*

  i. $\{V_{INTR, SH}\}$ $= \star(31bii)$

  ii. $$\{V_i\}_E \quad = \quad \underline{\quad\quad} \quad \#$$
  with $\{N;P\}$ above.

  iii. $$\{V_{1, INTR, H}\}_E = \{V_1\}$$
  with $\{V_3\}$ above $\{V_1\}$.

(31a) applies to morphology-free items and also to derivatives with passively integrated affixes, such as *-ity*. Also recognized in the redundancy with the help of (31b) is that some kinds of final rhymes in nouns are extrametrical, and thus do not participate in the regularity except as a final sequence to be discounted – from this point of view, another appendix. Also recognized in the revised redundancy (31bii) is the exclusion of disyllabics from final-rhyme extrametricality.

We have also found that extrametricality also characterizes some affixes, both prefixal and suffixal: as commented on just above, the affixes do not integrate phonologically with the rest of the formation. But the *-ity* and many other non-Germanic suffixes form part of the domain that the accent placement generalization applies to, so that in *sincerity* the accent falls on the prepenultimate, as we would expect of a morphologically simplex noun, if we allow for extrametricality of the final rhyme. On the other hand, presence of the common noun-forming suffix *-ness* does not affect the stress placement in its base, as evidenced in the source of the base – that lexical item that corresponds, loosely in many cases, to the base semantically and phonologically.

Some bases, however, are synchronically sourceless: there are no corresponding lexical items. But we can identify bases in terms of the recurrence in different items of sequences showing a semantic-phonological correlation, or even in an opaque sequence that occurs in morphological circumstances that demand such an identification. Some of the examples in (24) – *-mit* and *-pel* – exemplify the first situation.

(24)   [[an]$_E$nul], [[be]$_E$head], [[re]$_E$pel], [[de]$_E$mit], [[per]$_E$mit], [[dis]$_E$pel],
        [[com]$_E$bine], [[up]$_E$set], [[un]$_E$pick], [[in]$_E$stil]

Even without the recurrence, as in the latter situation, there seems in certain morphological circumstances to be no other option, if we assume that a base is obligatory if it comes along with affixes or mutation. The sequence *satis* occurs only in *satisfy* and its derivatives (if we exclude the specialized *satispassion*, and the etymologically related *satiate, saturate* and derivatives). But it is a potential base.

I shall also anticipate here the discussion in Chapters 30–1 of compounds, in noting the existence of compounds with synchronically sourceless components, such as non-native *gastropod*, whose accentuation is associated with this compound structure and whose components recur in derived forms, such as *podalic* – though not, apparently, in *i-pod, podcast, podcatch* – nor does the obscure word (*seed*) *pod* seem to be related to it.

I have just reminded us of another indication of a related kind of integration of an affix is the presence of the effects of formative frotting. Frotting was illustrated in the examples in (38a), as spelled out in the representations in (38b) etc.

(38) a. publicity/public, election/elect, division/divide, nobility/noble

    b.

```
              {V₄}
               |
[p ʌ b l  {V{i}}   {C{u}}   [{V{i}}    t ɪ]]      MORPHOLOGY
                     ┊
                   {C;V}                           PHONOLOGY
                     ┊
                     s
```

The alternations resulting from this kind of frotting are particularly to be associated with established formations, whether foreign in origin, as in (38a), where it is very common or native, as in *height*, etc. Similarly, their long history of interaction means that integration is a prominent aspect of the inflected forms that are the focus of our concern in the chapter that, I keep insisting, follows immediately.

I want to (finally finally) finish here by emphasizing the consequences of the lexicality of derivational morphology and of the diachronic development of the lexicon. These are relevant to the earlier mention of productivity, and to the degree of regularity of derivational relationships in general. It is important to recognize that diachronic phenomena of word-formation such as addition of an integrating affix is manifested synchronically as related pairs with alternative accentuations, not as accent-shifts. So too historical events such as a 'vowel-shift' are not in themselves synchronic but may be manifested phonologically by related forms with alternating vowels, as illustrated by most of the (over-)familiar pairs in (2).

(2) a. [dɪvɪn[ɪtɪ]], [sərn[ɪtɪ]], [prɒfan[ɪtɪ]] – [dɪvaɪn], [sərin], [prɒfeɪn]
    b. [sɪvɪl[ɪtɪ]], [[mɒd[al]][ɪtɪ]], [salɪn[ɪtɪ]] – [sɪvɪl], [mod[əl]], [selaɪn]

(from Chapter 27). But recognition of even such relationships may very well not be part of many individual lexicons.

Partly in reflection of their historical source, affixes can be divided into two groups that display different properties, one or two noted above in other contexts. The different behaviour of these groups is again a consequence of history. There is a large group, mainly of classical or Romance origin, which are generally placed in a multiply-derived form closer to the base than members of another group, mainly native, as is shown in *competitive-ness* – though some suffixes belong to both groups. Partly to do with this relative placement, the former group have more morphophonological consequences, such as for accentuation, showing either conformity to or directing of its determination (as with *-ity* and *-ee*, respectively) and the results of frotting (as in *confusion*). This mostly is a consequence

of adoption of forms conforming to a new system beside the Germanic-based one, with individual adoptions often in a morphologically pre-fabricated form not even native to the language loaning the components. These often succumb to what have become native phonological regularities that are representative of neither source of vocabulary.

A consequence of this is that such individual formations can be morphologically opaque to different degrees, so that many connections that are perhaps clear to the etymologist are not established in many mental lexicons. Likewise, the meaning of formations involving the non-Germanic group of formations is often more drastically variable, as with *-ette* (diminutive – *kitchenette*, or imitative – *leatherette*, or female – *usherette*). Their compositions are even for many users quite obscure, as with, say, *pan-ic* or *of-fer*.

Necessarily, affixes also vary in the lexicosyntactic categorizations they can be associated with – as illustrated in the preceding chapters with affixes that are associated with 'nouns derived from verbs', etc. And the choice and placement of mode of expression is dependent on the lexicosyntactic relation currently being expressed morphologically, or by conversion, or non-overtly.

And, as we saw in the previous chapter, this categorial distinction involves a difference in mode of signification. Thus, nouns derived from verbs and adjectives typically present the actions, states, or qualities expressed by their bases as abstract entities or they involve metonymy in identifying a set of entities in terms of their argument status in relation to what is expressed by their source/base. Derived adjectives typically present a state or result of what is expressed by a verbal base and a quality associated with the kind of entity denoted by a noun base. Many verbs present processes or actions as defined by the particular argument type associated with what is denoted by their source/base. The relative prominence and frequency of these crudely characterized lexical derivation types partly determines the combinatorial possibilities of affixes. Much is lost if morphology is treated autonomously.

But we should note that there are also further restrictions on morphological expression. Sometimes the phonology of the base is relevant, as with the de-adjectival verbalizer *-en*, which attaches to bases that end in an obstruent: thus, *blacken* and *redden* but not **greenen* or **blu(e)en*, for instance. There are also further factors based on history, particularly the source language of the formatives. Thus, the de-adjectival nominalizer *-ity* has been reluctant to attach to bases derived from native sources. And etymological relationships underlie choice among the suffix forms *-able/-ible/-uble* – though the etymology leaves behind potential synchronic clues. But many such restrictions are inconsistently attested, and changeable. And this is associated with the idiosyncrasies permitted by the stored but changeable status of lexical items, which idiosyncrasies

have many and various diachronic explanations. So that what regularities as can be discerned are tendential or even sporadic rather than strictly rule-governed.

Thus, for instance, the negative *un-* is typically prefixed to verbs and adjectives. And this has sometimes been deployed in arguments concerning synchronic 'order' of 'rules' of affixation; so that the noun *uneasiness* and the like are said to be based on the negative adjective which in turn is based on the non-negative adjective; similarly, <u>*unfaithful*</u> is said to be based on the 'previous' derivation of *faithful*. But *unease* is an established negative noun – though some others, such as *unfaith*, are less common. Are we, in deriving *unease*, to appeal to synchronic back-formation (from *uneasy*, in this case) in just such isolated instances, which are rather different from the adverb-adjective case discussed in Chapter 24?

Even relative productivity of the formation types associated with the different templates provided by lexical items is scarcely stable or neatly predictable.

The content of this chapter has also highlighted the very different roles of morphosyntax and morphophonology. The former involves the exponence of categories of one alphabet – the lexicogrammatical – by another – the phonological, but bracketed into formatives. Simple items bypass morphology, of course. Morphosyntax is also principally concerned with the establishment of internal alternations that indicate derivational relationships. Morphophonology interprets any phonological consequences of the morphological bracketing, again involving alternations, but also by frotting of formatives.

This description of the structural results of word formation means that the morphosyntax and morphophonology of inflections studied in the chapter that follows is necessarily different. The area associated with traditional inflectional phenomena is characterized in present terms by conversion to or absorption of functional categories, and the affixes, the inflections, that correlate with this expound secondary features of the functional category. These inflections are traditionally taken to express different forms of the converted verb category, however. The features expressing the secondary category of tense, for instance, are often described as marking different forms of the verb to which they are attached, even though absolute tense – whose features are related directly to the moment of utterance – is present only in finite verbals, i.e. verbs that have been converted to operatives or are operatives themselves. The chapter looks at how this apparent discrepancy might be resolved, in the course of a presentation of relevant morphosyntactic and morphological generalizations and of the consequences for the storage of what inflections expound. This is what we now turn to (after the break).

Chapter 29
Inflectional Morphology and Functional Categories

inflections as manifesting minor features of a functional category – stems and paradigms – cumulation – syncretism – suppletion – modes of expression – inflectional class – tense, person, number in verbals – inflectional morphosyntax, morphology, and morphophonology – comparatives – non-finite verb inflections – the deconstruction of verbal inflections – subjunctives – morphosyntax and morphology of the copula – number, gender, and determiners – default inflections – incorporation: internal functional categories as verbal – the inflectional pervasiveness of {N} – genitives, lexical and syntactic – comparators – analogy with specifiers

Perhaps the most familar treatment of inflections is the tradition that regards them as a manifestation of secondary features of the category whose form they apparently attach to. This did not seem appropriate to the representation of morphological case, as discussed in Chapters 4 & 7, however. There they were analysed as features of the functor category, not of the nouns, their major traditional host in the classical languages. It is by conversion to functor that determiners, and (via them) nouns are associated with morphological case. Recall the Latin of (38) as glossed in (i) from the Commentary to Chapter 3 in Part I, where the (plural) form of the accusative name is represented more fully in the Commentary to Chapter 7 – though plurality is unrepresented (except in the gloss).

Chapter 3 commentary (i) Missī   lēgātī   Athēnās   sunt
                          sent   envoys:NOM   Athens:ACC   are
                          ('Envoys were sent to Athens')

Chapter 7 commentary (i)   { {loc{gol}}}
                                   |
                              {N{def}}
                                   |
                              { ᴋ }
                                   ⋮
                              Athēnās

And there have been other indications in the preceding of the need to deconstruct the categorizations associated with inflections as involving functional secondary features, typically associated with subjunction to a functional category (as with functors) or incorporation of a functional category (as with verb concord, exemplified in the concord with the plural subject of both verb forms in Chapter 3 commentary (i) above; non-contentive secondary features are what inflections

express. But I shall suggest here that the traditional view, nevertheless, gives an insight into the appropriate manner of lexical storage for the morphological structure of case-marked lexical items and other inflected forms; they are forms of the noun, for instance, whose character determines, in its case, its declensional class: morphologically the form of the noun can vary in the exponence and **syncretism** of inflection in accord with the declension. Notionally, too, the subjunction to or of a functional category does not affect the distinctive meaning of the noun **stem** concerned, unlike in contentive-to-contentive derivations.

We might approach the characterization of the traditional idea of inflection, in present terms, as the morphological expression of subjunction to or incorporation of a functional category, a functional category that gives access to secondary categories whose feature values are expounded by inflections. These inflections give an indirect indication of the subjunction or incorporation. Functional categories thus may be expressed inflectionally via their secondary features or via syntagmatically independent words, though not necessarily in the same language. Functors, for instance, may be expounded by an affix attached to the exponent of the subjoined category (frequently a non-functional), an **inflection** (*Athēnās*), or by an adposition to which this category is adjoined (*to Athens*). This dual manifestation is characteristic of functional categories and their features. Other inflections reflect incorporated functional categories, as with verb concord with a participant, as exemplified in *Max love*s *Matilda*.

However, traditionally, a lexical item which is subject to such subjunction remains the same category and derivational subclass, the same item, as far as morphological structure is concerned: the morphologically differing forms are forms of the same word, and the expression of this constant is the **stem** of the forms, as opposed to the semantically transformed base of a complex of contentive categories, as in derivation. Prototypically, an inflection, or, more exactly, an inflected form, is a member of a morphological **paradigm**: different forms of a word, consisting of stem and inflection, expound the features associated with the functional category to which is subjoined the category expounded by the stem or is incorpoated in it. And the paradigm is stored with the subjoined lexical item or (at least in grammar books) the set of items that inflect in the same way and may signal the declensional class morphologically.

Thus, the term paradigm may be extended to the set of all different non-derivational morphological expressions associated with a particular word, or the word class it exemplifies. (Indeed, the sense of 'individual model' or 'example' is still associated with the Greek word that is the source of the loanword *paradigm*.) As usual, there is to be expected in individual mental lexicons a mixture of storage of individual paradigms based on the source of the stem and redundancies associated with particular inflectional classes – **declension** classes in the case of

non-verbals, **conjugational** if verbal. The recognition of inflectional classes is based on the observation that typically in inflecting languages different subsets of a part of speech may show different exponents of the same secondary feature and even differences in the number of distinctions made. Compare the familiar English so-called 'weak' and 'strong' verbs: *walk/walked/(has) walked* vs. *ride/rode/(has) ridden*. Sometimes the inflectional class is signaled by a formant intervening between the stem and inflection, as in the Old English 'weak' verbs of 'class two', such as in *lufian* and *lufode*, the infinitive and non-second-person singular past forms of the ancestor of the *love* verb (though an *-ian* infinitive also occurs with some 'class one').

The classic example of subjunction to a functional category, however, is that whose morphological expression is morphological case: that is, the subjunction to functors of {N}. As observed, the cases of Latin and other languages are briefly described in Chapters 4 & 7 and the commentary to these. Ideally, each distinctive functor is realized by a different case, though the same inflections may simultaneously – by **cumulation** – express secondary features of other functional categories, such as the dimensionality of spatial {N}s, but also number in {N}s, and person in pronouns. This can be illustrated by *urbem* or *urbe* from (I.52) in Chapter 4, whose inflections cumulate case (accusative vs. ablative) and number (both are singular), as well as conforming to a particular inflectional class, or declension.

Unfortunately for illustration, case in present-day English is almost restricted to pronouns: *he/his/him* – nominative/genitive/neither, as is (largely suppletive) inflected gender (*she/it/he* etc.). And the non-pronominal 'genitive' inflection is not restricted to nominals and, as we have observed, its attachment is syntactically determined – as in *I know the girl who left's name* – though the head of the construction that the non-pronominal genitive attaches to is {N}.

In Chapter 9 plural personal pronouns were represented as in (I.115b).

(I.115) b.
{N{pl}}	{N{pl}}	{N{pl}}
|	|	|
{ }	{ {ego<{tu}>}}	{ {tu}}
┊	┊	┊
they/them/their	*we/us/our*	*you/you/your*
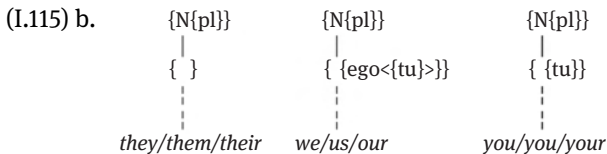
Pronouns are a part of speech that is a complex determiner; and there is no conversion of a contentive involved, though { } is indeed non-functional. The first two of those in (I.115b) are marked as nominative. To ensure this, the representations should be extended by being subjoined to a functor that in the unmarked instance is associated with the (free) absolutive of a {P}: there is a succession of

conversions to a functional category that endow *we*, {ego<{tu}>}}, for instance, with the further features {pl} and a subject/nominative feature associated with a free absolute. If { {ego<{tu}>}} is not dependent on the subject (or possibly but obsolescently predicative) functor, then it appears as *us*. In this case we have radical **suppletion**: the distinction in functor is expounded by completely different forms. With *they/them* the difference in form is only partial; and, indeed *th-* and *-m* recur in other forms with similar interpretations. Suppletion of some kind is common in the paradigms of functional categories, however, as might be expected of much employed items.

Count nouns inflect lexically only for number, which, as referential, is a feature of {N}, not {N;P}; again, conversion to a functional category is involved. Non-pronominal genitives and regular plurals, moreover, share the same inflection (distinguished only orthographically). A notorious minor declensional class takes a *-(r)en* plural, combined with vowel alternation if *-ren* is involved (*oxen, children, brethren*), which allows distinct coexpression of plural and genitive and removes any ambiguity in *child's*, where the orthographic diacritic is redundant.

However, both person and number marking in the verbals is present, if not plentifully except in the unique conjugation of the copula, which is again a functional category. Nevertheless, the functional subcategory of modal lacks such inflection – indeed any inflection, except in some instances tense or counterfactuality or null expression (*I demand that she leave*). The finite verbal prototypically 'agrees' with the subject; they are coreferential. Moreover, the only overt inflectional form of verb that signals this **verb concord** is the same as marks genitive/plurality in nouns, with the same variation in phonological manifestation. A remarkable inflectional economy! – but offering increased opportunities for ambiguity. And in all these instances we are dealing with features of functional categories incorporated to a {P}, unlike tense, a feature of a lexical modifier of {P} and {P;N} (*Fred had departed*).

And what is perhaps the most familiar example of a verbal inflection, is, indeed, that which differentiates **tense**. Tense is an example of a notional subclass of alternative features or values whose overt expression, though mutually exclusive with person-number after all other verbal stems, in the copula is cumulated with number and person. Despite, then, the inflectional poverty of English we can illustrate many of the above inflection-related concepts with these English verbal, and particularly copular, forms, before proceeding further to a more detailed examination of inflectional morphosyntax. All these 'verb' features are incorporated dependents or circumstantials. Later, we shall look in detail at the subjunctive government by or absorption of functional categories whose secondary features are expounded by the inflections involved.

When there is cumulation the paradigm may be presented in the familiar form of a grid, with forms occupying cells defined by the intersection of different categorial dimensions. Moreover, as observed, paradigms reflect not just such syntactic secondary categories, but also the inflectional (declensional/conjugational) class of the word involved; this class is defined by the particular inflectional expressions of features shared by a subset of items. The English copula belongs to a unique conjugational class, but it preserves a number of historically more widespread distinctions.

We might display the inflections of the finite indicative copula as in Table XIV, which tries to accommodate a multidimensional grid to two dimensions, partly by omitting the indicative/subjunctive dimension.

Table XIV: The Finite Indicative Paradigm of BE

		CATEGORY: tense			
FEATURES → ↓		non-past	past	← FEATURES ↓	
	sg	*am*	*was*	i	
	pl	*are*	*were*		
number	sg	*are*	*were*	ii	**person**
	pl	*are*	*were*		
	sg	*is*	*was*	iii	
	pl	*are*	*were*		

As shown there, the secondary category of tense associated with some verbals has two features, or values; so too has number, while there are three persons, two of them referring to speech act participants, {SAP}s. These are typically in concord with the subject of the verbal, as mentioned above and discussed further below. The cells here contain the forms that identify the intersection of features of these three categories, all, as we shall see, ultimately associated with a categorization involving {N}s. The table shows the finite indicative paradigm that is associated with the copula. Other finites, either, as in this case, an independent word or one to which a non-finite is subjoined, also display such paradigms, but much reduced, particularly in the second instance.

Indicative of the paucity of inflectional distinctions in English is the amount of **syncretism** – morphological neutralization – we find even in the above table: if we look down the column for past there are only two distinct forms, and the distinctions in person-number are patchily drawn on. So that the plural expres-

sion for forms of the same tense are all the same; it is only in the singulars of the unmarked present that we have a three-way distinction in person; and there is only one second person form for each of the tenses. And this table exemplifies what is in English the verbal, indeed word, that is most highly differentiated in inflectional expression of lexicosyntactic secondary categories! The forms in Table XIV also instantiate the extreme form of internal modification, introduced above, called suppletion, where we have complete-formative alternation within a paradigm, particularly of stems.

The inflectional forms in the verbal paradigm displayed in the table define a unique inflectional class, specifically a conjugational class. The typical verbal in English, belonging to the weak conjugation, has only three finite forms, one for the past and two differing non-past person-number combinations, only one of which is overt, that expounding {iii} – refering to neither speaker, {i} or {ego}, nor addressee, {ii} or {tu}. As anticipated above, the major inflectional classes are the historical 'strong' and 'weak': in the former of which finite tense distinctions in particular are marked only by vowel alternation (e.g. *drive/drove*) in the stem; the latter, by far the most productive, employs almost only suffixation (*love/loved*). Various historical developments have given us verbals which show both modes of expression (as with *tell/told* – or *be*). Again we have differences in the modes of expression of lexicosyntactic categories.

Doubtless, many such paradigms as that in Table XIV are simply stored by users of English. But the more regular or common ones also serve as examples (are actively paradigmatic!) when a new word is being inflected. The structures of paradigms are governed by morphosyntactic redundancies that can be extrapolated from its members. We now look at some of these, specifically those applying to verbal paradigms, since the nominals are relatively trivial in this respect. The main observation concerning the latter we need to add to what was mentioned above concerning the plural/genitive inflections is the existence of another minor declension in which plural marking is entirely by alternation, again allowing distinct and unambiguous expression of plural and genitive: *man/man's/men/men's*, And again the orthographic diacritic is unnecessary, and writers have difficulties in locating it, despite traditional prescriptions.

We can formulate the expressive potential and the interaction between notional classes of the typical verb as the hierarchy of redundancies in the flow-chart in (43a), which relates the secondary-feature values of the notional classes that are distinguished morphosyntactically to their morphological realizations.

(43) a. *MORPHOSYNTAX OF VERB INFLECTIONS*

```
                    *{P}           ⎡ {progressive}  [[stem.........]ɪŋ]
                     |             ⎢
infinitive = {P;N}⇒  ⎨             ⎢ {passive}⎫
                                   ⎢          ⎬
                                   ⎢ {past}   ⎭   [[stem...]{C}] or [alternation<+/-<ə>n]>]
                                   ⎢
{P} ⇒ {TENSE}  —  ⎨                ⎢                                      ⎡{iii}...]{C;V}]
                                   ⎢                                      ⎢
                                   ⎢ {pres} ⇒ {NUM} — ⎨ {sg} ⇒ {PER} — ⎨
                                   ⎢                                      ⎢{SAP}...⎤
                                   ⎢                                      ⎣        ⎬...]
                                   ⎣ {pl} .................................       ⎦
```

b. *ADDITIONAL SYNCRETISMS*

```
                        *{P}
                         |
{pres{SAP}} = {pl} = {P;N} = {non-factive} = {P{imp}}

{past} = {contrafactive}
```
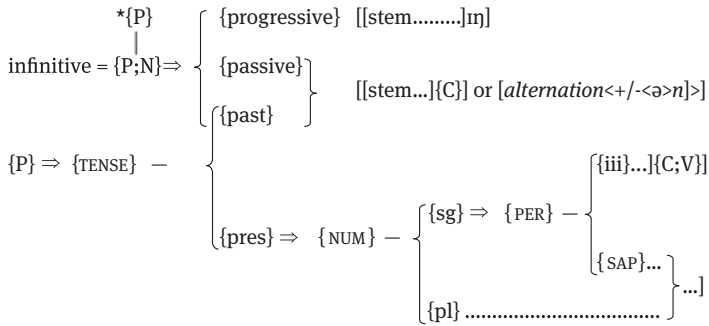
c.
```
    {P{pres}}  ◄- - - - - - - - - - - - - ⎤
       |                                  |
    {P/{loc/{N{e}}}//{sg}{iii}ᵢ}  ◄- - - ⎤|
       |                                 ||
    {P;N/...{loc{gol}}}  ◄- - - - - ⎤    ||
       |                           |    ||
    { {loc{gol}}}                  |    ||
       |                           |    ||
    {N;P}                          |    ||
       ▲                           |    ||
       |                           ▼    ▼▼
    [[[liquid                    [iz]]   es]
```
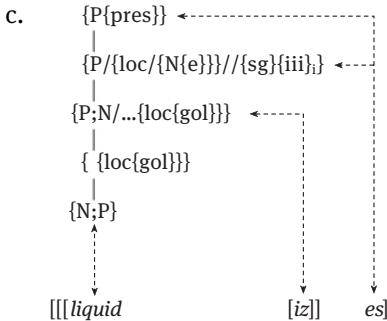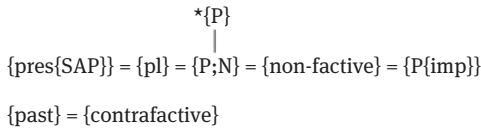
The large right facing – '{' – braces in (43a) give alternative values, and the left-facing indicate syncretisms, as does the overlap between the right-facing braces that both include {past}, the past of the non-finite perfect and the finite past – which may, however, involve different exponents, as with strong verbs such as *drove/driven*. The capitals represent notional classes and are reduced in size, except for 'C,V', which, of course, are phonological; and lower case are features of these notional classes. On the far right are any suffixes (or alternations) expounding the feature; inflections (even the genitive) are the final formative in any form.

Inflectional suffixes introduce only a terminating bracket and a stem-initial bracket; they are attached directly to the closing bracket of the stem, as in the exponence of progressive, and in (43c), to which we'll return. The non-finite forms in (43a) should be differentiated from deverbal adjectives and nouns that

typically share the same forms: we have passive-perfect (resultative) derived adjectives, such as *frightened*, and progressive adjectives, such as *frightening*, as well as deverbal nouns such as *building*, as discussed in Part II, Chapters 21–2 (adjectives) and Chapter 19 (nouns). The suffixes in their case are derivational not inflectional. The non-finites of (43a) are verb forms, however: their stems are notionally identical to the other stems in (43) and share their valency.

(43b) introduces some further syncretisms, involving in the first place absence of an overt inflection. The forms are those for present SAPs and plural, as well as infinitive (but usually adjoined to *to*), non-factive ('present subjunctive'), and imperative. Past and contrafactive ('past subjunctive') share a suffix (-*(e)d*) or alternation, or in some instances suppletion (*go/went*). Much of Part IV will explore the distribution and semantics of the categories associated with these forms, including those of the non-finites.

The representation of the nominal/progressive form, for instance, shows that the suffix introduces a pair of brackets enclosing the stem and the inflection. This is true of all inflectional exponents even if null, provided it is opposed to an overt inflection, so that the absence of the latter is contrastive: the morphological representation of a word form thus typically introduces a pair of brackets enclosing the inflection and the stem, which may be derivationally complex, as in [[[*liquid*[*iz*]]*es*]. A skeletal representation of the morphosyntax of this form is offered by (43c), where the distanced (//) valency of the lower, existential {P} is satisfied by the argument of the verb that is associated with the free absolute of the {P}. The subscripts are co-indexed in the subject at the lexicon-syntax interface. If, for instance, {iii} in (43c) is changed to a SAP feature, {ii} or {i}, the inflection is null.

Any further derivation is blocked by the inflection. A conversion to a functional category takes one out of derivational morphology; further subjunction to a functional category involves inflectional affixes or none. An inflected form, even if it has a contrastive-by-absence inflection, is Janus-faced: its syntactic face behaves in accord with its ultimate functional category (e.g. a Latin case); its morphological face is stored in accordance with the identity of the stem (e.g. a Latin noun stem), in a paradigm like that in Table XIV.

Internal functors that merely satisfy valencies of a base do not take us outside derivational morphology, of course. Recall, for instance, the representation of *student* suggested in (I.159b), whose morphological structure would involve a base and an agentive suffix resulting from suffix interchange, enclosed within a stem with a null inflection – [[[*stud*[*ent*]]], cf. plural [[[*stud*[*ent*]]*s*].

(I.159) b.   {N$_i$}
                   |
              {N;P}
                   |
           {P;N/{abs}{src}}
                   |
             { {src}}
                   |
               {N$_i$}
                   ┊
                   ┊
              student
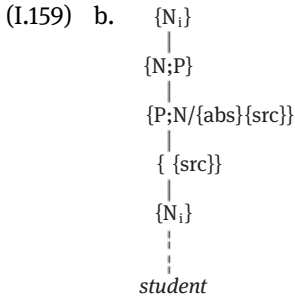
So too in the abbreviated representation in (43c). However, in diagrams I shall not be consistent is marking null inflections unless that is under discussion.

The lower part of (43a), originating in {P} (representing any finite verbal, except core modals) hierarchizes the expressive distinctions associated with the classes surrounding Table XIV – though the redundancies appropriate for the copula would be more complex than those in (43a). The upper part of (43a) introduces the features that distinguish the non-finite verb. They are not, of course, subjoined to {P}: typically, their presence is required by rection exerted by particular operatives or verbs, but other functional categories may be involved. The inflections expounding these features do not seem to conform to the generalization that inflections express the features of functional categories that are the goal of a conversion; rather, they fulfil the valency of a dedicated {P}, to constitute a periphrasis. We shall return to this observation in what follows, as well as in Part IV, where we look more extensively at the syntax of non-finite verbals.

Two of the four non-finite features are syncretized as the *-ing* form, and the other two are syncretised with the finite past, in weak verbs and some strong. In the more regular of the strong verbs the non-finite past alternations may, as observed above, be accompanied in the non-finite form with a suffix (*drive/drove/ driven*). The finite organization allows for the syncretism of person in plurals.

We need to distinguish between systematic and non-systematic syncretism: with the former the syncretics form a natural grouping, as with the sharing of {past} between {P} and {P;N}, or the silent syncretism of first and second person singular as their notional basis, {SAP}; they are not syncretized in the copular paradigm, however, even in the past – as we shall see below. On the other hand the syncretism of the {SAP} singulars with the undifferentiated plural is not systematic synchronically, though regular. Nor, apparently are the syncretisms among the non-finite forms, in the case of the *-ing-form*, either gerund or participle. On the other hand, the apparent combination of {past} and {pass} in the *-ed* form (e.g. *the suspended player*) is illusory, since an {absolutive} valency is involved, given such intransitive forms as *the fallen tree*. This participle denotes a

state resulting from an event (so past) involving an absolute. We shall return to these non-finites in connection with their synchronic combination, a combination which is lost in the corresponding periphrases, passive vs. perfect. The finite syncretisms and the left-to-right hierarchy of notional class types in (43a) reduces, as we have noted, the number of distinct finite verb inflections to three; and if the {C;V} formative were to be lost, only tense would be marked on the finite verb.

The two syncretisms in (43b) are stated separately for different reasons. The first one – the 'bare' form – cuts across a number of notional classes from the SAP and plural syncretisms of (43a) to the simple non-finite (bearing none of the features in the upper part of (43a)) to the non-factive 'present subjunctive' to expression of the imperative mood. What I've called the simple non-finite is dependent on the modal in *He may come back*. One can trace notional similarities between some of the pairs of features in this list, such as the last two, but overall it is difficult to argue for systematicity.

The other syncretism in (43b) is a very specific one, involving the indicative past and the contrafactive 'preterite subjunctive', once again a syncretism that does not characterize the copula, except by some speakers, in the use of *were*. There is some kind of natural basis for the syncretism in the sharing of non-actuality (via pastness or contrafactivity, presupposed non-factuality). Neither syncretism in (43b), of course, adds to the set of suffixes; they merely extend the scope of existing syncretisms.

As is familiar, the suffixes {C;V}} and {C}} of (43a) vary in precise shape, both, in the first place, in nominal and in verbal forms: *kisses/fishes*, but *bats*, *beds*; however, the {C} suffix is only verbal, as in *patted* but *snipped*, *stabbed*). There are in each case three parallel variants: [s] ≈ [z] ≈ [əz] and [t] ≈ [d] ≈ [əd]. The variation involves a regularity resulting from a little phonologically natural frotting with the stem-final segment, including voicing agreement with it and epenthesis between them. All of the realizations of these inflections are associated with the phonological nature of the stems they are attached to. The result of this can be formulated in the morphophonological redundancies of (44), using the C,V + c,v phonological notation of Table IX from Chapter 13 – repeated here for ease of reference.

(44)   a.   *REALIZATION OF FINITE VERB AND NOUN INFLECTIONS*
              stem terminus   *inflection*
              MORPHOLOGY   ]   {C<;V>}]

MORPHOPHONOLOGY

b.　$\{C_{x,y}<;V_y<\{\{v\}\}>>_y\}<\{v\}>]$　　　　$\{C_{x,y}<;V_y>\}$] --

　　　　　　　　　　$\{V\}$

c.　$\{v\}$　　　　　$\{V\{\ \}\}$　　　$\{C<;V>\}$

　　　　　　　　　　　　　　　　　$\{v\}$

PHONOLOGY　　　[ə]　　　　　[d/z]　　　[t/s]
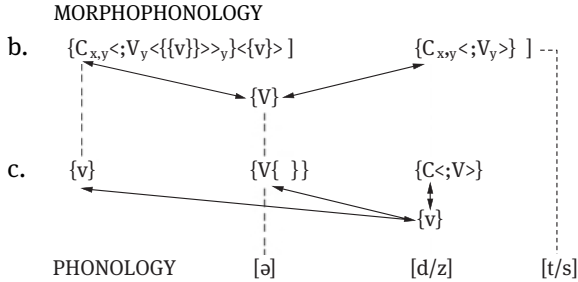
Table IX: English Obstruents in CV Representation

	Labial	**Coronal**	**Tongue Body**	
Anti-voiced:	{c<,v>{c}}: [pʰ/ʔ]	{c<,v>}: [tʰ/ʔ]	{c<,v>{v}}: [kʰ/ʔ]	Plosives
Neutralized:	{c}: [κ]	{ }: [τ]	{v}: [κ]	{C}
Voiced:	{v{c}}: [b]	{v}: [d]	{v{v}}: [g]	
Voiceless:	{c{c}}: [f]	{ }: [s]	{c{v}}: [ʃ]	Fricatives
Mellow:		{ {c,v}}: [θ]		{C;V}
Voiced:	{v{c}}: [v]	{v}}: [z]	{v{v}}: [ʒ]	
Mellow:		{v{c,v}}: [ð]		

The formulation in (44a) specifies that the inflections concerned, {C}] and {C;V}], collectively {C<;V>}], are, other things being equal, realized as the unmarked plosive and fricative, represented in Table IX as {C{ }} and {C;V{ }}, and abbreviated in (44) as [t] and [s]. The C;V option in (44) applies to third person verbs and non-modal operatives, to most suffixed noun plurals and, as we shall see, to genitives. The C alternative is verbal only, except that it also applies to deverbal adjectives in -*ed*.

The morphophonological redundancy (44b) gives the first result of frotting at the stem-inflection boundary; this frotting feeds the following redundancy in (44c), which assimilates the inflection to a preceding voiced segment. Vowels and sonorants are redundantly voiced: {V>{v}}. And by (44b) a reduced vowel (so redundantly voiced) is introduced between the inflection and a preceding formative that ends as specified there, i.e. a voiced or voiceless minimal plosive, or a sibilant – a voiced or voiceless minimal (coronal) or tongue-body fricative, and also affricates, which are fully specified as {{C}{C;V}<{v}>} – which expands, in C,V terms, on (I.143b) in Chapter 12.

As formulated in (44c), either of the inflectional variants, plosive or fricative, is simply voiced after a voiced segment ('<{v}>'), which, as observed, automatically extends to vowels (which are redundantly voiced), and even sonorants

(which are also such), and this includes the vowel intercalated by (44b). This assumes, in accord again with Chapter 13, that vowels and sonorant consonants have a redundant highest {v} (voicing). The formulation in (44c) constitutes a morphophonological extension of the phonological regularity in accord with which adjacent obstruents agree in voicing; but in (44c) all pre-inflectional consonants and vowels participate in the context. In this way, the frotting of (44c) precedes and feeds the simple phonological realizations abbreviated at the end of (44).

I have underlined an interesting consequence of the formulation in (44). It refers to redundant as well as contrastive voice: voice in vowels and sonorants is redundant, but stem-finally they induce a voiced realization of these inflections. Morphophonology can be sensitive to the non-contrastive, but as long as the feature is contrastive elsewhere in the language.

As a whole, (44) specifies these two sets of alternation, as found in regular verbs, nouns, and derived adjectives like *impressed/surprised/excited*: [s] ≈ [z] ≈ [əz] and [t] ≈ [d] ≈ [əd]. (44) is a complex structure-building redundancy like others we have encountered, in this case adding an intercalation and/or a voicing to the two sets of inflections. The second set of alternations is distinctive of the weak verb inflections and the etymologically related suffix deriving adjectives from verbs, and the first is associated with the prevalent nominal inflections, as well as all verbs. But, of course, we do find instances of plurality marked by other suffixes (*ox/oxen*) or by vowel alternation (*foot/feet*) and even instances of past tense where stem vowel alternation accompanies the weak inflection, as in *slept* (cf. *sleep*), and others (descendants of the strong class) where tense is marked by vowel alternation alone. Note too such adjectives as *blessed* and *beloved*, which can have an intercalated vowel.

But perhaps the most striking complication is illustrated by those marked nouns that, when expounding their inflected plural, voice stem-final labial or dental voiceless fricatives. These are illustrated by *wife/wives* and *mouth/mouths*. As a consequence, the exponent of the inflection is voiced in accordance with (44c). There is some variation here, so that we encounter both *loafs* and *loaves*, *roofs* and *rooves*. The voiced stem finals in verbs *griev(s/d)* and *mouth(s/d)* express, however, derivation of the verb.

The contrafactive subjunctive in the protasis of such as (45a) and the non-factive subjunctive in the subordinate clause in (45b) remind us, rather belatedly, that (43a) lacks a provision for the vestigial English inflectional subjunctives.

(45) a. They demanded that he resign
      b. If she loved him she wouldn't behave like that

But this was partly compensated for in (43b), repeated here.

(43) b. *ADDITIONAL SYNCRETISMS*

$$*\{P\}$$
$$|$$

{pres{SAP}} = {pl} = {P;N} = {non-factive} = {P{imp}}

{past} = {contrafactive}
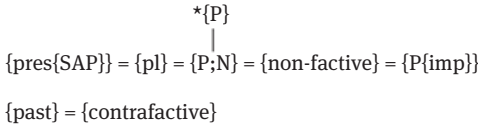
There I identified their realizations in terms of the syncretisms they participate in: the non-factive subjunctive of (45a) lacks an overt inflection where one is usual; the contrafactive of (45b) shares its inflection with the past. The former is also the realization of the infinitive, for instance, associated, as are the other non-finites, with the lack of a {P} to which it is subjoined (as in *I saw you leave*, *you may leave*), as well as involving rection by the functor *to*, but differing from these other non-finites, indeed contrasting with them, in lacking an overt inflection. The 'bare' form also occurs in the imperative mood.

The hierarchization of finite distinctions will obviously be different from that in (43a) for the paradigm of the copula in Table XIV. It is indeed more differentiated, as shown in (46a) – which also reveals the particular complex syncretisms and suppletions in this asymmetrical system of expressions (in non-rhotic form).

(46) *THE FORMS OF OPERATIVES*

a. *THE COPULA*

SYNCRETISMS   i) $*\{P\}$
               $|$
              {P;N} = {non-factual} = {P{imp}}

ii)   {finite, past, pl/ii,sg} = {contra}
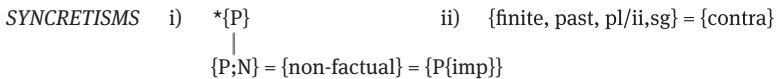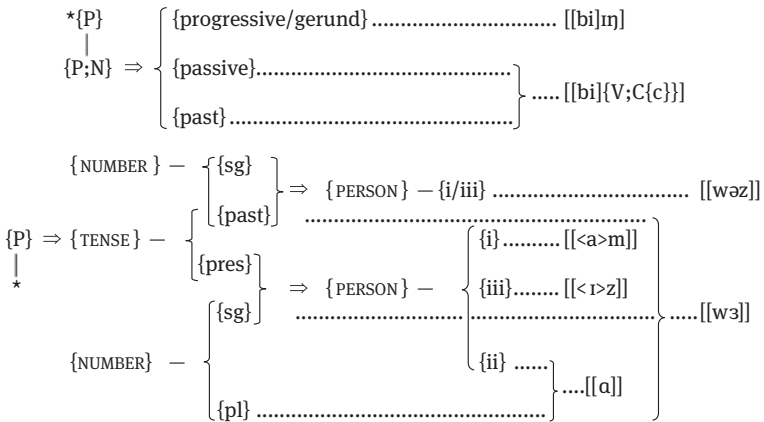
    b. *PERFECT* HAVE

        as (43), except for alternation before finite inflections:
        [[hav]] ≈ [[ha]/{C<;V>}]

    c. *OPERATIVE* DO

        as (43), except for stem vowel alternation before inflections:
        [[du]] ≈ [[dʌ}]/{C;V}] or /{V;C{c}}] ≈ [[{dɪ]/{C}]

Be is particularly distinguished by the fact that the non-factive subjunctive and
the imperative do not share a form with any of the finites in (46a): it is indeed *be*,
which is also the stem for formation of the non-finite forms. (46b) has to do with
perfect *have*, which shows the same pattern as a weak verb, except that the forms
have a stem alternation, apparently as a result of frotting; it can also function
as a verb, of course, with the same alternation. So too with operative and verb
do, as represented in (46c), which however differs from *have* in showing more
inflection-triggered alternation, viz. in having, like *be* (*been*), a strong perfect/
passive participle (*done*). A few other verbs (such as *make, say*) show alternation
before the inflections in (46b). As is well-known, the modal {P}s lack any inflec-
tions, except a limited tense distinction and an indicative/subjunctive distinc-
tion. Thus, *could* contrasts with *can* in tense or in representing contrafactivity (for
some further discussion see Part IV).

    The class of inflections, including case (to which we return), is thus limited
in membership in present-day English. But much of what follows is illustrative
of the profound consequences of the contents of (43) and (46), in particular. First
of all we can distinguish more explicitly the two morphosyntactic possibilities
universally available that were distinguished initially, between independent real-
ization of a functional category and its being the target of a conversion whose
presence is evidenced by the inflections associated with the complex category
thereby created, as in the representations in (47b–c) respectively for the compar-
ative adjective and perfect operative in (47a).

(47) a. She had wanted a warmer dressing-gown

    b. {P.N/{loc{src}}} ◀╌╌┐
           │   ╎
        {P:N}   ╎
         │   ╎
         ▼   ▼
        [[*warm*]   *er*]

c. {P}
    |
    {P/{loc/{N{int,e}}}{P;N}} ………. { {loc}\{P/{int,e}}}
    | |
    {P/{P;N{past}}} ….. { {loc}}   {N{TEMP:past}}
    ↑ | |
                       {N{int,e}}   {P;N{past}/…}
    ⋮   ⋮ ↑   ⋮
    ↓   ↓ | ⋮
    [[*ha*]   *d*] *wanted…*
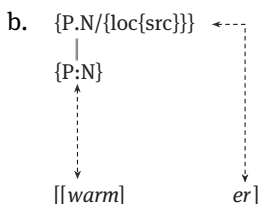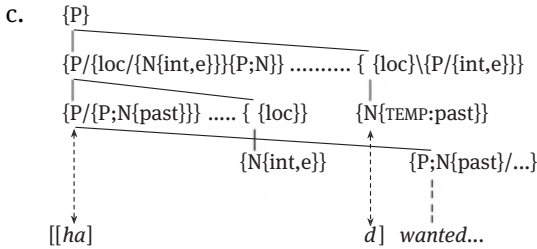
In (47b) the inflection manifests conversion of an adjective to the comparative
functional category {P.N} (with a directional valency, with the source potentially
satisfied overtly by *than*). In the rather more complex (47c), the feature {past} of
{P} of such as (I.170c) from Chapter 15 has been deconstructed (and there is more
of that to come):

(I.170) c.   {P{past}/{P;N}{loc{src}/{N{int,e}}}}
                                  / | \
            { {abs}}   { {loc{src}}}   {P;N/{src{abs}}}
               | | |
         { {src{abs}}}   {N{int,e}}   ⋮
               | ⋮   ⋮
             {N}   ⋮   ⋮
               ⋮   ⋮   ⋮
            Dolly   *didn't*   *arrive*
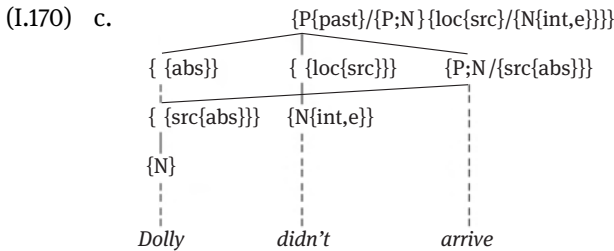
In (47c) the inflection represents a locative functor with subjoined determiner,
and the functor serves as a circumstantial to the existential {P}, so that the latter
is subjoined to this other {P}. This introduces a new configuration expounded by
inflections, conversion to a functional circumstantial.

The basic finiteness element is an existential, whose existential valency is
abbreviated here as {P/{N/{int,e}}} ('is in existence'). The temporal is past, an
abbreviation for a further deconstructed configuration that specifies that location
in time of the scene represented is prior to the reference point, here, in (47a,c), the
time of utterance. But in (47c) there is a further (undeconstructed) past, **relative**
to the upper past, which is an **absolute** tense, i.e. related directly to the utterance
reference. And note again that (47c) also shows some formative frotting. (47c),
further, has introduced a tensed {P;N}. The deconstructing of that will lead us to
another relationship expounded by inflections, different from the conversion to
or absorption of functional categories. I take this up in a moment.

In (48a), the operative is dispensed with, so that a verb is assigned to a finite-
ness element, which is then subjoined to a {P} introduced by the needs of the
circumstantial temporal, as shown by representation (48b).

(48) a. She wanted a warmer dressing-gown

b.

{P}

{P/{P;N}{loc/{N{int,e}}}} .... { {loc}\{P/{loc/{N{int,e}}}}}

{P;N/...} ......{ {loc}}   {N{TEMP::past}}

{N{int,e}}
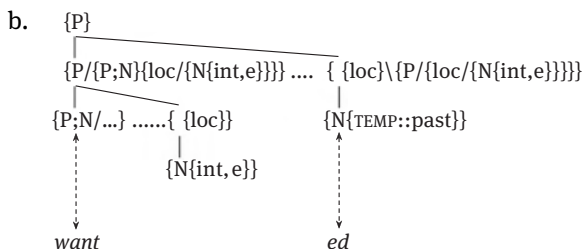
want   *ed*

c. She wanted a warmer dressing-gown when I spoke to her

d.

{P}

{P/{loc/{N{int,e}}}}.....{ {loc}\{P/{N{int,e}}}}

{ {loc}} ...... {P;N}   {N$_i${TEMP:past}}

{N{int,e}} {P;N/...}   { {loc}\{P;N}}

{N$_i${TEMP}/{P}}

want   *ed* *... when I spoke to her*
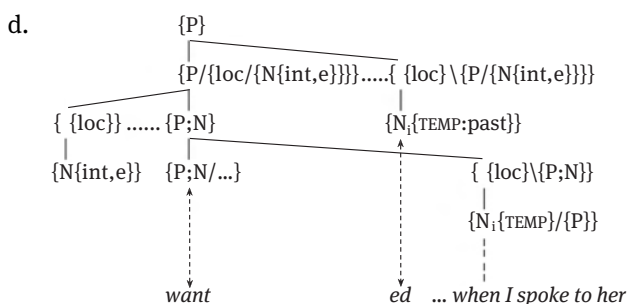
(48c) introduces an overt appositional circumstantial that corefers temporally with the tense, as shown in (48d).

However, as observed above, in passing, the verb in (47a), as well as the operative, also involves a temporal; indeed, this is required by the operative, in its role as a periphrast. And this does not involve conversion to a functional category, as the attentive reader may have already observed and remembered concerning the non-finite 'inflections'. I suggest that in the perfect form there is subjunction to another {P;N}, and this {P;N} is inserted again by a circumstantial tense locative; and this the configuration is required by rection from the periphrast, as represented in the further deconstruction of (47a) suggested in (49a), involving the verb of the perfect periphrasis, while (49b–c) combine this configuration with a syntactic circumstantial.

(49) a.

```
{P}
 |
{P/{loc/{N{int,e}}} {P;N}} .......{ {loc}\P/{e}}}
 |
{P/{P;N{past}}} ....{ {loc}}       {N{TEMP::past}}
        ↑                ↑
              {N{int,e}}  ⋮   {P;N{n.p}}
                              |
                             {P;N}
                              |
                         {P;N/...}      { {loc}\{P;N}}
                              ⋮               |
                                        {N{TEMP::past}}
                              ⋮               ↑
 ↓                        ↓   ↓              ↓
[[ha]                     d] [[want]        ed]...
```
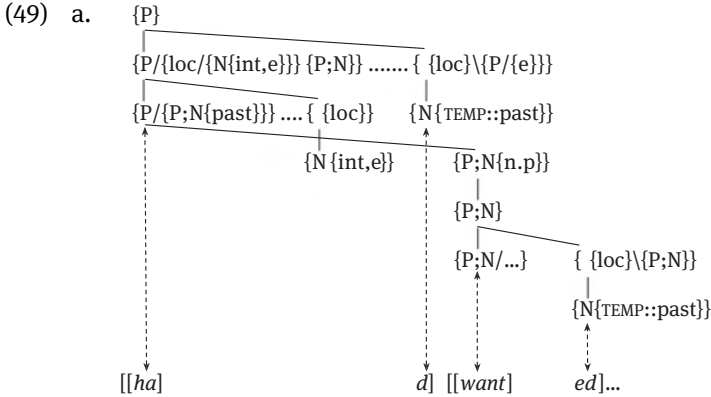
b. She has wanted a warmer dressing-gown since then

c.

```
        \
     {P;N}
      |
   {P;N{n.p}}          { {loc{src}}\.......... {P;N{p.n}}}
      |                                    |
   {P;N}              {Nᵢ{TEMP}}    { {loc}}
      |                                    |
   {P;N}  { {loc}\{P;N}}          {Nᵢ{TEMP}/{P}}
          |
       {Nᵢ{TEMP::past}}
      ↑      ↑              ↓       ↓
    want    ed            since   then
```
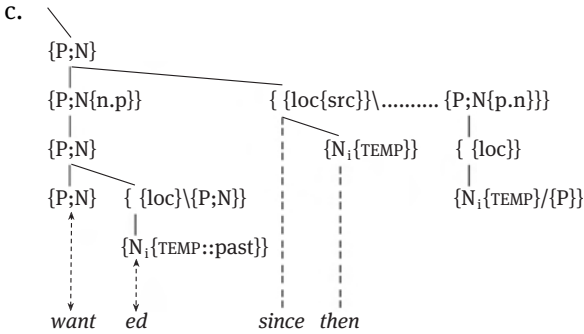
Overt locative circumstantials such as that in (49b) are co-indexed with the temporal locative dependent on the lowest {P;N} of *wanted*. The participle {P;N} is marked as stative by the {n.p} secondary features, as also represented in (49a,c).

Historically, this participle is a derived adjective – as in *He is frightened*. The formation has been (re-)adopted as a verbal past participle that retains the resultant stativity of the adjective, indicated by the secondary feature {n.p} in (49a,c). (50a) offers a simplified version of (II.75b) illustrating the structure of such an adjective but ignoring the structure of the past tense of the base verb that explains how the state adjective is shown here as a 'result'.

(50) a.   {P.N}
            |
            {P:N{result}}
            |
            {P;N {past}/{src}}
            |
            {P;N/{abs}{src{loc{gol}}}}
            ┌──────────┐
            { {abs}}   { {src{loc{gol}}}}
            | |
            {N}   {N$_i$}
            ┊
            frightened
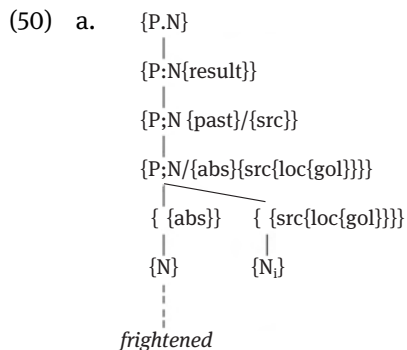
  b. *PERFECT PARTICIPLE FORMATION*

                    {P;N{p.n}}
                    |
                    {P;N}
                    ┌────────┐
        {P;N} ⇔   {P;N}....{ {loc}}
                            |
                         {N{past}}
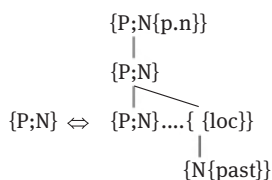
If the adjective is predicative, the experiencer argument in (50a) is coindexed with the subject, whereas the experiencer would not be the subject of the basic causative verb. The adjective, {P:N}, is based here on a past causative directional ('cause fear in/to'); it denotes a resultant state. When such an adjective is diachronically reverbalized, the state sense of the adjective remains in the form of the secondary features {p.n}, and the 'result' sense is associated with the relative past tense of the verb involved, as in (49a,c). This means that the lexical circumstantial in the redundancy in (50b) that modifies the basic verb is unusual, as a circumstantial, in adding to the specification of the replica of the basic {P;N}; it is derivationally 'active' in that the derivation of the non-finite requires its presence.

   For a further illustration of the perfect and its relation to other phenomena, let's re-consider (I.169c) from Chapter 15 in Part I, where the representation includes an upper (declarative mood) {P}.

(I.169) c.

```
                              {P{decl}}
                                 |
                          {P/{loc/{N{int,e}}}}
                ┌────────────────┴──────────────────────┐
            { {abs}}    {P{pres}/{P;N{past}}}················{ {loc}}
                |                    |                          |
            { {abs}}       ┌─────────┘                      {N{int,e}}
                |       {P;N{past}/{src{abs}}}
          { {src{abs}}}
                |
              {N}
                |
                |
             Dolly        has      arrived
```
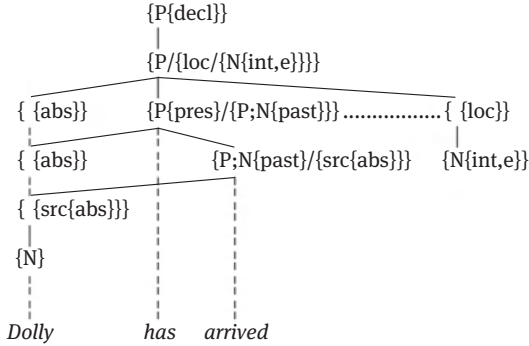
We can now expand (I.169c) as in (51), incorporating the deconstruction of the perfect form:

(51)

```
                          {P{decl}}
                             |
                            {P}
                             |
                  {P/{P;N}{loc/{N{int,e}}}}····················{ {loc}\{P{e}}}
            ┌────────────────┴───────────────────┐                |
        { {abs}}     {P/{P;N{n.p}}}····· { {loc}\{P{int,e}}}   {N{pres}}
            |                |                        |
        { {abs}}       ┌─────┘              {P;N{n.p}}  {N{int,e}}
            |           |                        |
        { {abs}}        |                      {P;N}
            |           |                        |
            |           |          {P;N/{src{abs}}}····· { {loc}\{P;N}}
      { {src{abs}}}     |                   |                   |
            |           |                   |               {N{past}}
          {N}           |                   |                   |
            |           |                   |                   |
         Dolly         has            [[arrive]               [d]
```
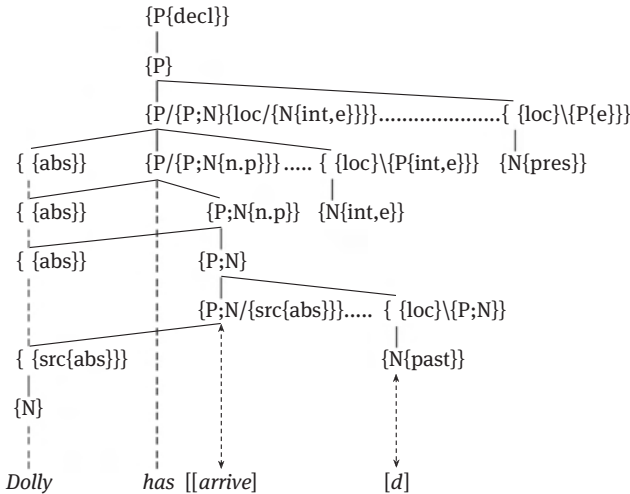
(51) incorporates the configuration allowed for by (50b), but the {past} feature continues to abbreviate the tense configuration itself. The representation also spells out the morphosyntactic relationships pertaining to *arrived*. The status of **absolute tense** – the {pres} in (51) – and **relative tense** – the {past} there – is rather different, crucially in terms of the rectional status of the latter. Absolute tense, on the other hand, is optional, to allow for statements that are intended to be understood as applying timelessly. These observations accord with the notional status of relative tense, whereby it is subordinate – understood relative to – an absolute tense. If the tense is relative to a timeless governor the former refers to a time preceding any time.

The English passive participle, again typically marked by the *-ed* suffix, retains the other property of the adjective in *-ed*, namely its de-transitivized character, but not its stativity. We shall now turn in a little more detail to its properties, as a prelude to our looking in more detail at the syntax of periphrases in Part IV.

(52) a. Fred was rescued (by Rosie)

b.
$$\{P/\{P;N\{pass\}\}\}$$

{ {abs}}		{P;N{pass}/{src} {abs}}
{ {abs}}		{ {src}}
{N}		{N}
Fred	*was rescue*	*d*

c.
$$\{P\}$$
$$\{P/\{loc/\{N\{int,e\}\}\}\} \text{ .... } \{ \{loc\}\backslash\{P\}\}$$

{ {abs}}	{P/{P;N{pass}}} .... { {loc}}	{N{past}}
{ {abs}}	{P;N} {N{int,e}}	
	{P;N/{abs}} ◄----- { {{src}}\{P;N//{ /{N$_i$}}}}	
{ {abs}}	{P;N/{src}{abs}} {N$_i$}	
{N}	{ {src}}	
	{N$_i$}	
Fred	[[*was*]] [[*rescue*]]	*d*] *by Rosie*
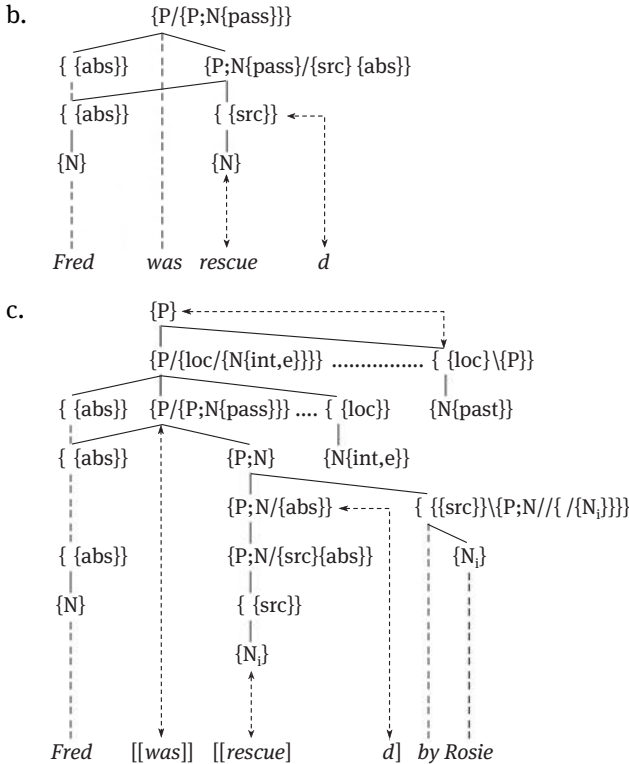
The provisional representation of the non-optional part of (52a) that is given in (52b) ignores structures associated with tense. And the feature {pass(ive)} in {P/{P;N{pass}}} abbreviates the passive configuration of the verb, whose morphological exponence is included. (52c), as well as showing tense, deconstructs the diathesis, and includes a circumstantial, whose {N} is coreferential with the lower verb's valency-satisfying incorporated {N}, the argument of the relation highest on the subject selection hierarchy. Here it is a valency rearrangement that is expounded by the inflection, but again, of course, converting a {P;N} to a different kind of {P;N}, as in the perfect of (51).

The other inflection attached to a simple non-finite verb is different once again from both perfect and passive, in that it involves conversion to a primary functional category that is not subjoined to a contentive; and, of course, no coreferentiality is involved. This is the progressive, exemplified in (53a) and provisionally represented in (53b), which aims to capture progressiveness in terms of recognizing that verbs may have interiors, as can deverbal nouns in *-ing*.

(53) a. Frances is running

     b.
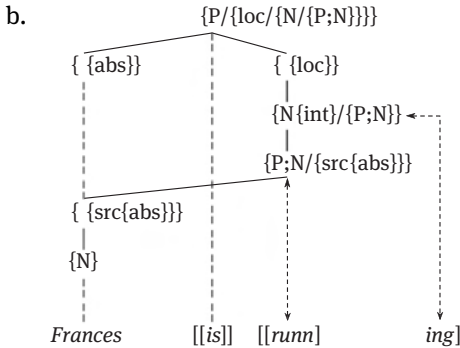
This conforms to the picture of an inflection we have otherwise been envisaging, in involving conversion to a functional category, indeed, two, successively. But we shall look in Part IV at a slightly more complex variant that recognizes both the existential component in its meaning and its relationship to the gerund, such as that in the sentence in (28a) from Part II, as well as to the adjective in (II.59a,c).

(II.28) a. Fred's building of his house was frequently interrupted

(II.59) a. That trip was frightening (for Julian)
       b. That trip frightened Julian
       c. that frightening trip

The synchronic constructional spread of the *-ing* form reflects a complex interactional history involving historical 'participles' and 'gerunds' and the *be a-V-ing* construction (with another etymologically locative prefix). The synchronic roles, however, are more helpfully studied in relation to syntax.

To some extent all of these non-finite inflections (if such they are) involve increase in functionality. But more striking is the sharing by the participles of being required by rection, which we shall take up again in Chapter 36, in the discussion there of periphrasis. Of the three verbal constructions – passive, perfect,

and progressive – the first interacts most intimately with the valency relations involving the verb, in showing change of and internal satisfaction of a valency; and the second, least interaction, adding only rection of a {P;N{p.n}} and past tense; the progressive is intermediate, as involving a marked valency for the copula, which normally rejects verbal complements. This is perhaps reflected, when all are concatenated, in the relative linear closeness to the verb of the operative: from least interactive to most, perfect, progressive, passive. But this order also correlates with other, perhaps more significant, properties of the constructions (as also discussed in Chapters 36–38).

Thus, we return in Part IV, Chapter 36, under the rubric 'grammatical periphrasis', to the syntactic and morphosyntactic role of these operators, whose valency includes a non-finite form differentiated inflectionally. We shall also examine the modal operators, whose complement is typically an uninflected verb form. Even at this point we can remark that this form is the unmarked non-finite, with minimal interaction among valencies in its relationship to the modal. This is consistent with the initial position of the modal in *They may have been being deceived*, furthest from the verb.

As noted briefly above in the context of syncretisms, this uninflected final form appears in a number of other syntactic environments, including its role as a complement traditionally labelled 'infinitival', as exemplified by the italicized forms in (54a–b).

(54)   a.   She may *arrive* late
      b.   I heard her *arrive*
      c.   He went there to *visit* his sister
      d.   He likes to *visit* his sister
      e.   *Visit* her a lot more
      f.   They demanded that Forbes *submit*

As discussed in Chapter 17 of Part I, it also serves as the verbal complement to the functor *to*, which latter may be either saliently directional or purposive, (54c), or not, (54d): so respectively categorized as { {loc{gol}}/{P;N}} or simply { { /{P;N}}}. The (finite) imperative mood of (54e) (see again Chapter 15) is also uninflected, as is the so-called 'present' subjunctive of the subordinate verb of (54f).

In the repeated (45a) it is paired with the other subjunctive, again in the subordinate clause.

(45)   a.   They demanded that he resign
      b.   If she loved him she wouldn't behave like that

The other subjunctive, the historical 'preterite' subjunctive of the conditional clause in (45b) is inflected, as we have seen, and can see, though it is only marginally distinguished in expression from the past tense. Thus, we have coincidence of the subjunctive form with the tense in (45b) and (55a) but not in (55b).

(55) a. I wish he lived nearer
      b. I wish he were here
      c. They demanded that he resigns
      d. They had demanded that he resigned

And often the same form that marks past tense (singular Ist and IIIrd person), *was*, is used in the circumstances of (55b). Similarly, the vestigial 'present' subjunctive form also may give place to an indicative, as in (55c). Any instance of the 'preterite' subjunctive is therefore scarcely distinguishable in form from the past: consider (55d), where the last verb form is a past non-factual, not counterfactual. The two present-day subjunctives do not differ in tense but in modality, basically non-factual (historically 'present') vs. counterfactual (historically 'past'). I suggested, though, that the 'past' subjunctive and the past tense share a sense of remoteness from 'present actuality'. However, as already indicated, further discussion of the subjunctive is also better delayed until we talk about its syntax in Part IV.

    The main other inflections associated with verbals signal person-number on finite forms, and, as shown in (43) above, they are also signalled only along with a non-past tense specification, and then only minimally. The morphosyntactic relations that are expounded by a marked person-number inflection were illustrated by the representation in (43c), where the representation of tense is much abbreviated.

(43) c.
$$\{P\{pres\}\} \leftarrow\text{-----------------}$$
$$\mid$$
$$\{P/\{loc/\{N\{e\}\}\}//\{sg\}\{iii\}_i\} \leftarrow\text{----}$$
$$\mid$$
$$\{P;N/....\{loc\{gol\}\}\} \leftarrow\text{-----}$$
$$\mid$$
$$\{\ \{loc\{gol\}\}\}$$
$$\mid$$
$$\{N;P\}$$
$$\uparrow$$
$$[[[liquid \qquad\qquad [iz]] \quad es]$$
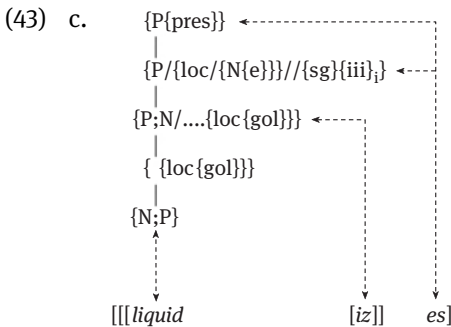
Here the existential {P} 'looks for' a third person, and it is satisfied by the participant associated with the free absolute of the existential – the subject. However, the richer morphology of the copula and periphrast *be*, particularly in the differentiation of person-number, i.e. subject-concord, was illustrated in Table XIV.

Let's recall the categories manifested by the relevant finite paradigms of *be*, where the **person-number** features dominate the finite part of (46a).

(46) *THE FORMS OF OPERATIVES*

  a. *THE COPULA*
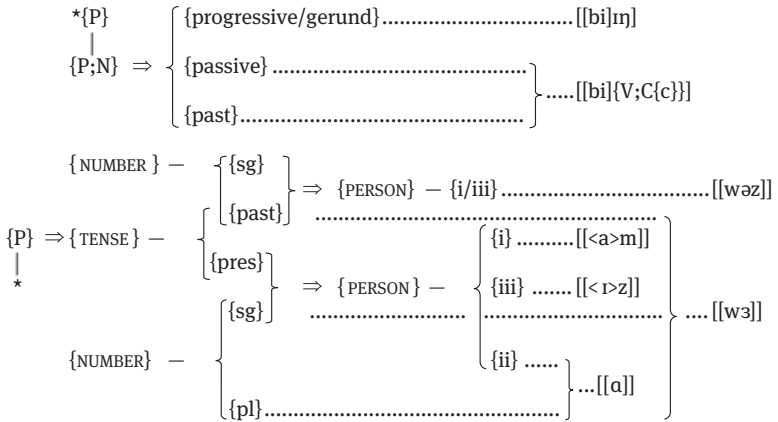
SYNCRETISMS   i)   *{P}   ii)   {finite, past, pl/ii,sg} = {contra}
                       |
                {P;N} = {non-factual} = {P{imp}}

Once we've acknowledged the existential {P} in the lexical structure suggested for (53a) in (53b), i.e. (56a), the resultant upper {P} in (56b) bears the concord requirement, which is satisfied by co-indexing with the subject (hence the subscript).

(53) a. Frances is running

(56) a. {P/{loc/{N/{P;N}}}}

  b. {P/{loc/{N{e}}}//{sg}{iii}$_i$}
     |
     {P/{loc/{N/{P;N}}}}

  c. {P/{loc/{N{int,e}}}//<{PERSON}><{pl}>$_i$}
     |
     {P/{loc/{N/{P;N}}}}

The pair of angle brackets in (56c) enclose incompatible combinations of specifications. (56b) figures in syntactic representations such as (57a), which again involves third-person singular.

(57) a.

$\{P/\{loc/\{N\{e\}\}\}//\{iii,sg\}_i\}$

$\{\ \{abs\}\}$ $\{P/\{loc/\{N/\{P;N\}\}\}\}$

$\{\ \{abs\}\}$ $\{\ \{loc\}\}$

$\{N\{int\}/\{P;N\}\}$

$\{P;N/\{src\{abs\}\}\}$

$\{\ \{src\{abs\}\}\}$

$\{N\{iii,sg\}_i\}$

$\{fem_F\}$

Frances   *is*   *running*

b.

$\{P/\{loc/\{N\{e\}\}\}//\{pl\}_j\}$

$\{\ \{abs\}\}$ $\{P/\{loc/\{N/\{P;N\}\}\}\}$

$\{\ \{abs\}\}$ $\{\ \{loc\}\}$

$\{N\{int\}/\{P;N\}\}$

$\{P;N/\{src\{abs\}\}\}$

$\{\ \{src\{abs\}\}\}$

$\{N\{def\}\{pl\}_j\}$

$\{ego\}$

we   *are*   *leaving*
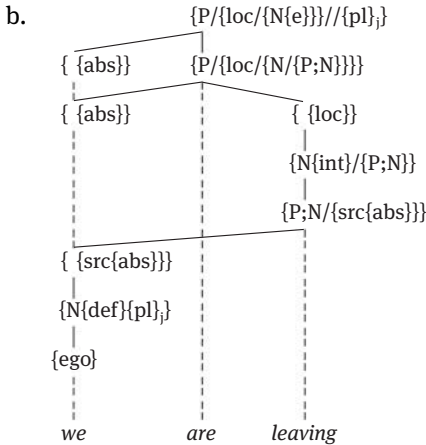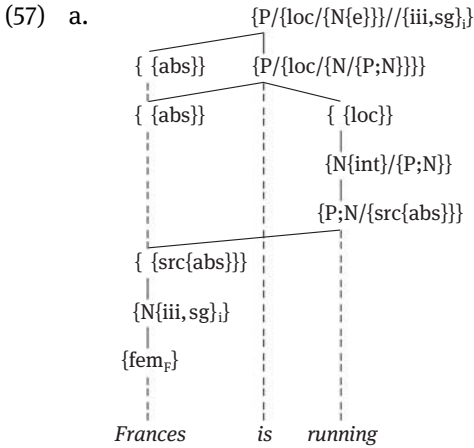
(56c) expresses a systematic syncretism: no copular plurals express person, as illustrated in (57b). Here the presence of concord is permitted only if the copula is subjoined to the existential. Only the third person singular present is allowed in other circumstances.

The syncretism of {ii} singular and plural is non-systematic, synchronically 'accidental'. The past finite forms of the copula correlate with a slightly different line-up of lexicosyntactic categories; but in both past and non-past the second person singular form is identical with the plural – in other words, there is no second-person distinction in number. There's also in the past, however, no distinction between persons {i} and {iii}, again non-systematically, and not included in (56c). The past plural and second person also share their exponent, *were*, with the contrafactive subjunctive, which does not distinguish person or number. This

again is not systematic, though, as I've observed, past and contrafactive share non-actuality.

The first-and second persons of concord are identified pragmatically, as the speech-act participants, {ego} and {tu}. This deictic property is shared with the features expounded by other verbal inflections – (particularly absolute) tense, subjunctive, and number, as illustrated by (58).

(58)   We are demanding that you leave her

And similarly the nominal inflections of person, number, and (natural) gender, particularly associated with pronouns, are pragmatically based, referential. Non-finite verbal inflections are different, in that like morphological functors in inflectional languages, they participate in language-internal relations – rectional in particular for these non-finites.

Having reaffirmed the pragmatic status of person and number, in terms of kind of participation in the act of speech associated with the sentence concerned, it is now time for us to give overt recognition to the same kind of basis for the category of **tense**. For the features past and non-past, or present, conceal different relations to the time of the enactment of the utterances that realize the sentences concerned. Let us represent the time of utterance by the subscript 'T' on the lexical locative modifier of the {P} of mood, the root {P}, as in the modification of (51) suggested in (59), where the reference time phrase is attached to the highest {P}.

(59)
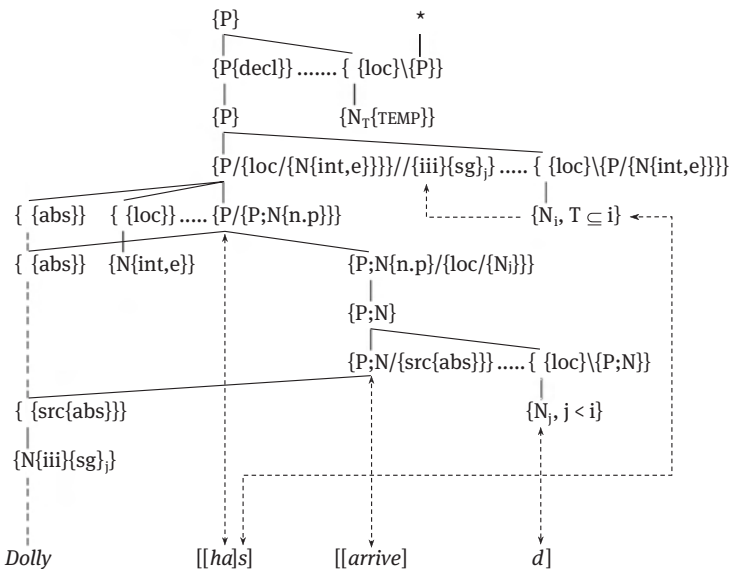
The time of the scene represented is indicated by the 'i' subscripted to the {N} of the temporal modifier of the existential {P} and its relation to T – in this case as including T. The locative modifier of {P;N} bears a relative tense, which is defined as prior, or past, relative to i. The same kind of semantic and coreference relations are associated with independent temporal adverbs – but that is not our concern here. It is perhaps worth observing, however, that in a sense such adverbs can be said to inflect for tense, though suppletively, as with *now* and *then*.

Among the secondary notional categories we have looked at, number is also associated with noun forms. But I suggest that such distinctions, along with person, are a referential property of {N} – rather than {N;P}, which denotes but does not refer; and I have also suggested that it denotes only via the {N} to which it is immediately subjoined. The {N} in (I.91a) (from Chapter 8) denotes the set of entities to which a noun of a certain sense may be applied.

(I.91) a. *DETERMINERIZATION*

$$\begin{array}{ccc} & & \{N\} \\ & & | \\ \{N;P\} & \Rightarrow & \{N;P\} \end{array}$$

A noun gains the capacity to show number by conversion to this {N}, which itself can be generically singular or plural, and can be adjoined or subjoined, via a partitive, to further {N}s that refer and enumerate the referent.

Variation in number is associated with count nouns. With **count** nouns there may be plurality on the {N} to which they are subjoined ('generic') and, along with singular, on a distinct superordinate {N/{src}} ('partitive'). The number features may be in simple contrast (*a pig* vs. *pigs*, etc.); there is, of course, no such contrast with presence of the contrasting noun feature of the category of numerability, namely **mass**, though they may be quantified (*some mud*). Mass nouns, like *mud*, are redundantly non-plural, and share the lack of a plural inflection with singular. This is not to deny that these nouns may be converted to count nouns, and given a special interpretation, as in *She is studying different (kinds of) muds*. And we have to acknowledge the existence of a few inherently 'plural (or dual) mass' nouns, such as *clothes* and *oats*. Plural and singular may be combined in collective nouns such as *committee*, which may show singular or plural verb concord, with appropriate notional difference, with plural indicating distributivity.

However, given that our interest here is in inflections, I refer the reader in pursuit of more details of the general role of number to Chapter 8. What is of interest at this point is that number inflections again are a realization of a func-

tional feature, and that again morphologically they are often associated with a contentive, here noun. Number on {N}s lacking a dependent noun is typically linked with definiteness, and is suppletive: *they* vs. *it/{s)he*, *those/these* vs. *that/ this*. And the situation with the SAP pronouns based on {ego} and {tu} is complex, combinatorially and in exponence.

Gender in English is also a referential and agreement category of {N}. It is traditionally signalled inflectionally in non-SAP personal pronouns (*it/she/he*), and more marginally in indefinites (*something/someone*). But notionally gender is a feature of entitatives in general: it can also be an inherent feature of nouns (as in e.g. *cow/bull, queen/king*), and it restricts the set of entities to which the noun may be used to denote or participate in reference. This is manifested in agreement with pronouns. Gender plays a role in restricting which particular contentives may normally be predicated of an entitative (so *The bull/Archibald is pregnant*). It may also play a role in derivation (as base in *effeminate* or suffix in *count/countess* or, with some irregularity, in *duke/duchess/duchy* or *governor/governess*).

It must be acknowledged, however, that there is now much variation, indeed controversy, concerning gender usage. There is no problem in extending the range of variation in gender features, as is the case in many languages; and even the traditional {f(eminine)} and {m(asculine)} features could be combined ({f,m}), even asymmetrically and otherwise complexly ({f;m}), {m;f}, {f:m}), and also have a null combination {GENDER:: } – 'neuter'? But usage is not determined by grammarians, despite the (often contradictory) efforts of educational and amateur prescriptivists through the ages.

We are now in more of a position to confirm some generalizations about the distribution and function of inflections. Inflections expound minor features of functional categories. This might be interpreted as casting some doubt on the status of the 'inflections' associated with non-finite verbs, but they at least expound rectionally determined elements, as do some other inflections; and the notional content of the stem is constant. Also, the morphological paradigms of inflectional exponents are stored for convenience with a contentive, either subjoined to the functional category or incorporating it, as are non-finite 'inflections' of course, though connection with a functional category may be less direct in their case. Exponents of inflections are suffixes bounded by the brackets]___], where the first terminates the stem and the second the inflected word form.

The subjunction of functional categories that is associated with some inflections (incorporation) is always associated with verbals and not nouns. The subjoined elements are potential participants, as in the case of passives such as that in the abbreviated representation in (52b), or existentials, as in (59) just above.

(52) b.

```
                        {P/{P;N{pass}}}
                       ╱          ╲
        { {abs}}       ┊    {P;N{pass}/{src}{abs}}
        { {abs}}       ┊        { {src}} ←----
          {N}          ┊          {N}            ┊
                       ┊           ↑             ┊
         Fred        was        rescue          d
```
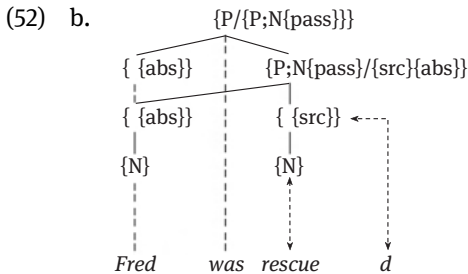
The absence of such structures in subjunction to nouns is not surprising, given that nouns don't take arguments; they are leaves. Their inflecting for number reflects conversion to a {N}. Similarly, non-relative tense on finite verbs involves conversion to {P}, as again shown in (59) above.

We are also able now to highlight the pervasiveness of {N} in the structures expounded by inflections, even though other functional categories may also be involved. {N} is involved in verb concord and other manifestation of person and number, in gender, tense, non-finite verbs even, as minor features. Unsurprisingly, the presence of {N} introduces deixis, reference, and agreement, all basic functions of this category. And exponence of these functions are thus characteristic of inflectional morphology.

Morphological case is absent from present-day English nouns, however, with one complicated exception, the genitive. When case is present, it involves conversion of a {N} to a functor, as is proper, and a vestige of this remains in English – but not if a noun is subjoined to the {N}, as in other languages (as exemplified from Latin in Chapter 4). In English there is also a highly routinized variation in case with personal pronouns and their derivatives. Again it is associated only with functional categories. Consider the difference between subject and non-subject pronouns in (60a).

(60) a. He hates him/He walked towards him
      b. I am she/It is I – I'm her/It's me
      c. The wife and me agree on that/Me and the wife agree on that

This alternation is frequently expressed by suppletion or at least has involved much frotting. There is variation in equative position, as shown in (60b), contrasting those speakers whose usage conforms to the prescriptive norm with the widespread informal usage. There is also some variation in coordinations, where coordinated pronouns do not always show the case or the sequence that might be expected (prescriptively), as shown in (60c). Usage of the relative/interrogative pronoun *who/whom* is also very variable, and *whom* is generally recessive.

At this point, the reader may justifiably inquire about the status of the genitive (or 'possessive') feature, which is regularly expounded in the morphology of pronouns, at least, involving again {N}. It is certainly also descended from an inflection that attaches to nouns as well as pronouns, and in Modern English the genitive is regularly expressed with both – though this is misleading. It is not just that in the regular nouns of present-day spoken English, as we have seen, number and genitive are typically not expressed distinctly, and orthography has recourse to presence or absence of a diacritic and to its placement to make the necessary distinctions: *doors/door's/doors'*. Nor is the problem that the genitive even shows the same variation in realization as noun plurals and verb third-person singulars, as formulated by the {C;V} options in (205a). What is problematical is that the genitive is not attached only to nouns and pronouns (and names). It is not selective as far as part of speech is concerned. This is because it can be introduced in the interface to syntax and not in the lexicon.

The genitives in (II.20b) and (II.21d) (from Chapter 19) are associated with respectively a pronoun and a noun.

(II.20) b.   {N{def}}
              |
             {N/{src}}
              |
             { {loc}}   { {src}}
              | |
             {N{def}}   {N}
              | |
             { {ego}}   {N;P}
              ┆   ┆
              my   *spoon*

(II.21) d.   {N{def}}
              |
             {N/{src}}
              |
             { {loc}}   { {src}}
              | |
             {N{def}}   {N}
              | |
             {N/{src}}   {N;P}
              ┆   ┆
              ┆   { {src}}   ┆
              ┆ | ┆
              ┆   {N}   ┆
              ┆ | ┆
              ┆   {N;P}   ┆
              ┆   ┆   ┆
              the   girl's   spoon
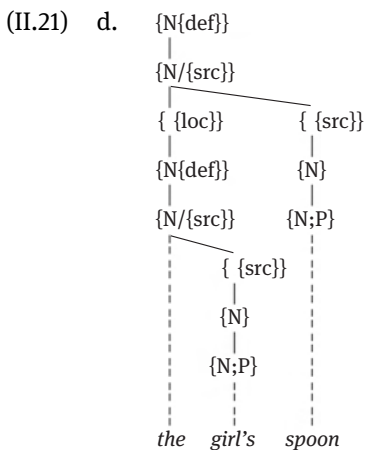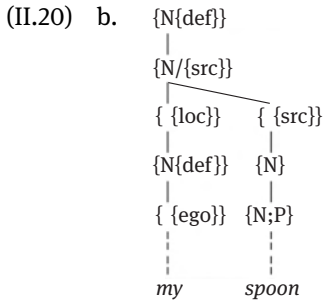
And, indeed, even in more complex phrases such as in (61) the inflection is attached to a noun, even when the genitive phrase is included in another one, as in (61a).

(61) a. the president's mother's car/arrival
      b. the mother of the president's car/arrival
      c. the boys who saw the president's car/arrival

But this is because they are the last elements in the determiner phrase headed by the definite {N} at the root of the whole construction. The genitive noun preceding *car/arrival* in (61b–c) are not adjacent to the realization of the genitive configuration, and their position is determined by what is terminal in the variable internal syntax of the genitive phrase.

And the genitive phrase doesn't always end in a noun, particularly in the spoken language, as in the relative clauses in (62a–c).

(62) a. the girl I saw's face
      b. the girl who was sick's handbag
      c. the girl who saw us's opinion
      d. the girl who stole the pearls's face

Here, in (62a–c), the suffix attaches to a verb and an adjective and a pronoun, but the pronoun is not in the normal genitive form, though the realization pattern still follows the model of variable inflections in (44), repeated below. So too with the noun in (62d), though, as with names ending in [s], the complex ending is sometimes simplified (*Roger Lass's(s) book*). These last two types of example, in particular, support the idea that there are two kinds of genitive formation. And pronouns and nouns are clearly eligible for the positing of a lexical status for the morphological genitive, as well as a genitive introduced in the lexicosyntactic interface, a phrasal prosody.

Compare the representations in (II.20b) and (II.21d), repeated above, with the proposed structure in (63a) for (62c).

(63) a. {N{def}}
|
{N/{src}}
|
{ {loc}}   { {src}}
| |
{N{def}}   {N}
| |
{Nᵢ/{src}}   {N;P}
|
{ {src}}
|
{N}
|
{N/{src}}   {N/{P}\{Nᵢ/{src}}}
| |
{ {src}}   {P//{top,def}}
| |
{N}   { {abs}}   {P}
| | |
{N;P}   { {abs}}   {P;N}
| | |
{ {src{loc{src}}}}   { {abs{loc}}}
| |
{Nᵢ{top}}   {N}

the   girl   who   saw   [[us]]'s   opinion

≠ the girl who saw our opinion
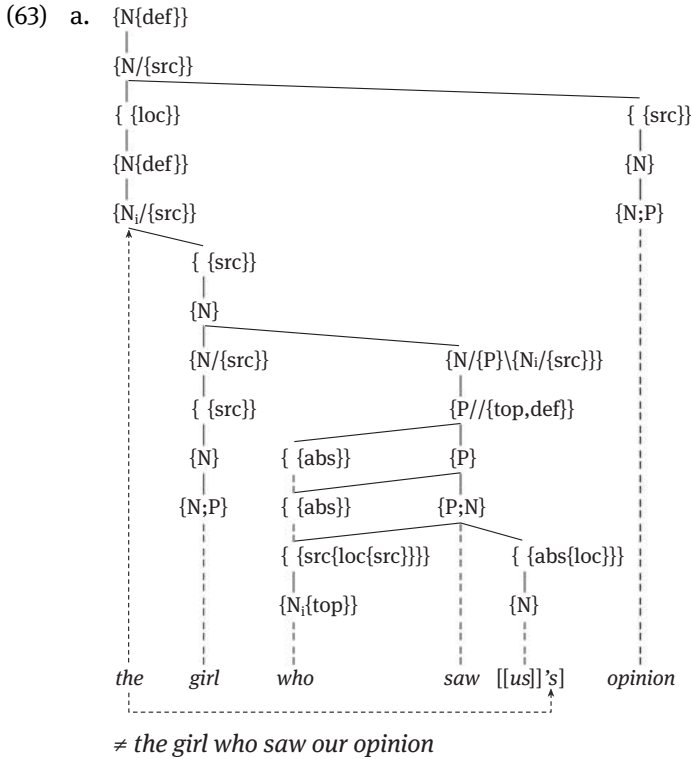
As marked in (63a), the genitive is inserted at a variable distance to the right of the {N} that is coreferential with the initial determiner. In (II.20b) the genitive is attached to this determiner, and in (II.21d), it is attached immediately to the right of the coreferential {N} with subjoined noun that can be separated from the syntactic root and from the coreferential {N} only by prenominal attributives.

Less dramatic is the cancellation of the unmarked plurality of count nouns by subordination to a singular determiner, alluded to elsewhere, and which as roughly abbreviated in (64), where again morphology is responsive to the working of the lexicosyntactic interface.

(64)   {N{sg}/{src}}
|
{ {src}}
|
{N{*pl}}
|
{N;P{CNT}}

a   girl
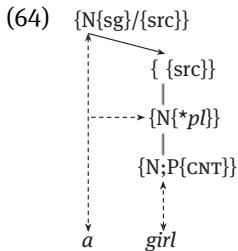
And again there may be an indefinitely long attributive structure, indicated by the solid arrow in (64), separating the article and the noun, and indicating subordination rather than necessarily dependency.

Genitive inflecting of pronouns, however, is clearly lexical: the genitive is part of a lexical paradigm. As (II.20b) illustrates, it is manifested on the same word as the genitive lexicosyntactic configuration of categories. But we can perhaps also make some sort of case for the lexical status of noun-attached genitives like that in (II.21d) – though here too we may have to have recourse to our useful friend 'X'. It is a noun form that must appear in the configuration of (II.21d), with, as I have noted, the possible extension by intervening pre-nominal attributives. It is a manifestation of rection: any noun can bear the inflection if it is governed appropriately. Intervening attributives are transparent to the government, just as in other languages they share in the agreement relation that involves determiner and noun.

In contrast, the genitives in (62) are attached to a variety of categories, all of them arguments of a verb that intervenes between them and the genitive-licensing configuration, as well at it being to the right of the coreferential relative {N}. And there are other structure types, such as non-relative post-nominal attributives or appositives, that can intervene. The placement of the inflection depends on the syntax of the genitive phrase: these genitives are not members of a lexical paradigm. And, despite complying realizationally, as with lexical noun genitives, with redundancy (44), the pronominal attachment to the pronoun in (62c) is unlike the regular lexical pronominal form (*us's* vs. *our*).

(44) a. *REALIZATION OF FINITE VERB AND NOUN INFLECTIONS*

  stem terminus   *inflection*

  MORPHOLOGY   ] $\{C\!<;V\!>\}$]

  MORPHOPHONOLOGY

  b. $\{C_{x,y}\!<;V_y\!<\{\{v\}\}\!>\!>_y\}\!<\{v\}\!>$] $\{C_{x,y}\!<;V_y\!>\}$] --

                    {V}

  c.   {v}   {V{ }} $\{C\!<;V\!>\}$

                                        {v}

  PHONOLOGY   [ə]   [d/z]   [t/s]
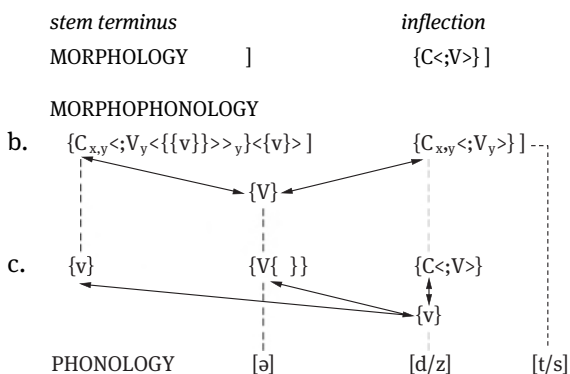
What all these genitives have in common is that the 'inflection' terminates the determiner phrase headed by the determiner that triggers its presence.

Another variant of genitive construction is illustrated in (65a), involving the categories familiar from the lexical genitives of (II.20b) and (II.21d), as well as interface genitives such as *a mistake of the man who built it's*.

(65) a. a book of John's
  b. a friend of ours/theirs/yours/hers
  c. a misdemeanour of the bishop's/his/its
  d. a suggestion of mine

What is of interest here is that this construction involves some distinctive inflections, as in (65b,d).

The post-nominal attributive structure of (66a) seeks to represent (65a), including a coreferentiality, or rather codenotationality, relation between the denotational class {N} of the first noun, *book*, and that of the final unrealized noun that is 'possessed', a co-indexing that helps to identify the latter.

(66) a. {N/{src}}

     { {src}}
      |
     {N}

     {N{src}} { \{N{src}}}

     {N$_i$}   {N{def}}
      | |
     {N;P}   {N/{src}}

          { {loc}} ..... { {src}}
           | |
          {N$_j$} {N$_i$}
           | |
          { $_K$} {N;P}

    a *book* *of* *John's*

b. {N/{src}}

```
       {N/{src}}
          { {src}}
          {N}
          {N{src}}                    { \{N{src}}}
          {Nᵢ}                         {N{def}}
          {N;P}                        {N/{src}}
          {P;N}                        { {loc}} ..... { {src}}
          { {src{src}}} .... { {{gol}}}   {Nⱼ}        {Nᵢ}
          {Nᵢ}          {Nⱼ}           {ego,pl}     {N;P}

          a    friend                  of    ours
```
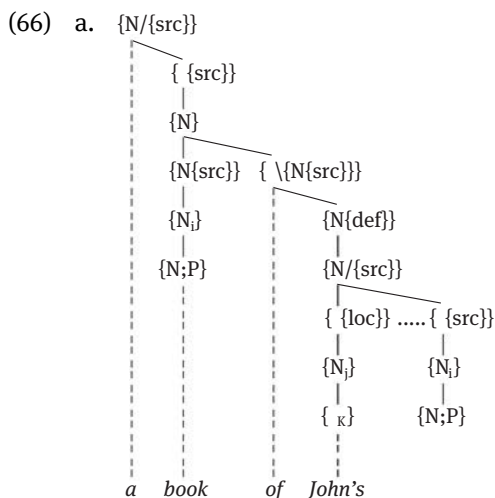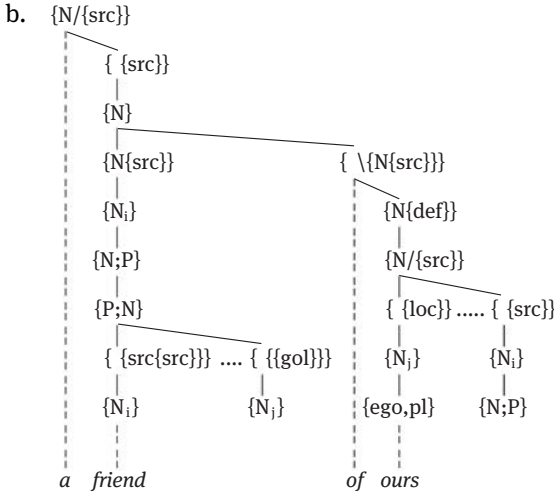
We seem to have a condensed genitive construction within the post-nominal attributive. (66a) assumes a simple 'possessive' interpretation – not, say, 'a book written by John'. (66b), representing (one option from) (65b), acknowledges the greater complexity of the latter, where the noun is deverbal and so further coreferences are introduced; *friend* is interpreted as a relational noun based on a directional experiential verb, which is a variant of the internal structure attributed to familial nouns in Chapter 21. The final source argument is co-indexed with the denotative set of *friend*, and the goal with the genitive pronoun.

There is another difference between the genitive forms in (65a) and (65b). The pronominals in (65b) have an extra final *-s* compared with the congeners in the genitive constructions we have looked at before; but the genitive name in (65a) is the same as elsewhere, as are the noun and pronoun in (65c). It is tempting to suggest that, despite *yours*, the *-s* is synchronically an exponent of the plurality of the unrealized {N;P} in (66b), plural being the unmarked value of the denotational {N} that a count noun is subjoined to? But such forms also occur in equatives such as *That one is ours*, as well as *That (one) is one of ours* – though the former could involve a covert equivalent to the structure of the latter. The forms in (65c) already end in a sibilant. And it might be even more fanciful to take the final nasal in (65d), and the archaic or religious *thine* as reinterpreted as a weak-declension plural (so too *your'n, his'n*), as has survived in *oxen* and *children*, or archaic/dialectal *kine*. But we also find it in construction with mass nouns, as in *some land of mine*.

This chapter has examined the role of functional categories in inflectional systems. From a categorial structure involving subjunction to a functional category, particularly {N} and { /} we have traced the morphosyntactic redundancies

linking these to morphological structures involving inflections, and the morphophonological redundancies linking the latter to phonology. Subjunction to the functional category {P} introduces inflections only by virtue of incorporating pronominal categories such as tense and person-number. And conversion to comparator is often marked by inflections (such as *-er*) and is associated with relational structures involving functor-pronoun complexes.

Inflections that expound the features of a functional category that is dependent on the functional category to which is subjoined a contentive – particularly the tense structures alluded to above (recall (48–9) and (59)) – are characteristic of verbs, whereas both verbs (mood and factivity) and nouns (number), and also more marginally adjectives, are associated with simple subjunction to a functional category. We also investigated the distinctive lexical structure that is expounded by the non-finite forms of verbs. Pronouns are non-contentives that bear a variety of inflections.

As concerns nouns and other entitatives in general, we looked finally at the distinction between lexical inflections and those associated with the interface to syntax, illustrated by the present-day English genitive. Among the functional categories, the functor is the major binder of structures in both the syntax and lexicon, but they leave minimal traces in inflections in English. The chapter that follows looks at another role of functors, as parts of compounds, and potentially derivational affixes.

Both the morphosyntax and the morphophonology of inflections are distinctive in relation to those associated with derivational morphology. The tight set of morphosyntactic redundancies of (43) (verbs) and (46) (operatives) that we can associate with verbal inflections is not paralleled in derivation. And the alternations of inflectional morphophonology conform to simple natural structure-building redundancies. I formulated the morphophonology of the default inflections as in (44), repeated above. The blank-filling character of their morphophonology is striking. These inflections are represented by the minimal obstruents and diversified by (44).

Morphological inflections also come to the far right of the word they designate a form of, and other (derivational) suffixes precede it – they are not normally word-internal or -initial in English, though their meaning may be expressed by internal alternation of the stem. The inflections are bounded by brackets oriented thus:]___], where the first brace terminates a stem and the second a word.

Functional heads of conversions obviously involve class change, but their presence is shown by the presence of inflections associated with minor functional features. Nevertheless, particular inflections are also associated morphophonologically with particular parts of speech, not always the functional category

whose features they expound. Recall the paradigms which store alternative forms typically of nouns and verbs.

As anticipated at the end of Chapter 28, all of this makes them distinctive as affixes, and takes them closer to analogy with specifiers, in phonology and in syntax. Specifiers also identify a particular class and are sequentially distinctive, and they themselves are minimally specified categorially. One manifestation of these inflectional forms even coincides in realization with the phonological specifier, as [s].

If functors are the relations which contribute most to the linking of participants and circumstances to the scene labelled by the verb, in the case of other functional categories in English that are more commonly given independent or particularly inflectional expression it is their pragmatic functions that are what is prominent. {N} in particular is associated with reference and deixis and speech act participation, as well as contributing to the expression of orientation. Similarly, operatives are linked to speech act mood and modality, and, along with {N}, speech-act participation, and other aspects of the existential status of scenes and arguments. Even the complex functional category {P.N}, comparator, is directly linked to users' judgements of dimensions as well as those of other language users.

This chapter concludes our focus on formative + formative structures. But a concern with them will remain with us, as, in the following chapter, we focus on the difference between such structures and the lexical word + word structures traditionally labelled 'compounds': minimal lexical items made up of word + word. But also at issue will be the distinction between idiomatized lexicalized phrase and compound.

Chapter 30
Compounds and Affixes

affixation or compounding? – attributives and nominal compounds – non-compositionality – verb-/adjective-headed noun compounds – non-noun compounds – headedness of compounds – and accent placement – and sequencing

The prototypical English **compound** is a word composed of two potentially independent words, or rather their **stems**: prototypically, the components of the compound are individually uninflected, though the second component may bear an inflection that expounds, say, the number of the compound. A compound is also marked expressionally in some way as a single word rather than a (lexicalized) phrase, as a morphological rather than (simply) a syntactic formation, without our denying that the latter formations may be lexicalized, idiomatically or not. More exactly, a compound shows signs of extreme monolexicalization, recognition of the components as syntactically a single word, even though it resembles a syntactic construction. A related characteristic of compounds, indeed, is that their synchronic derivational sources are the component words in a construction. The more obvious the source construction, the more transparent the compound. The less obvious the construction, the more uncertain the interpretation of the compound, the more idiosyncratic, and dependent on exposition to or imagination by the addressee. There is, however, no single 'criterion' of compound status in English, and of course no language-universal 'criterion' or consistent set of criteria. However, I speculate that the two characteristics I have mentioned – some indication of single-word status and derivation from a constructional source – may have some generality in language.

Compound formation is said to be varyingly recursive in different languages, though given current uncertainty over the identification of 'compounds', the extent of this is also uncertain. English is very restrained in this respect, though it does exhibit apparent compounds within compounds. But, as just indicated, the formation of even minimal compounds is limited only by the degree of ingenuity or need required in finding a semantic connection, between the components, mediated by a syntactic construction. Compound formations typically conform to common normative patterns based on a set of notionally-informed syntactic structures. These patterns are our concern in what follows.

But my starting-point is the distinction that is the complement to the distinction between compound and phrase: that is, it is the distinction within morphology between compound component and affix. The historical source of (at least) many affixes is in a compound component. And there can be uncertainty about

when this transition has taken place. Let's consider a set of synchronically controversial putative affixes/components.

Most traditionally recognized prefixes in English go back to prefixes in the classical languages that ultimately derive historically from prepositions/adverbs but, when adopted in English, lack cognate words: such are *syn-, pre-, per-*. But *un-*, for instance, is a Germanic development of a particular Indo-European negative form, as are Latin (non-preposition-based) *in-* and Greek *α-*. The few other surviving Old English 'prefixes' in present-day English have a similar status to classical 'prefixes' in English, in terms of having lost a transparent relation to a modern preposition. Such are *a-* in *asleep*, *alive*, *abed*, and *be-* in *belong*, *belief*, *beside*, which show phonological and semantic reduction. These would all be implausible as compound components in Modern English, in terms of their integration into morphophonology, as well as the absence of an independent lexical source for the putative component.

More uncertain in status, however, are such locative-including formations as those in the nouns *outlook* and *outburst* or *downturn* and *downfall* or *incomer*. These 'prefixes' (as they are often classed) could be phonologically and semantically transparent occurrences of the corresponding prepositions, or, rather, adverbs; and the items overall show no more than the usual semantic specialization often to be associated with established compounds. So too there are also adverbs that are potential second elements, such as those in *lookout*, *cast-off*, *throw-away*.

Familiar traditional compounds involve components that belong to contentive categories, with minimal reduction, whereas suffixes based on former contentive second components show reductions in both semantics and phonology. Recall here from Chapters 27 and 28 the suffixes *-dom, -ness,* etc. Functional categories often have less of both to reduce, even when they occur in complexes such as we find with adverbs. But the functional status of the adverbs/complex-prepositions 'prefixed' and 'suffixed' in the above examples is a feeble reason for denying these formations the status of compounds. Affixes are only ever formatives, not independent words. *Out* etc. are not such; they are words. In general, functor configurations occur as either element of a compound, or as (inherited) prefixes. There are also sourceless functor-expressing suffixes, but these are prototypically inflectional, of course, as described in the preceding chapter; and they are typically deictic or at least involve coreferentiality, unlike prefixes.

Affixes, then, show evidence of further morphologization compared with the components of compounds, notably in the shape of participation in the morphophonology entirely as a non-root part of a single word rather than their exhibiting the relative independence of compound components based on sources that are themselves words. Often compound components may occur in either posi-

tion in a compound. But, having roughly set this 'lower' boundary to the domain of compounding, let us return to different types of traditional compound and their constructional bases and signs of single-word status. We shall mainly be concerned with noun compounds since they are by far the most common, but compounds whose category is adjective are not unknown in English. Commonly discussed compound verbs based on contentives are both diachronic and, I have suggested, synchronic back-formations, such as *head-hunt* – cf. *head-hunter*.

In Chapter 24 it was also suggested that many nominal compounds are based on the left-headed attributive structure of English as their source. The examples in (II.125a) were provided there.

(II.125)   a.   bluebird, redhead, longboat

b.

{N}
|
{N;P}
⌐
{P.N$_i$/{src}}
⌐
{P:N}   { {src}}
                                                    |
                                                  {N$_j$}
                                                    |
                                                  {N;P}

{V$_4$}

long   *boat*
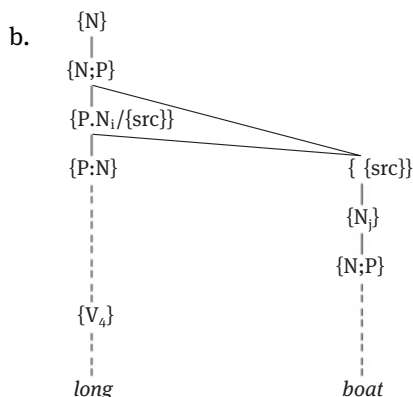
where i ⊂ j

The examples are non-compositional to varying extents, but they exhibit the sub-type-to-type relationship characteristic of attributive structures. Thus, the compound noun to which the lexical structure in (II.125b) is subordinate is based on an attributive structure, where denotatively the attributive {P.N$_j$} introduces a subset of the noun {N$_j$}. The sequence in (II.125b) is as determined by the attributive syntax that is its source; it is left-headed.

Headhood in such compounds regularly correlates with the placement of the tonic accent ('main-stress'), '{V$_4$}' in (II.125b); and this accentuation marks the overall construction as morphological, rather than simply syntactic attributive, where the phrasal accent falls on the second component. The initial, 'compound' placement may be overridden in certain pragmatic contexts, such as those involving 'emphasis'. And individual users may vary in their accentuation of potential examples. The accentuation of the other component will be of relevance below.

Such a representation and accentuation as are attributed to (II.125b) are appropriate for many noun compounds with adjective-noun and noun-noun components. We must, however, confront apparent variations in expression among compounds consisting of these contentives. But let us look at this point, in the light of what immediately precedes, at a quite different type of combination, the putative compounds with a functor-headed component and (ultimately) verb discussed above.

We have both *outlook* (as in *The outlook is bleak*) and *lookout* (as in *He is the lookout* – not to mention *He is on the lookout*, with again a derived non-human noun). The most salient difference between these perception-verb-based compounds – the sequence of the identical components – correlates with a difference in coreferentiality, as formulated in the two respective representations in (67).

(67) a.

$$\{N_i\}$$
$$\{N;P\}$$
$$\{P;N/\{src\{abs\{src\}\}\}\{loc\}\}$$
$$\{ \{loc\{gol\}\}\} \qquad \{ \{src\{abs\{src\}\}\}\}$$
$$\{N_i\} \qquad\qquad \{N\}$$

out   *look*

b. $\{N_i\}$

$$\{N;P\}$$
$$\{P;N/\{src\{abs\{src\}\}\}\{loc\}\}$$
$$\{ \{src\{abs\{loc\{src\}\}\}\}\} \qquad\qquad \{ \{loc\{gol\}\}\}$$
$$\{N_i\} \qquad\qquad\qquad\qquad \{N\}$$

look   *out*
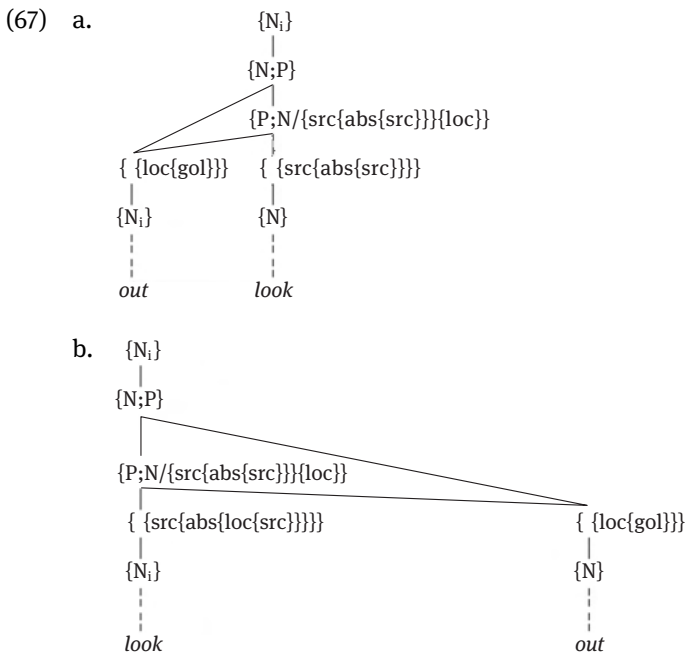
The verb base is taken to be directional, specifically involving an affected perceiver (source of visual perception). In (67a) the argument perceived is co-indexed with the nominal head of the compound; in (67b) it is most commonly the perceiver. In the first case the compound noun is abstract, in the latter animate.

The sequence in (67b) is in accord with the syntax; the sequence in (67a) is apparently morphological, a consequence of compounding. Both have the accent on the left; but only in (67b) is it the syntactic head, as in (II.125). Though fre-

quently conforming in properties to (II.125b), even noun compounds such as these are not necessarily based on attributive structures, nor are they necessarily syntactically left-headed. So far, they can be said to be marked expressionally as morphological, however, either by just the accent alone or also by the difference in sequence.

The sources of the other, non-functor component in what I am regarding as nominal compounds in (67) are verbal, and both components are Germanic. This is true of another type of compound based on verb and adverb, but in this case constituting a verb compound. Adverb + verb compound verbs, such as *overtake*, marked as such by non-syntactic order of the components, take a final primary accent. This suggests that neither of the two expressions of compound status is necessary: either is a sufficient criterion, however. The requirement is that there should be some indication of single-word status; and distinctive accent-placement and sequence of components are the obvious means to achieve this. As is usual in grammar, there is no simple 'criterion' here.

Such compounds are now less common in English than in other Germanic languages. Instead, we find lexicalized syntactic sequences, as in *take over*, of verb + (so-called) 'particle' – i.e. adverb argument ('particle' not being a part of speech). *Overtake* and *take over* are semantically very distinct – again unlike the so-called 'separable prefixes' – i.e. compoundable adverbs – of German. Typically, in relation to the verb in English these 'particles' are (often directional) locatives that may be participants, as in *throw away*, or (often metaphorically intensifying) circumstantials, as in the lexicalized phrase *eat up*. Participant expressions may also be metaphorical (*the supplies have run out*), and, with less transparency, idiomatic (*put up with his sister*). These adverbial 'particles' thus fall outside morphology, though there is in many cases lexicalization and idiomatization of the phrase containing them. Signs of morphologization, as opposed to lexicalization, are absent.

Moreover, the sequence *take over* is the source for the nominal compound *take-over*, with, as expected, initial accent. And this compound is a component in the recursive compound *take-over bid*, with again accent on the left. This illustrates one type of manifestation of the important role of the prenominal attributive construction in the formation of recursive compounds, as well as the interaction of phrase and compound in expanding lexical structures.

Compounds and lexicalized phrases thus have much in common, including in many instances evidence of further lexicalization, or idiomatization; it's not merely storage that's involved. One familiar potential difference we have noted is the frequent primary accentuation, on the first element (compound) or the second (phrase, in isolation). Since we have already encountered potential exceptions to this marking of compound status, we need to consider further how

common this accentual property is, as part of the establishment of a typology of what properties can distinguish between 'compound' and 'lexicalized phrase'. We can already observe that not all apparent compounds are based on attributive structure, nor even on another syntactically left-headed construction: these properties are common but not essential, so long as the morphological status is signalled in some way. And we already have reason to question the absolute prevalence of accent-on-the-left property, and to suggest that distinctive sequence alone may function as a compound marker.

It seems to me, then, that proposing that *outlook* and *outburst* and *overtake* etc. are compounds has some plausibility. More problematical, perhaps, and controversial, is the status of certain 'suffixes' in English. There are traditionally recognized suffixes that are rather clearly derived, historically at least, from the second component of compounds, such as *-able* and perhaps *-ful*.

Able occurs as a separate simple word, and as an element in a compound, as in *able-bodied*, where the compound is marked by suffixation as a derived adjective. It can also be the base for lexical derivation by suffixation, as in *ability*, whose relation to the source of its base shows a 'vowel-shift' alternation, and also potential vowel reduction, as well as some frotting. Similar in these respects are *noble/nobility*, for example, including the formative-frotting manifested as an epenthetic *-i-* (recall Chapter 27). But both *-able* and derivatives in *-ability*, unlike *noble/nobility*, occur as what are traditionally considered to be suffixes. What are the motivations for regarding them as involving suffixation? I shall focus on this formation, since any relation between a number of other suffixes and their origination as independent words are much more obscure, as with *-hood*, *-dom*.

However, both the first vowel in the putative suffix of, say, *readable* and the corresponding vowel in *readability* are at least typically reduced, unlike the independent word and the first component of *able-bodied*; and whatever reduction is associated with the base of the independent form *ability* is compensated for by the insertion in the base of an [i] that bears the accent. Also, the function of *-able* is clearly derivational, adjective-deriving, unlike the second components in *outlook* and *lookout*, neither of which formations is signalled as a noun, – or, indeed, unlike the *able-body-* part of *able-bodied*. *-Able* adjectives are also very common, and show marked semi-regular (rather than simply idiosyncratic) interpretative differences, as with (absolutive-oriented) *changeable/lovable* vs. (source-oriented) *comfortable/pleasurable*. There is, further, established, inherited base-determined variation in form (*-i/u/able*).

All in all, something like a representation such as that in (II.82a) (from Chapter 22) therefore seems to be appropriate in this case.

(II.82) a.   {P.N$_i$}
                    |
              {N:P{state{pot(ential)}}}
                    |
              {P;N/{abs}...}
                    |
                { {abs}}
                    |
                {N$_i$}
                    ⋮
                    ⋮
              variable
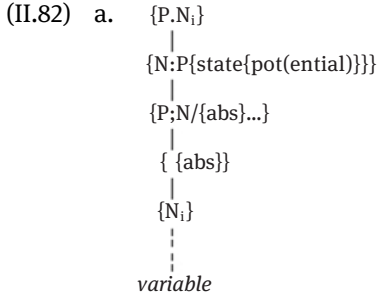
So too with the *-ful* sequence in *beautiful* (again discussed as a suffix in Chapter 22), as opposed to the typically unreduced second element of the compound *pocket-full*.

Other cases are more marginal, such as the *-man* of *postman*, *fireman*, *chairman*, consistently noun forming and reduced, as opposed, for many speakers, to the noun compounds *space-man, spider-man,* and – new to me – *knifeman*, and verb compounds such as *overman*. The reduced version has lost its gender significance for many users of English, and functions like an agentive suffix such as that in *miner* or *worker* or *researcher* and *accountant* or *assistant*. However, in spoken English, words containing the putative suffix *-man* do not inflect for plural, despite being used to refer to a plurality (and spelled *-men*). This is unusual, but is a simple consequence of the reduction in this recently potential suffix. The treatment of the often reduced *-berry* in *cranberry, raspberry, strawberry* as a suffix has no such possible disadvantage, though often taken to be a compound component corresponding to the independent word *berry*. Is the prevalence of reduction a sign of suffix status in such doubtful cases? *-Able* is adjective-deriving, and *-berry* marks a noun subclass, as does *-dom*. And *-be*rry would also be a suffix, if reduction is a mark of this. It is, however, a suffix with typically obscured bases, though its own meaning remains very specific. It may be that the status of these formatives is variable, though the phonological reduction seems to me to support suffix status.

On the other hand, *-like* lacks reduction, but was again assumed, along with the reduced *-ful*, *-dom*, and indeed *-ly*, to be a suffix in Chapter 22. Its meaning remains, however very specific, though, as a suffix, it could be said simply to derive adjectives. But it may be that such derivationality is not reliably differential in distinguishing suffix and compound. Status as a compound component is apparently undermined, however, by such forms as *unladylike*, where the first element is a noun with a prefix not normally associated with nouns (though recall *unease*, perhaps a synchronic back-formation from *uneasy*). So too with the

element *-worthy* in *seaworthy/unseaworthy*, though *worth-y* bears within its own structure a plausible suffix, *-y*. The morphological vs. syntactic status of *-like* or *-worthy* is not at issue here – the resulting formation is not phrasal – but affixation vs. compounding. To save its compound status, the negative in *unlady-like* would have to be said to be prefixed to the derived compound adjective.

That is, we would have a perhaps unusual (or just unfamiliar) compound structure along the lines of (68a).

(68) a.

```
            ┌ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ →  {P:N{neg}}
            ┊                              │
            ┊                           {P:N}
            ┊                              │
            ┊                        {P.N/{{gol}}}
            ┊                         ╱         
            ┊        { {loc{gol}}}      {P:N{sim}}
            ┊            │                   ┊
            ┊           {N}                  ┊
            ┊            │                   ┊
            ┊          {N;P}                 ┊
            ┊            ┊                   ┊
            ↓            ↓                   ↓
         [[un]      [[lady]            [like]]]
```

b.

```
        ┌ - -→ {P:N{neg}}
        ┊          │
        ┊      {P:N{sim}}
        ┊          │          ↑
        ┊        {N;P}      ┌- ┊
        ┊          ┊        ┊  ┊
        ↓          ↓        ↓  ┊
     [[un]     [lady  [like]]]
```

c.

```
        ┌ - -→ {P:N{neg}}
        ┊          │
        ┊      {P.N/{{gol}}}
        ┊          ┌─────────┐
        ┊      {P:N{sim}} ..... { {loc{gol}}}
        ┊          │                  │
        ┊        {Nᵢ}    ┌- -       {Nᵢ}
        ┊          │     ┊            ┊
        ┊        {N;P}   ↑            ┊
        ┊          ┊                  ┊
        ↓          ↓                  ↓
     [[un]     [lady  [like]]]
```
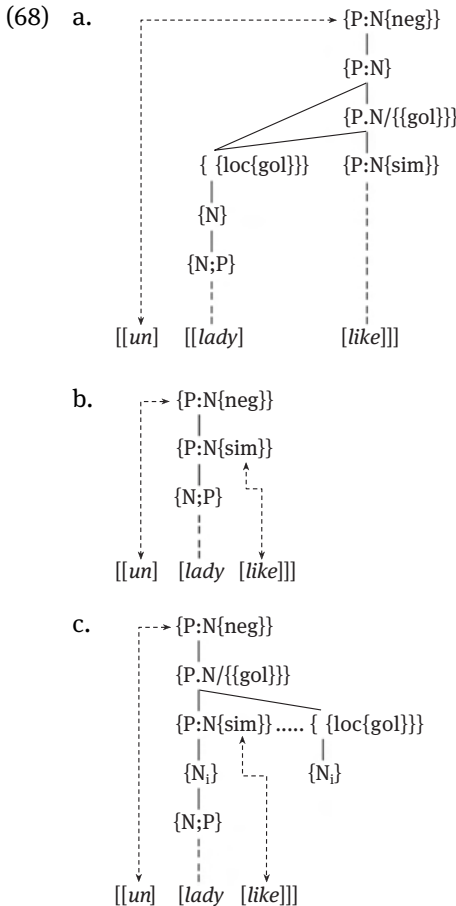
The alternative would be the double affixation of (68b), which is an expansion of (II.93b) in Chapter 22.

Lady in *(un)ladylike* has the accent, though it is not the lexicosyntactic head; and the order of components is also not in accord with the syntax of the com-

ponents of *lady-like*. However, *lady-like*, as represented in (68a), is categorially a compound adjective word that serves as the source of the base of a negative adjective, as do many other adjectives. Let us examine the differences between (68a) and (68b).

The bracketing notation of morphological structure tells us only about the status of a sub-sequence as compound component, base or affix: an affix is included within brackets along with a base within its own brackets, as in the representation of *lady-like* (in (68b)), where a suffixed base has itself a prefix in *unladylike*. A compound, of course, a potential base itself, is composed of two components, and has an internal morphological structure with two sequences within brackets inside the brackets around the compound, as in (68a). In (68a) the compound is thus prefixed by the negative formative.

(68a) is lexicosyntactically more transparent than (68b), which represents *like* as a suffix. But this may reflect merely that the morphosyntactic categorization in (68b) is under-characterized. This discrepancy disappears if we substitute for (68b) the representation in (68c). This renders the rival analyses more competitive, though *-like* would be an unusual suffix, unreduced notionally and phonologically.

Notice now that in *unseaworthy* the second component of the compound, if such it is, contains itself a suffix: the sequence *seaworth-* does not seem to be a plausible base for such, either as a compound or a derived base. The *-y* belongs with *worth-*, as in the independent source of the component *worthy*, which as an adjective can be prefixed with *un-*, giving *unworthy*. This would support compound status for *(un)seaworthy*, where the negative is again prefixed to the compound. Such support is lacking in the case of *unladylike*. But the possible 'unusualness' of its compound structure is lessened by the existence of forms like *unseaworthy*. Indeed such prefixed compound words are 'unusual' only in the context of the other compound types we've looked at so far; and in *able-bodied* a suffix is attached to the compound. And there is apparently no positive evidence of affix status for *-like*. We come back to such formations below.

However, it may well be, once more, that such a form as *unladylike* is analysed differently, if at all, in different mental lexicons. Indeed, it is unrealistic to think of the morphological structure assigned to particular forms as any more uniform over different lexicons than the membership of lexicons. Assumptions of (or idealizations involving) homogeneity and determinacy are not helpful in trying to understand the cognitive and communicative status of linguistic and particularly lexical structures. Language users don't necessarily share or conform to the same conceptualizations or perceptions.

A rather different case from *-like*, or even *-worthy*, is presented by *-monger*, as in *fishmonger*, where this subsequence, though usually taken to be the second

element in a compound, does not now in my experience occur as an independent noun. But it has throughout the modern period been productive as a compound component, with such (often disparaging) formations as *fashion-monger*, *scandal-monger*, *gossip-monger*. The situation with *costermonger* is even more dire, in that the first element not only doesn't occur independently (though there is *custard*), but is also, as a result, now obscure. However, *-er* is a nominalizing suffix that typically attaches to verbs to form an agentive, as in *driver*, and thus to second components in compounds like *train-driver*; and the first element in such compounds is typically also a noun in a participant relation to the verb (usually absolutive). The appropriateness of this to the interpretation of *-monger* forms supports the analysis of *-monger* (if any analysis is envisaged by the user) as the second element in a compound with just such a structure (as is transparent in earlier English), despite the present-day opacity of some of these forms, particularly the component *-mong-* itself.

We can say, with perhaps a little more confidence than with *-like* sequences, that *fishmonger* etc. are compounds, compounds with a now obscured nominalized verbal component, not attested as an independent word. We also return below to the lexicosyntactic and morphological structure of such compounds, which throws light on the interpretation of *-like*. But we must now re-confront more directly the question of what constitutes a compound, as distinct, not now from affixation, but, especially, from a lexical phrase. This anticipates the more focused discussion of lexical phrases and lexical periphrases in Chapter 32.

We recalled above the examples in (II.125a).

(II.125) a. bluebird, redhead, longboat

b.
$$\{N\}$$
$$|$$
$$\{N;P\}$$
$$\{P.N_i/\{src\}\}$$
$$\{P:N\} \qquad\qquad \{\ \{src\}\}$$
$$\qquad\qquad\qquad \{N_j\}$$
$$\qquad\qquad\qquad \{N;P\}$$
$$\{V_4\}$$
$$\textit{long} \qquad\qquad \textit{boat}$$
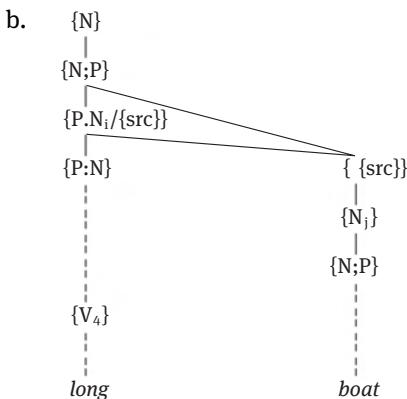
where $i \subset j$

As noted there the compound noun to which the lexical structure in (II.125b) is subordinate is based on a prenominal attributive structure. And it was suggested in Chapter 24 that many nominal compounds are based on the left-headed pre-nominal attributive structure.

Consider now some other nominal compounds that look as if they are based on an attributive construction, and, indeed, more specifically, are noun-noun based. As with other attributives, the attributive {N/{src}} to which a noun is sub-joined is, in these circumstances, no longer understood as denoting all the deno-tata of the noun. But some such compounds are more complex categorially than the forms in (II.125). This is illustrated by the structures assigned to a couple of the items in (69a) in (69b–c), such that in (69b), for instance, the attributive rela-tion is built on a verb-mediated relation between the relevant {N}s.

(69) a. tear gas, daisy chain, drug death

b. {N}
{N;P}
{N$_i$/{src}}
{N:P}   { {src}}
{N$_i$}
{N;P}
{P;N/{abs}{src}}
{ {src}} .... { {abs}}
{N$_i$}   {N$_j$}

tear   *gas*

c.
$\{N\}$

$\{N;P\}$

$\{N_i/\{src\}\}$

$\{N;P\}$ $\{ \{src\}\}$

$\{N\{sg\}\}$

$\{N;P\}$

$\{P;N\}$

$\{P;N/\{abs\}\} \dots \{ \{loc\{src\}\}\backslash\{P;N\}\}$

$\{ \{abs\}\}$ $\{N_i\}$

$\{N\}$

$[[drug]$ $[dea \longleftrightarrow [th]]]$

≈
die
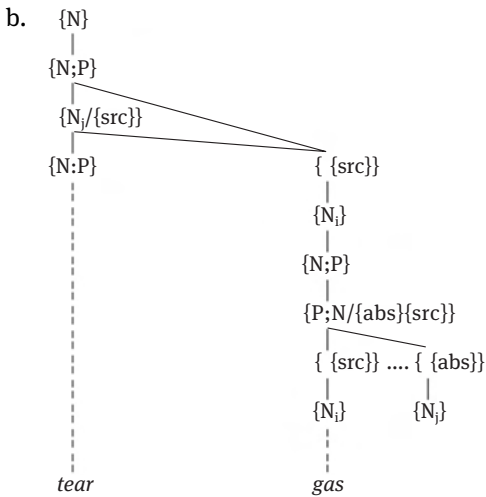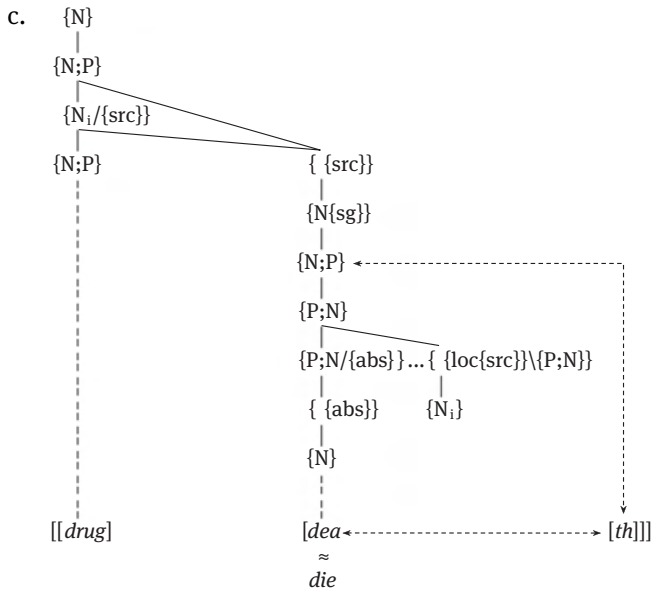
And in (69c) the verbal contribution to the structure is made overt, if somewhat obscurely, given the vowel-alternation, and the basic verb's valency is incomplete (in omitting a representation of 'out of existence').

These representations involve, then, in addition to the attributive structure, respectively a covert $\{P;N\}$ or pro-verb, and a phonologically much obscured $\{N;P\}$, which is associated with an unusual vowel alternation. The $\{P;N\}$ articulates, further to the attributive relation, typical verb-based relationships between the two elements. In (69b), representing the first example in (69a), the $\{N\}$ to which the *tear* noun is subjoined is coreferential with the absolute of the pro-verb, whereas *gas* is coreferential with the agentive $\{N\}$. In (69c), coreferentiality is with the circumstantial source (here causal) that modifies the $\{P;N\}$.

Similarly, when we return, against this background, to compounds with adverb components, which seemed to be right-headed, another possibility becomes apparent: the $\{N\}$ of the attributive locative in the first of the types of examples in (70a), is coreferential with a participant of the verbal base of a noun conversion, as in (70b).

(70) a.   outlook, upsurge, downturn

b.   {N}
|
{N;P}
|
{N_j/{src}}

{ {loc}}   { {src}}
| |
{N_i}   {N}
|
{N;P}
|
{P;N/{src{abs{src}}} {loc}}

{ {src{abs{loc{src}}}}} .... { {loc{gol}}}
| |
{N}   {N_i}

out   *look*
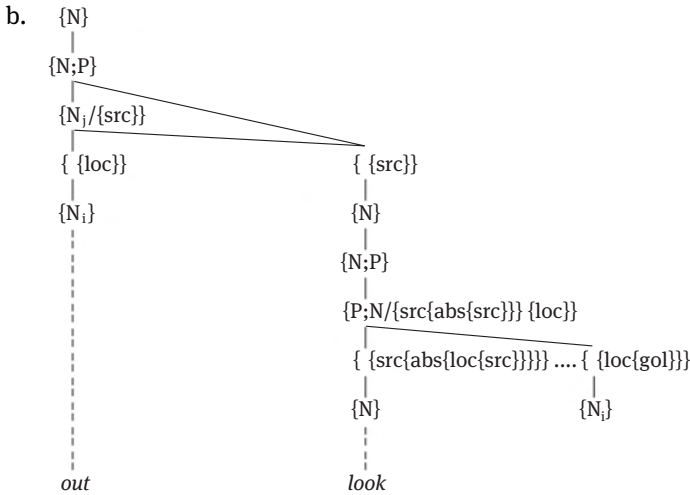
(70b) is an expansion of the representation in (67a) that acknowledges, after all, the presence of an attributive substructure. Again the compound is immediately based on an attributive, and thus left-headed, structure. And compound status can be said to be at most only indirectly signalled by divergence in sequence in such a case.

This structure is not appropriate in the examples in (71a), however, as represented, for the last example therein, in (71b).

(71) a.   overtake, out-do, undergo

b.   {P;N/{src{loc}}{abs}}

{P;N/{abs}{{gol}}} .... { {abs{loc}}} .....{ {abs}}

{ {{gol}}}   { {abs}}   {N_j}   {N_i}
| |
{N_i}   {N_j}

under   *go*
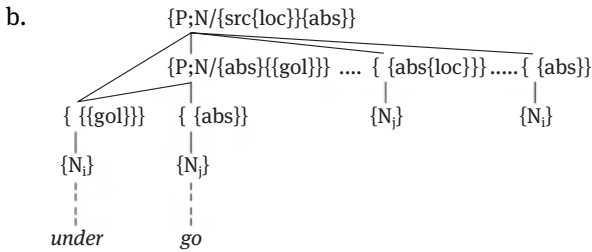
c.   bulk-buy, mass-produce
d.   stock-pile
e.   self-isolate, self-serving, self-absorbed, self-denial

The verb compounds in (71a) combine a locative goal and a verb, as represented in (71b), and the compound itself is an experiential verb whose participants are co-indexed with those of the component *go*. This structure also lacks both initial stress and headhood but has a non-syntactic order, which is the only grammatical indication of compound status, as recognized in the spelling. So too with the verb compounds in (71c), which combine a circumstantial and a verb. The representation of (71a) given in (71b) illustrates the scope for metaphor provided by such compounds: it is a patient verbal compound based on a directional construction. We pursue this below.

However, the verb compound *stock-pile* in (71d) apparently assigns an initial accent, from which I assume it is converted to a compound component, a compound which preserves the syntactic order and in which *stock* is a transitive verb to which *pile* is a noun converted to a cicumstantial ('in a pile', say), as in *They stock-pile toilet rolls*. And it has a representation that is not unlike the noun compound in (67b), though it is a verb compound with a transitive head.

(67) b. {Nᵢ}
         |
         {N;P}

         {P;N/{src{{abs{src}}}{loc}}
           |
         { {src{abs{loc{src}}}}}   { {loc{gol}}}
           | |
         {Nᵢ}   {N}
           ┆   ┆
         look   *out*
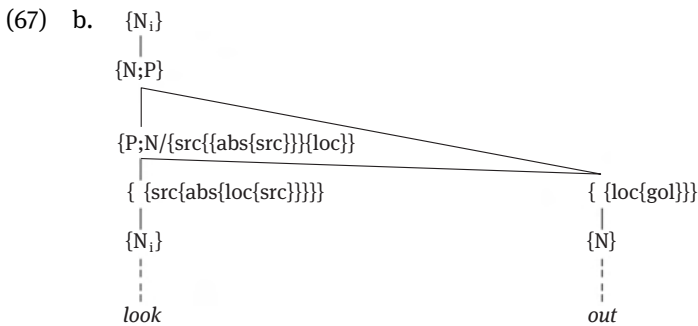
This verb compound, whose source is not attributive but is a verb-headed structure, nevertheless has an initial head and, as in (70b), an initial accent, and preserves a syntax-based order, except that the circumstantial precedes the distinct syntactic 'object'. The initial accent is what mainly signals compound status.

The verb and adjective and noun compounds in (71e) illustrate a further variety of compound combinations. As well as verbs combining with adverbs (complex functors), here we have combination of verb or deverbal contentive with a noun, *self*, with disruption of syntactic order. It also combines with 'oblique' pronouns (in a syntactic order) to form compound 'reflexive' pronouns, as in *it/her/himself* and *(y)our/themselves*. Despite some frotting of the pronominal form (compare the more transparent (in this respect) *hissel*) I am familiar with, these reflexives look like compounded possessive structures, expecting coference typically with a preceding {N}. Cf. the syntactic possessive phrases *She should*

look after her<u>self</u> better, with contrastive accent on *self*; or *One should look after one's self*. We also find nominal compounds *self-confidence*, *self-restraint*, and *self-slaughter* (the latter squeezed out by neo-classical *suicide*, a phenomenon we take up in general in the succeeding chapter); the second components are typically (ultimately) verb-based. All of these compounds have primary accent on the second component, but neither component shows signs of affixation.

The pronominal compounds illustrate further that compounds and their components are not limited to contentive status, though the reflexives do take noun plural inflections. We might suggest too that expressions such as *into* involve functor compounds composed of adverb plus functor; they have initial accent and the second component is the head. More speculatively, in those varieties that allow sequences such as *might could*, with initial accent, do we have a modal {P} compound?

Also in contrast with the complex compound types we have been looking at, there is a final rather simple type that is often overlooked, perhaps because it involves components that are functional or very general in denotation. I have in mind some of the pronouns addressed in Chapter 9 in Part I, particularly those other than the simple, monosyllabic definite 'personal pronouns' – *I* and *us* and *she* etc. – but *she-devil, she-goat*. Contrast with these the indefinite and non-definite forms in *someone* and *anyone*, representative of a range of genders: *someone* or *somebody, something, somewhere, some-time(s), somewhere,* and their equivalents in *any-*; negatives such as *no-one* or *nobody, nothing, nowhere*, but *never*; 'universals' *everyone* or *everybody, everything, everywhere,* but *always*; manner forms *somehow, anyhow, nohow, every-which-how/-way*. All morphologically and phonologically complex, and with initial accent. The *wh*-forms – *whoever, whatever, where ever, whenever, however* – have accents on the second component, but are not in a typical syntactic sequence. These are compounds with varying functor heads.

But let's continue with verbs and their distribution in syntax and compounding. Simple verbs do not head attributive phrases. We do find participial attributives, such as those in *falling rain, released prisoners*, and, of course, nominalized verbs that are attributive. And, of course, we find such deverbal-noun-headed compound formations as *flying boat* and *living room*. Otherwise, verbs do not undergo attributivization whether or not they head nominal compounds.

Is left-headedness and accent placement, after all, characteristic of nominal compounds, at least? This is necessarily the case if the nominal compound is attributive-sourced, since prenominal attributive structures lacking initial accent I take to be phrasal, given that they lack a signal of morphologization. But, as we've just seen, some sources that are verb headed also have initial accent, but others don't. All the kinds of compounds we have looked at so far are based on

left-headed syntactic structures – except for the verb compounds in (71), simple functor compounds, and the (perhaps questionable) *(un)ladylike* of (68a), where it is the sequence of categories that is morphologically significant, as well as accent in the latter case. Let us now look at further compounds that don't have their source in an attributive construction.

This is, indeed, also a feature of the left-accented noun compounds in (72a), with components of verb plus noun, and not obviously attributive, but verb-headed, and apparently with an order of the components that is syntactically compatible, as shown in (72b), with simplified verb valency.

(72)   a.   pickpocket, dreadnaught, lickspittle

      b.

$$\{N_i\}$$
$$|$$
$$\{N;P\}$$
$$|$$
$$\{P;N/\{src\}\{abs\{src\}\}\}$$

$\{\ \{src\}\}$	$\{\ \{abs\}\}$
$\{N_i\}$	$\{N\}$
	$\{N;P\}$
pick	*pocket*
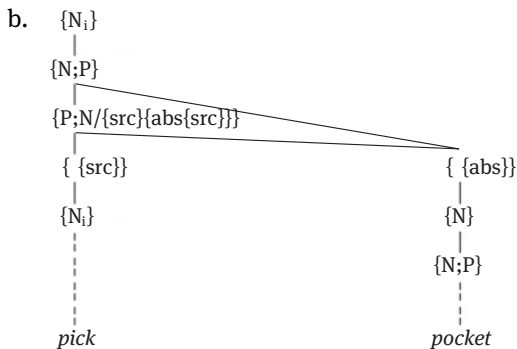
So far, then, the different kinds of nominal compounds we have encountered, whether attributive-based or directly verb-based, preserve the syntactic sequencing of their components and almost all show the head-to-the-left dependency that determines sequencing, as well as introducing the accent marking that seems to go along with headhood in the compound. Tonic accent is normally on the left in compound nouns, at least.

But what about the verb plus noun nominal compounds in (73a), which, if taken to be verb-headed, are not sequenced in accordance with syntax, while those in (73b), though mirroring subject-verb syntactic sequence, and again with initial accentuation, are not accented on the head, which is also again not on the left?

(73)   a.   lionhunt, leg-pull, bell-push, pastry-cook
      b.   sun-rise, rainfall, bee-dance

c.   {N}
         |
       {N;P}
         |
       {N_i /{src}}
         |⟍
       {N;P}   { {src}}
         ⋮ |
         ⋮   {N}
         ⋮ |
         ⋮   {N;P}
         ⋮ |
         ⋮   {P;N/{abs}{src}}
         ⋮ |⟍
         ⋮   { {abs}}.....{ {src}}
         ⋮ | |
         ⋮   {N_i}   {N}
         ⋮   ⋮   ⋮
        lion   *hunt*

d.   {N}
         |
       {N;P}
         |
       {N_i/{src}}
         |⟍
       {N;P}   { {src}}
         ⋮ |
         ⋮   {N}
         ⋮ |
         ⋮   {N;P}
         ⋮ |
         ⋮   {P;N/{abs}}
         ⋮ |
         ⋮   { {abs}}
         ⋮ |
         ⋮   {N_i}
         ⋮   ⋮
        sun   *rise*
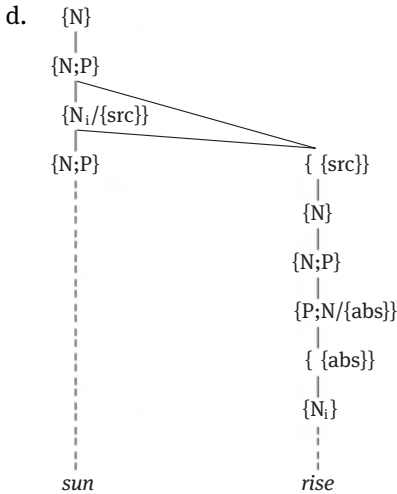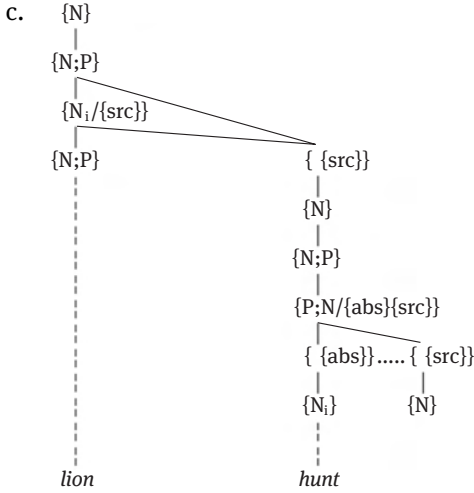
The correlations suggested at the end of the previous paragraph cannot be generalized in that case, apparently. However, suppose, consistent with the subtype to type relation between the two components of these last compounds, they exemplify further attributive structures: the verbs concerned have been converted into nouns. This would give us a representation in (73c) for the first compound in (73a) – i.e. analogous to that in (73b) given in (73d), but with a verbal base to the second noun that involves two verbal participants not one. One participant is coreferential with the {N} of the first component of the compound. In these

terms, the discrepancy in word order – S-V vs. O-V – between (73a) and (73b) is illusory: they both conform to attributive structure and an 'ergative' pattern. They are based on an attributive noun and a deverbal dependent.

(73c–d) conform to the generalizations concerning headedness and accent placement in nominal compounds. Perhaps we can say that when the verbal head of a nominal compound is not initial we have an attributive structure which includes the verbal structure. The generalizability of this depends on the plausibility, with such examples as those in (73a–b), of the verb-to-noun conversion and the resultant sub-type-to-type interpretation of the attributive structure. Evaluation can be more difficult where non-compositionality is prominent, as in *hen-run*, *landfall*. The verb-to-noun derivation may, on the other hand, be signalled morphologically, though this may not always clarify things in detail, as with *pond-life*.

Relatively transparent morphological marking of verb-to-noun lexicosyntactic structure is illustrated by the agent nouns in (74a), the type to which *-monger* formations belong, and by the event nouns in (74b), as respectively illustrated in (74c–d).

(74)   a.   house-keeper, house-holder, care-taker, metal-worker, cattle-thief
       b.   child-bearing, fox-hunting, oath-taking

       c.   {N}
               |
             {N;P}
               |
           {N$_j$/{src}}
               |
     {N;P}   { {src}}
       | |
       | {N$_i$}
       | |
       | {N;P}
       | |
       | {P;N/{abs}{src}}
       | |
       | { {abs}} .... { {src}}
       | | |
       | {N$_j$}   {N}
       | | |
   [[*house*]   [*keep*   [*er*]]]

d.   {N}
|
{N;P}
|
{N$_i$/{src}}
|
{N;P}   { {src}}
|
{N$_i$}
|
{N;P}
|
{P;N/{abs}{src}}
|
{ {abs}} …. { {src}}
| |
{N$_i$}   {N}

fox   *hunting*
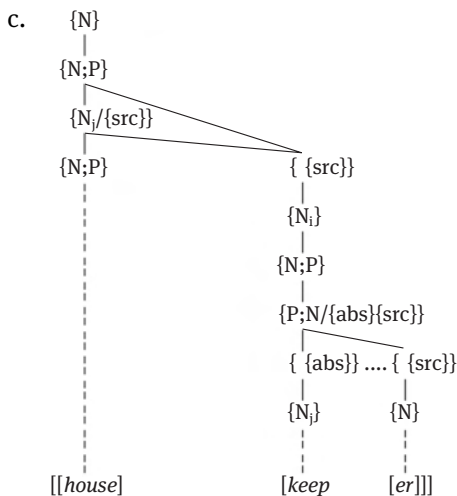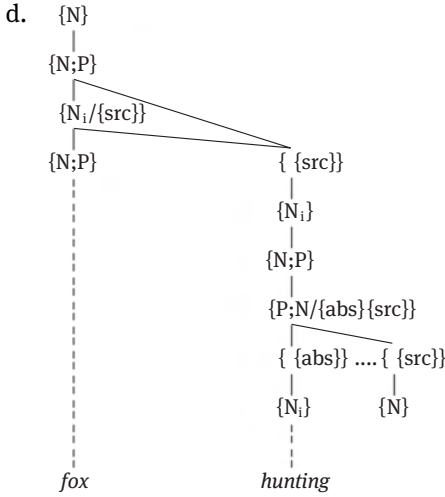
Here the second component of the compounds has the morphology of a derived noun. The structure in (74c) is appropriate for the first example in (74a), which indicates the morphological structure, while we can attribute a structure like that in (74d) to the compounds in (74b). The second component of the final example in (74a) is more complex than the others, despite the absence of a suffix: *thief* is an agentive (possibly occupational) noun based on a pro-verb, while the verb *thieve* is apparently based on the noun, with expression of the derivation being by internal modification (a residue of its causative ancestor).

The morphological structure indicated overtly in (74c) – and that to be associated with (74d), though unexpressed in the diagram – is not like that in (68a) suggested for *unlady-like*, if this last is interpreted as a compound with a prefix. In the present cases the affix is attached to a single component of the compound not to the compound as a whole. Certainly, in relation to a compound like *fishmonger* the affix rarely appears now on *monger* in isolation, since neither the latter form nor indeed *mong* occur alone. But this obscuration does not justify regarding the suffix as attached to the compound as a whole. But consider *outlander*, where suffixation is part of the formation of the compound. The same seems to be involved with the adjective *outlandish*, but the accent is not initial. The native suffix *-ish* is accentually extrametrical, so the 'non-syntax' of the compound is what manifests its status as such.

The first element in compounds like *filling-station*, *smoothing-iron*, and the like involve an attributive derived noun, and the elements are again related via the {P;N} that is the base for this derived noun. If either of the component nouns

in a noun compound is deverbal we can have analogous complications of the subset-to-set attributive relation, in terms of the presence not only of {P;N}, but also of coindexing: this is illustrated in (74), for instance.

Compare with these compound forms such sequences as *falling rain*, *dripping tap*, etc. Here the attributive is verbal; it has not been nominalized. Similarly, the initial elements in *deposed president, emptied bottle*, etc. are verb-based attributives. The accent in both these cases is not on the head, but on the complement of the attributive element. I take this to be an indication that these sequences are not compound nouns; the absence of compounding is signalled by this absence of tonic accent on the head of the attributive structure (or of other diversions from a syntactic source). The accent in such examples has been said to be 'phrasal'; and sequences such as *filling-station*, etc., then, are 'compound' in accentuation, with the accent signalling the head of the compound.

In such terms, the familiar distinction between the attributive pair in (75a) that is suggested by the difference in accent-placement seems to be straightforward.

(75)   a.   ápple cake, apple píe

b.

$$\left\langle \begin{array}{c} \{N\} \\ | \\ \{N;P\}_i \end{array} \right\rangle$$

$$\{P.N/\{src\}\}$$

$$\{N;P\} \qquad\qquad\qquad \{ \ \{src\}\}$$

$$\qquad\qquad\qquad\qquad\qquad \{N\}$$

$$\{V_4\}_i \qquad\qquad\qquad \{N;P\}$$

$$noun \qquad\qquad\qquad noun$$
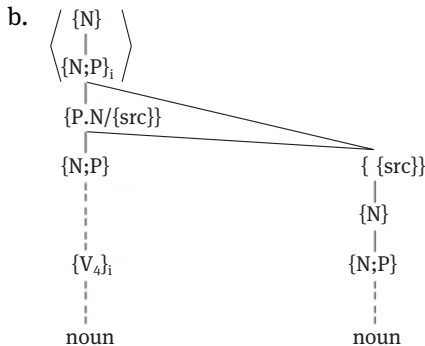
The former, with initial accent, is a noun compound and includes the structure enclosed in the angles (co-indexed with the initial accent); the latter is not a compound, even though the basic relationship between their components is roughly the same, as shown by the non-optional part of the structure in (75b). Both sequences in (75a) share the skeleton of (75b).

One common kind of complication of such a canonical noun-noun structure as characterizes *apple-cake* we encountered, of course, just above, in (74). As well as the simple attributive relation underlying many compounds, here there is a

verbal structure that also links the nouns by virtue of coreference between the {N} of the attributive noun and an argument of an incorporated {P;N}. The presence of the latter, unlike the contentive categories in (75b), is not overt. But it does not violate compositionality: the meaning of the attributive phrase is determined by a regular relation between the semantics of the two components mediated by a pro-verb. Different noun-noun sequences elaborate on this covert structure to greater or less degree.

The alternation illustrated by (75a) seems to be prevalent where the classifying subset-to-set relationship between the nouns is seen as salient, rather than any further relations between the nouns involving other, non-overt categories, even though this further relationship is undoubtedly present in any analysis of these sequences. Both of the expressions in (75a) are primarily simple, straightforward classificatory attributive structures, but only the former is a compound, which highlights the subset-to-set relation. But more obscurely related attributive elements may also manifest compound structure.

Compare in this regard, among many examples where a similar component occurs in the alternatives, *stone wall* vs. *kéy stone*: the former, with non-initial accent-placement, denotes a kind of wall distinguished by the substance it is made from; the latter, with initial, 'compound' accent, involves a more complex, less obvious relation between the two components. So too with the phrase *head master* vs. the compound *headstone*. However, that an interpretational difference between the relations in *apple cake* and *apple pie* is negligible is not a problem for according a different status to them. The same basic structures are involved, but it is only in one case that the structure is recognised as constituting lexically a single noun. Compound formation is not 'forced' by either complexity or simplicity of interpretation. It is worth noting too that non-compound status for *stone wall* does not disqualify it as a source for the figurative compound verb *stone wall*.

Another complication of attributive structure involves synecdoche: the head of the partitive relation between the elements in the examples of noun compounds in (76a) is subordinated, by synecdoche, to the argument of a non-overt possessive verb whose other argument is coindexed with the head of the whole structure – roughly along the lines indicated in (76b), perhaps, where the unexpressed verbal structure intervenes in the compounding structure between the compound category and its components, which are identified by their place in the verbal structure.

(76)   a.   redshank, redhead, fat head

     b.

$$\{N_i\}$$
$$|$$
$$\{N;P\}$$
$$|$$
$$\{P;N/\{abs\}\{loc\}\}$$

$$\{\ \{abs\}\}\ \ldots\ldots\ldots\ldots\ldots\ldots\ \{\ \{loc\}\}$$

$$\{P.N/\{src\}\} \qquad\qquad \{N_i\}$$

$$\{P:N\} \qquad\qquad\qquad \{\ \{src\}\}$$

$$\{N\}$$

$$\{N;P\}$$

red   *shank*
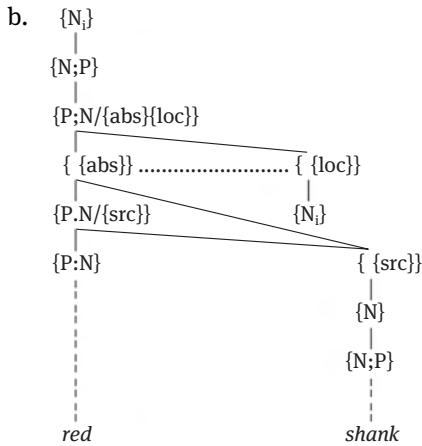
The compound noun in (76b) is coindexed with a {N} that is not associated with either of its components, but the overt sequence and accentuation are appropriate to the subordinate attributive structure. The final example in (76a) also involves metaphor. Some such compounds, *blue-stocking*, for instance, are even more 'indirect'. The expression *bluetooth* has an encyclopaedic link to the byname of a Danish king; early Germanic bynames of this form are not uncommon.

    Accent placement is crucial in potential noun compounds. Associating initial accent with compound formation is compatible with the existence of sequences of noun-noun or adjective-noun that bear 'phrasal' stress but also seem to make their lexicalization overt in the shape of non-compositionality. It is not only compounds that can be non-compositional. In the form of (Scottish) English that I grew up with, in *ice cream* the first component does not bear the accent; the converse is common in other varieties. In either variety the loss of the final *-d* in *iced* has rendered the semantic composition of the sequence unclear. The expression is firmly lexicalized, whether phrasal or compound.

    But if we accept it on this basis as a compound in both varieties of English, the status of forms like *apple pie* becomes indeterminate, unless we accept all noun + noun sequences as compounds. This is undesirable on other grounds. Coordinations like *apple and raspberry pies*, for instance, where the plurality is distributive ('apple pies and raspberry pies'), argue for a syntactic relationship between the attributives, compared with the compound *apple and raspberry cakes*, where 'apple' and 'raspberry' are construed as ingredients of each of the

cakes. We have syntactic vs. morphological structures, correlating with absence vs. presence of initial accent.

Say, then, that accent-placement is a reliable indication of compound-noun status. What do we make of final accentuation of *ice cream*? Whatever opacity there is in this form is the result of a phonetically natural simplification of the morphology of the first word. We find this too with *ice(d) tea* and many other sequences of juxtaposed plosives, whether the juxtaposition is brought about by morphological or simply syntactic means. Otherwise, *ice cream* with 'phrasal' accent exemplifies something closer to a canonical attributive structure like *curled hair*. This is a fuzzy area, but it may be here that opacity has not been sufficient to 'force' compounding universally. What the *ice cream* variation seems to show is that syntactic phrases, as well as compounds, can be marked as lexicalized by obscuration, just as compounds need not be. I retain the 'phrasal' accentuation myself, despite other evidence of the influence on my phonology of non-Scottish varieties.

Ice cream also illustrates another striking but common phenomenon. In order for the sequence as a whole to serve as a pre-nominal attributive it must be converted to a compound, as shown by the accentuation of the sequence in *ice-cream cone*, where <u>ice</u> is more strongly accented than *cream*. This conversion is necessary in such a syntactic position. Pre-nominal attributive constructions in English in general involve attributives that are not complemented internally: **the in the garden statue*. But non-compound *ice cream* is such a construction. It is only if the sequence is made into a single word, a compound, that it meets this requirement on prenominal attributives. The sequence is now part of internal morphological structure and not relevant to this syntactic constraint. Such syntactically restricted morphologization by conversion to a compound applies to a range of lexical phrases, such as *a never-to-be-repeated performance*. Dickens provides '... there was a little man with a puffy Say-nothing-to-me,-or-I'll-contradict-you sort of countenance, ...' (*Pickwick Papers*, [Folio edn.], p. 93). Compare these with the simpler recursive compound *take-over bid* discussed above.

Interesting in the light of all this are the expressions in (77a), commonly associated with 'phrasal' accent, though the latter expression seems to be more vulnerable to (?emphatic, ?contrastive) accentuation on the first word.

(77) a. party leader, Labour leader

b.
$$\{N_j/\{src\}\}$$

{N;P}   { {src}}

{N$_i$}

{N;P}

{P;N/{abs}{src}}

{ {abs}} .... { {src}}

{N$_j$}   {N$_i$}

party   lead-   er

where j ⊃ i
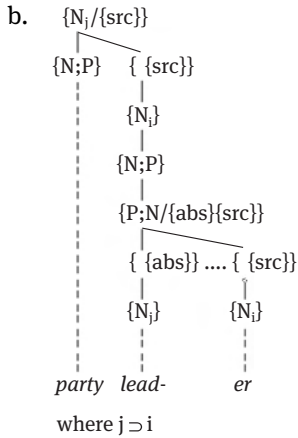
The role of a verbal component in the construction is made overt morphologically, as in the typical compounds in (74) – or indeed in *cheerleader*, where the second component is the same as the second words in each of the examples in (77a). The expression in (77b) denotes someone belonging to an organization with a special position, or status, in that organization. This introduces a notional complication of the canonical attributive relation we find in (74a), where the attributive head introduces a subtype of what is denoted by the dependent {N}. The 'belonging' in (77a) adds a reverse subset-to-set relation to the obvious one associated with attributives, which applies to (77b) as well as (74c).

(74) c.
{N}

{N;P}

{N$_j$/{src}}

{N;P}   { {src}}

{N$_i$}

{N;P}

{P;N/{abs}{src}}

{ {abs}}.....{ {src}}

{N$_j$}   {N}

[[*house*]   [*keep*   [*er*]]]
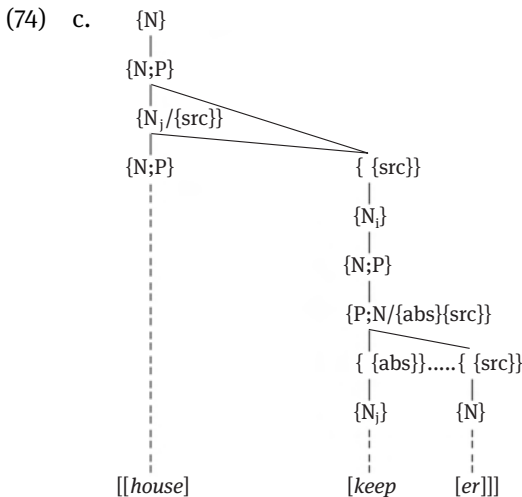
In (77a/b) the reverse subset-to-set relations, formulated as 'j ⊃ i' is more salient than the typical, attributive one. And there is no compound formation. The suggestion is that lack of compound forming is favoured by the salience of subset relationships other than, indeed here almost the reverse of, the subset-to-set relation that characterizes attributive phrases.

We now return to phenomena that suggest that, while an initial constructional-head category that bears the accent is an indication of compound status, both aspects – initial headedness and accentuation – may be absent, with non-noun compounds, if there is present another indication of morphologization as a compound. This is exemplified by the adjective compounds in (78a), on the assumption that, as elsewhere, the first, adverbial formative is not a prefix.

(78)   a.   outstanding, upstanding, uplifting, uplifted

   b.

$$\{P{:}N\}$$
$$\{P{:}N\} \leftarrow\text{-------------}$$
$$\{P;N/\{abs\}\{\{gol\}\}\}$$
$$\{\ \{loc\{gol\}\}\} \quad \{\ \{abs\}\}$$
$$\{N\} \qquad\qquad \{N\}$$
$$\{V_4\}$$
$$out \qquad\qquad stand \qquad\qquad \textit{-ing}$$

   c.

$$\{P{:}N\} \leftarrow\text{-------------}$$
$$\{P;N/\{abs\}\{\{gol\}\}\}$$
$$\{\ \{\{gol\}\}\} \quad \{\ \{abs\}\}$$
$$\{N\} \qquad\qquad \{N\}$$
$$[[[out] \qquad [\ stand\ ]] \qquad [ing]]$$
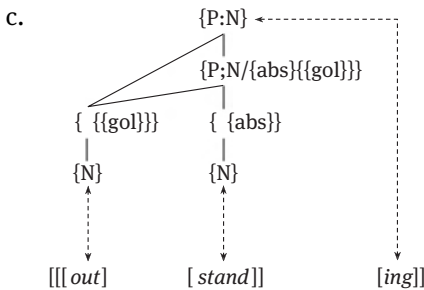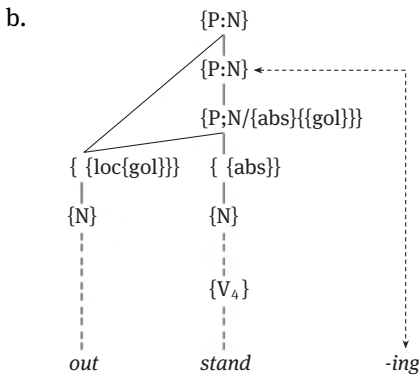
These are adjective compounds which are not initially-headed and the accent is also not on the initial component, as shown in the representation for the first example given in (78b). But the order of the words violates the syntactic order, as illustrated in *stands out* or *standing out*. The latter are lexicalized phrases, whose semantics is related to that of the formation in *outstanding*. We have here a 'sep-

arable' compound, or compoundable phrases, where separation/compounding involves a change in word class, and possibly further notional differences.

In the adjectival expression of (68a), if interpreted as a compound, both initial accent and non-syntactic sequence are present, but not lexicosyntactic left-headedness.

(68)   a.

```
                      - - - - - - - - - - - ->  {P:N{neg}}
                     |                              |
                     |                           {P:N}
                     |                              |
                     |                          {P.N/{{gol}}}
                     |                              |
                     |     { {loc{gol}}}      {P:N{sim}}
                     |            |                  :
                     |          {N}                  :
                     |            |                  :
                     |         {N;P}                 :
                     |            :                  :
                     v            :                  :
                  [[un]    [[lady]            [like]]]
```
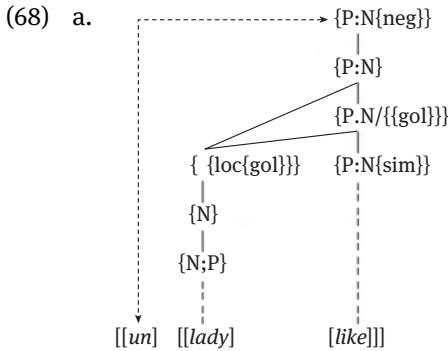
(78a) and (68a) have more in common still, as we shall see in what follows.

The representation in (78b) suggests that there should be, as well as a noun (as in the figurative *his standing in the party*), an independent adjective *standing*, and this is scarcely attested: in *standing stone* and *standing start* the categoriality of the *-ing*-form is not obviously adjectival. Moreover, the adjective should show some sign of being based on a verb that takes *out* as a complement.

Say that instead we take the affixation to be part of the compounding process, as represented in (78c). The morphological structure of (78c) is then like that (68a), if this is interpreted as a compound. They differ, however, in that *-ing* in (78c) is added at compound formation, whereas that in (68a) presupposes it, as is signalled configurationally.

The morphological structures of compounds make it particularly clear that not only do morphological structures lack categories – there are no morphological categories – but they also lack dependency relations, as suggested in Chapter 27. Compounds lack a morphological head. And the only motivation for attributing dependency to the relation between the prefix in (68c) and the compound would be the (from one point of view) 'optionality' of the former. But this is true of affixes in general, and the expression of such apparent 'optionality' need not refer to dependency; it follows from the role of affixes in derivation. Moreover, in terms of the representation in (78c) the affix is not 'optional'; it is a necessary part of compound formation in this case.

What characterizes and differentiates such morphological structures is simply the greater or less inclusivity of their components. The initial accent in compounds like (74c) above reflects lexicosyntactic-categorial headedness within this kind of compound, not morphological headedness. And, as we have seen, it is only the sequence that reflects morphologization as a compound rather than phrase-hood in (78c). Overall, this would mean that the inter-plane of morphology is differentiated from the planes of syntax and phonology by lack of both categories and dependencies. These two properties go together or are lacking together.

Again, but even more so than in some other cases, this chapter is obviously not comprehensive. There is much more to say about an area that remains highly contentious. And the chapter that follows perhaps introduces even more contention concerning compounds and lexical phrases. I have argued here that nominal compounds are formed historically on the basis of syntactic constructions, especially verbal-headed and attributive or a combination of the two. This is not to suggest that the compounds, once formed, pre-suppose a synchronic syntactic input, once the configuration of such a compound and its sequence have been lexicalized. I assume that it is the syntax that presupposes lexical information rather than vice versa. Compounds in general do, however, preserve the sequence of the input components unless a compound's non-syntactic internal sequencing is signalling morphologization, as in some verb and adjective compounds.

However, such head + dependent sequencing as is typical of compound nouns is redundant: it can be assigned on the basis a syntacticomorphological redundancy equivalent to the prototypical sequencing of the dependency relation between the syntactic sources of the components. The redundancy appeals to, and preserves the same generalization as is unmarked in the syntax – head before dependent.

But, of course, conforming to generalization does not necessitate non-storage of the sequencing. In general, contrast dictates what is the minimum storage necessary, not actual storage. And the redundancy of much mental storage often compensates for noisy channels of communication, for instance. And, of course users may differ in what they store. Thus, as we have been finding, the contents of the lexicon, even more than elsewhere in a language, are uncertain, unstable.

Noun compounds also have accent on the initial component. Verb and adjective compounding may also, or instead be signalled by marked, or 'morphological', sequencing, as opposed to unmarked, 'syntactic', sequencing. They may lack 'compound stress', typically when there is an adverbial component: *undergo*, *outstanding*. (It should be said again that this has often been adduced, sometimes silently, as evidence of prefix status for these adverbs.)

A hint of how much more there is to say about compounds is given by the 'juxtapositional' noun compound of the *cook-housekeeper* type, where the accents of the components are the same, 'listed', or either may be made more prominent. Nevertheless, this type too is based on an asymmetric syntactic construction, involving so-called coordination, as discussed in Chapter 17; but the coordination in *cook-house-keeper* does not impose plurality, unlike *Bill and Ben* or *Bill*, *Ben*, *and Weed*, but co-indexing of the conjuncts. This might be represented as in (79a), which does not include the covert verbal structure of *cook* or of morphological structure beyond separation into formatives.

(79) a.

```
        {N_i}
          |
        {N;P}
          |
        {N}
         /\
      {N_i}            { /{N_i}\{N_i}}
        |                    |
      {N;P}                {N_i}
        |                    |
{P;N/{src}{abs}}          {N;P}
       /\                   /\
{ {src}}....{ {abs}}    {N_j/{src}}
    |       |              |   \
  {N_i}    {N}          {N:P}        { {src}}
    :       :             :            |
    :       :             :          {N_i}
    :       :             :            |
    :       :             :          {N;P}
    :       :             :            |
    :       :             :     {P;N/{abs}{src}}
    :       :             :           /\
    :       :             :    { {abs}}....{ {src}}
    :       :             :        |          |
    :       :             :      {N_j}      {N_i}
    :       :             :        :          :
   cook    house        keep-            er
```

b.

```
     {N_i}
       |
     {N;P} <------------------------┐
      /\                            :
{P;N/{src{abs}}{loc{src,gol}}}      :        {V_4}
      |                             :          |
  { {src{abs}}}                     :     { {loc{src,gol}}}
      |                             :          |
    {N_i} <-----------------┐       :         {N}
      :                     :       :          ^
      :                     :       :          :
     pass                  er                  by
```

c. {N;P}

    {N{src}}

      { {loc}}   { {src}}

      {N$_i$}   {N$_j$}

      {N;P}   {N;P{part}}

      table   *leg*

    where $i \subset j$
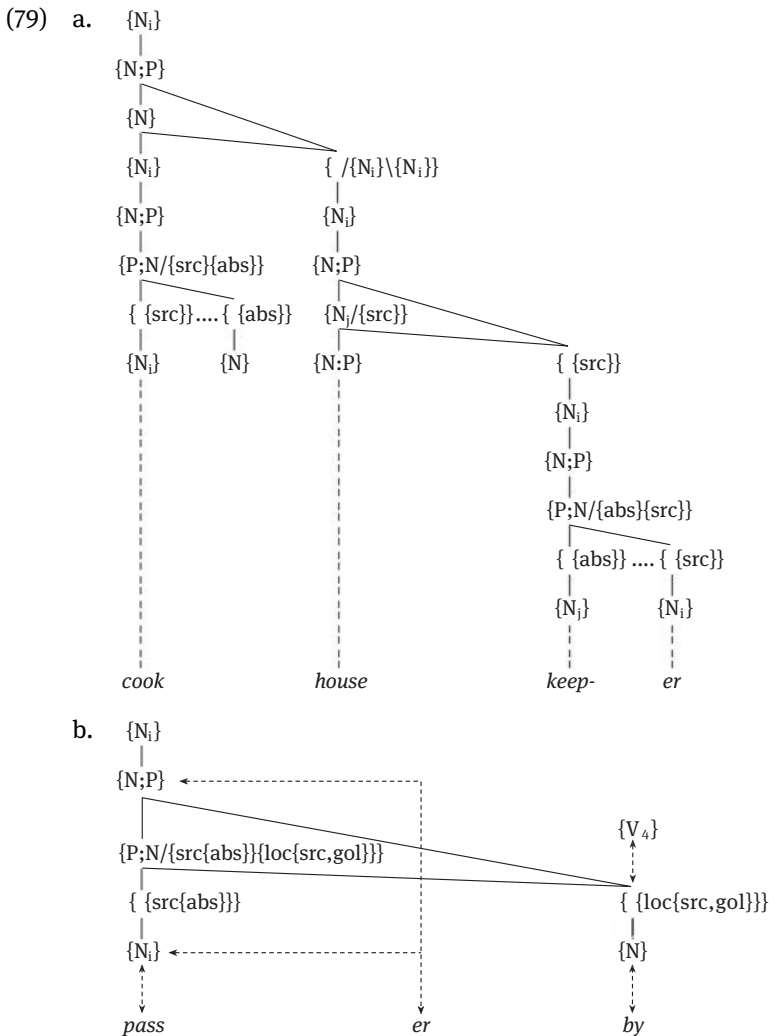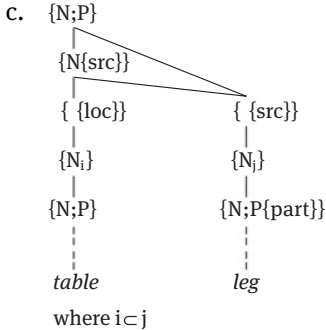
Here we have an *-er* compound embedded within a 'juxtaposed' or 'coordinative' compound, in which the 'coordinator' – '{ /{N}\{N}}' (recall Chapter 17) – is not given overt expression.

(79b) exemplifies another *-er* possibility, associated with such as *passer-by* (replacing *passenger*, now more specialized) and *holder-on* (my father's job in a shipyard), where the compound differs from its verb-headed source phrase by presence of a nominalizing suffix. There is syntactic and compound left-headedness, but the adverb retains the accent of the phrasal source. The present diagram aims to illustrate the double role of the suffix *-er*, as exponent of the agent and marker of nominalization. This nominalization of the phrase is another indication of compound formation.

And another type of source, long-overdue a mention, that should be acknowledged, before we close this overlong chapter, is one that might be confused with the simple attributive-sourced type that has figured prominently here. Many noun-noun compounds are rather whole-part genitive-structure sourced, as represented in (79c), where *leg* is located with respect to, or possessed by, *table*, apparently contrary to the partitive relation. Recall (II.67b/d) from Chapter 21.

(II.67) b. the leg of the table

d. {N/{def}}
    |
{N/{src}}

        { {src}}
           |
        {N_j/{loc}}

        {N;P{part}} { {loc}}

                  {N{def}}
                    |
                 {N/{src}}

                       { {src}}
                         |
                     {N_i}
                       |
                    {N;P}

the *leg*   *of* *the*   *table*

where $j \subset i$
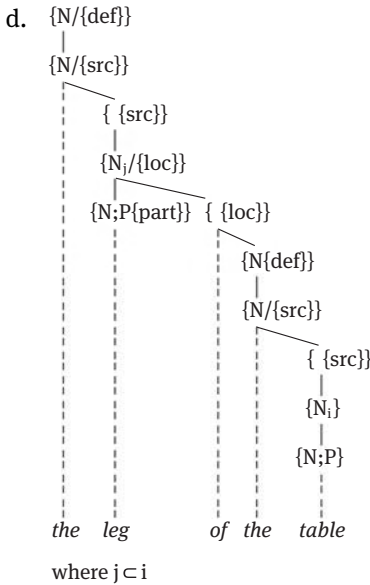
The representations in (79) add other types, but this does not disturb the hypothesis that lexicalization by compounding may be reliably signalled by accent placement or sequence or both – or, as in (79b), by change of mode of signifying of the phrase. This generalization, though not particularly elegant, seems to be true of a large sample of putative compounds, despite the wealth of what have been perceived as conflicting examples, in the form of phrasal items. Attributive constructions in particular that do not bear initial accent or any other stigma of morphologization are not compounds. On the other hand, I suggest yet another type of compound in Chapter 35, involving a pair of functors that are also separable.

There are other consequences of the description of compounds offered in this chapter that we shall return to in Part IV. In particular, we shall return to the status of verbal non-finite suffixes, in the light of their not being, as are other inflections, exponents of non-major functional features and the lack with at least some of them of the conversion to functional category that (in the immediately preceding chapter) we have associated with at least some inflections. There we shall confront the significance of compounds such as *wind-swept* and *death-defying*, whose second components seem to be inflected verbal forms, in terms of the presentation in the preceding chapter. This is consistent with other evidence that these non-finites are instead deverbal derived verbs.

At this point, though, some fundamental general questions might receive tentative answers. Most basic of all: why are compounds developed? In general terms, we can say that, given that compounds have their source in pairs of words in construction, and that compounds themselves can be recursive, they constitute an extensible store of lexical items much of whose content is overt, in the absence of further lexicalization (idiomatization). Alternatively, a compound component may be further grammaticalized, as a derivational affix.

Compounds involving simple contentives (not adverbs) are commonly noun compounds. Why? Enriching the lexicon with contentive entitatives is desirable when a subset of a set of noun denotata is frequently invoked, but along with its subset status, as with *sandbank*; and this is often judged to be preferable to introducing a quite novel lexical item. Figurativeness, as in *bluebell*, introduces some obscurity. Verb compounds frequently invoke adverbs. This is consistent with their relational status; and simple adverbs allow a compact expression of this, as in *overtake, outgrow*; and they allow for converted noun compounds, especially as the basis for localistic metaphors, such as *washout*. Unsurprisingly, adjective compounds are heavily dependent on the other, less marked contentives, as in *outstanding*, or *unladylike*.

Compound-formation has been one of the areas of the greatest exercise of creativity in the use of the language, and we have thus merely touched on here at the extent and variety of such creations and their interaction with other means of word-formation. So let's close this chapter with just one example of what has remained untouched in the above, one from Dickens' *Pickwick Papers*, Chapter VIII: '… there was a dignity in the air, a touch-me-not-ishness in the walk, a majesty in the eye of the spinster aunt, …'.

Chapter 31
Sourceless Compounds

‘neo-classical compounds’ – and accentuation – combining form – transparency – accent
and suffixation – affixation vs. compounding, again – ‘neo-classical prefixes’

We now place prototypical compounds within the context of, on the one hand, apparent compounds that systematically have one or more synchronically source-less components and, on the other, lexical phrases some of which share properties with compounds. I begin with the former, which relate rather directly to the central concerns of the preceding chapter. The latter will occupy us in Chapter 32.

We encountered in Chapter 30 and previous chapters compound-components or bases that lack synchronic sources, i.e. a related independent word. Whether we treat *cranberry* and *raspberry* as containing a suffix (as suggested in Chapter 30) or being composed of two compound components, the first formative/component is synchronically sourceless and obscure. Similarly, the first unit in *costermonger*, if we take that to be *coster-*, is sourceless synchronically, and obscure, except that it seems to be a compound component that distinguishes a kind of *monger*. The latter is a typically agentive form whose base is, however, also synchronically sourceless – though, as with *cranberry/raspberry*, we have an idea of what kind of entity it denotes, particularly the plausibility of an attributive + noun relation.

What we shall look at here are recurrent forms that are apparently com-pounded, mostly to form nouns and adjectives, but are synchronically systemati-cally sourceless in English – though the components may recur and though many users of English have a clear idea of their sense. What I have in mind specifi-cally are what have been called ‘combining forms’, or ‘neo-classical compounds’, whose status is a matter for contention, including what expressions should be included as such. I shall look particularly at components from Greek, where the absence of synchronic sources in English is most pervasive.

Although these combinations are composed of elements from the classical languages, they are not necessarily borrowed from them as a whole, in prefabri-cated form. Many of them, indeed, have denotata that did not exist in the period of the currency of these languages. More commonly, these sequences are con-structed in modern languages from classical elements, and circulated among the modern languages. Such compounding sometimes results in ‘mongrels’ combin-ing Greek and Latin, as in *spectrogram* (though the latter element was also bor-rowed into Latin), or *bioscience*, with a second component that has a synchronic source in English, and even such ‘mongrels’ as *shopping-therapy*, which illus-trates the degree of ‘naturalization’ of the second component.

But a number of compounds are borrowed directly from a classical language, often via French, particularly in the case of Latin; and they include familiar ones such as the Greek-sourced formations in (80a).

(80) a philósophy, philósopher
     b. bíbliophìle
     c. [[[*bibli*] *o*]] [*phile*]]
     d.

[[[*bibli*]*o*]]   [*phile*]]
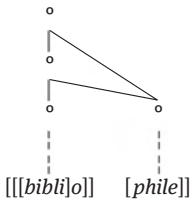
In English the agent noun *philosopher* (compared with the Greek compound *φιλόσοφος*) is derived historically by substitution of a native derivational suffix for the final declensional inflection of the original. The original derived component *σοφία* 'skill, wisdom' is based on the stem of the adjective *σοφός* 'skilled, wise'. In English the *-y/-er* suffixes can, however, be taken to be part of the compound formation (as with that in *outstanding*). Both components (glossable as 'love' and 'wisdom') recur in other Greek compounds. The final vowel in the first component of *philosophy/er* is a declension marker, or stem vowel, of the first component that has been interpreted as a 'compositional vowel' in Greek, joining the two components.

(80b), on the other hand, seems to be a French creation based on Greek stems that both also participate as components in ancient Greek compounds, as in (80a), of course though the diminutive *βιβλίο* – only sparingly. (80c) offers a morphological structure which groups the 'compositional' vowel with the first component, as is appropriate in Greek, given, despite exceptions, their origin as a declensional marker, or stem-vowel. We shall return below to its status in English.

The reader will have observed that the component that these two English compounds share differs in realization by virtue of a 'vowel-shift' alternation. We find the same alternation between the first vowels in *bibliophile* and the suffixed form *biblical*, on the one hand, and *Bible* (etymologically a specialization of the plural of non-diminutive *Βίβλος*), on the other. The presence of this alternation suggests a long-standing degree of naturalization.

Related to *σοφός* by suffixation are a range of Greek words, including the ancestor of *sophist* of English and other modern languages, as well as one or two ancient compounds; and it also contributes to later formations such as *sophomore* and *sophiology*, as well as the medieval Latin suffixed-formation that eventually gives us *sophisticate*. This is the distribution – as base and compound component –

that is typical of expressions that have independent sources; but they happen to lack them in English. These components have merely 'quasi-sources' in the shape of recurrent apparent components and bases. There is no substantial reason, however, to say that most of these compounded formatives, despite their history and synchronic sourcelessness, have ceased to be compound components in English, as anticipated by in (80c) above. And we can consider (80c) as expounding the canonical double-mother configuration of (80d) that I have associated with the categorization of compounds.

The components may not have independent lexical items as sources, but, as we have seen, they do recur as bases as well as compound components, as in *cynic* or *stoic* or *gnostic*, as well as *sophist*, where the suffixes *-ic* and *-ist* are Greek suffixes that also attach to non-Greek bases, as in *public* and *mannerist*. Moreover, these Greek-sourced bases/components do not conform to the notional types of English affixes or the phonological reduction characteristic of many of these affixes. The second component of *philosophy* is one sourceless component that can undergo phonological reduction. But I suspect that this is a consequence of the opacity of the whole expression, as far as many speakers are concerned. Partly because of this, and the associated sourcelessness, such compounds, however, are obviously not prototypical compounds in English.

English thus has two systems of compounding. Though both may be said to be based on stems (where the source of a component shows a stem/word-form distinction), one system is based prototypically on identifiable sources that can occur independently, and another one composed of components that prototypically do not occur independently – unless as a result of back-formation or clipping, which can be more and less arbitrary: *retro, pseud(o), poly, hydro, physio, tech*.

The latter system is derived from languages whose contentives have a salient distinction between word form and stem (though the stem-inflection boundary may be obscured). In English the prevalent word form is null-inflected or uninflected, as in count [[*book*]] vs. [[*book*]s] and mass [*mud*]. And there is certainly no regular combining, or compositional, form like the above Greek forms in *-o* etc., except for vestiges of a Germanic compound combiner in *yachtsman*, *oarsman*, *tradesman*, and the like, which seems to be a recycled genitive. In German and elsewhere in Indo-European the 'combiner' is a residue of a property of the syntactic source of the first component, as represented in (80c).

In the classical languages inflections are numerous and almost all word forms are distinguished by an overt inflection, and compounds more obviously combine stems not word forms. But the Greek compositional element shares its vowel with many inflections. Indeed, some compounds are linked by a recognizable (dative/genitive) inflection (whose development is comparable with the *-s-* of Germanic languages). In sum, we have to do with a typological difference in the

nature of compounding. 'Neo-classical compounds' in English are thus based on a different type from prototypical compounds in English; normally the sources of the components of 'neo-classical' compounds are necessarily stems, the source of English compounds is the unmarked morphological form of a word, in the absence of stem-markers. There are yet other discrepancies, however.

Thus, some 'neo-classical' compounds, including *bíbliophìle*, could be said to show the prevalent pattern of compound accentuation in English, with a secondary accent on the second component, rather than the identical simply phonology-based accentuation of simple forms. This could be true also of such as *gastropod* and the hybrid *demi-god*, with simple transitive final rhymes. But others, including *philóso-phy*, as well as *biógraphy, teléphony*, and many more, behave rather differently. Here the accent is on the vowel that in Greek indicates the compositional form of the first component, as well as occurring in inflected forms. Even in *bìbliógraphy* there is a primary accent on this combining vowel. Can this accentuation be regarded as an alternative marker of (sourceless, Greek-derived) compounds in English (the primary accent in Greek was and still is on the final derivational suffix in *φιλοσοφία*)?

However, these last accentuations are in accord with the phonological regularity for nouns suggested in Chapter 28.

(31) a. *THE PHONOLOGY OF WORD ACCENT*
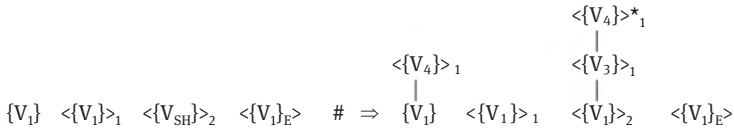
$$<\{V_4\}>^*{}_1$$
$$|$$
$$<\{V_4\}>_1 \qquad <\{V_3\}>_1$$
$$| \qquad\qquad |$$
$$\{V_1\} \quad <\{V_1\}>_1 \quad <\{V_{SH}\}>_2 \quad <\{V_1\}_E> \quad\# \Rightarrow \quad \{V_1\} \quad <\{V_1\}>_1 \quad <\{V_1\}>_2 \quad <\{V_1\}_E>$$

b. *FINAL EXTRAMETRICALITY IN ENTITATIVES*

i. $\{V_{INTR, SH}\}$ = *(31bii)

ii. $\{N;P\}$
$$\vdots$$
$$\{V_1\}_E \quad\# \quad = \quad \underline{\qquad}$$

iii. $\{V_3\}$
$$|$$
$$\{V_{1, INTR, H}\}_E = \{V_1\}$$

The *-y* rhyme in many of these noun forms is extrametrical, and the tonic accent falls, as expected on the penult in the residue.

Compare the set in (81).

(81) télegram/télegráph ≈ telégraphy ≈ telegráphic

The accent is on a different vowel in the three situations. But the accentuation is in each case as required by the regularity in (31). As noted, the final rhyme in all of the noun forms is extrametrical: *telégraphy* has an extra syllable supplied by the passively integrated suffix *-y*, which is nonetheless extrametrical as the final rhyme in a noun; and so the accent is moved one syllable back in the base. The suffix -ic in English is integrated, and as a result, again in accord with (31), the adjective *telegráphic* is actively accented on its penult. As we saw in Chapter 28, the presence of actively integrating *-ic* has the effect of assigning the tonic accent to the preceding syllabic, as in (32).

(32) a. cláss, átom, ártist, Íceland – clássic, atómic, artístic, Icelándic
      b. róbot, móron, Sátan, Éros – robótic, morónic, satánic, erótic

-Ic is a Greek suffix and occurs in many forms borrowed from or manufactured on the basis of Greek, including compounds such as *telegráphic* or *sycophántic*, as well as non-compound *atómic* and *morónic*. However, the commonness of *-ic* in English, as attached to a simple base or a compound, contributes to the perceived uncertain status of such putative compounds, given the usual pattern of compounds in English, as seen in *hóuse-keeping*. Though *sýcophant* has helpful initial accent, in the absence of this in *sycophántic*, we can scarcely appeal to a gloss of the basic combination, literally 'fig-shower' (interpretable only through knowledge of the culture in which it was composed), to suggest departure from English syntax as a sign of compounding. We have a second compounding system in English that is motivated on the basis of different criteria, mainly notional complexity and recurrence of the components, and the presence of a compositional affix. But *sycophantic* conforms to English accent placement.

 Sýcophant and *sýcophancy* are among the most obscure products of this 'neo-classical' historical source of compounds. The combination of the components of *sycophant/sycophancy* with sources in the Greek roots for 'fig' and 'show', the former of which, in particular, is non-recurrent and semantically obscure in English, and the compounds are also accented as any non-compounded form. In *sýcophant*, if (unhistorically) interpreted as containing the suffix *-ant*, which is extrametrical, the accent falls on the first syllable, in accordance with (31). In *sýcophancy* the accent is again on the initial syllable and succeeding vowels are at most unaccented and may be reduced. This suggests that both *-y* and *-anc/-ant* are, for different reasons, taken to be extrametrical. Recall on the latter (30d), also in Chapter 28.

(30) d. Améric(a)$_E$, cámer(a)$_E$, tóler(ance)$_E$, córmor(ant)$_E$

An immediately-preceding accent is associated, as expected, with the final suffix of *sycophántic*, as is the norm with simple nouns.

What is remarkable, however, is how many of these putative compounds are analyzable as such in English, by virtue of comprising recurrent components that are each associated with a relatively stable sense, components that are often also bases. Even the presence of the compositional vowel may serve at least as a warning that we're likely dealing with 'one of those compounds'. *Philosophy* is relatively transparent, in involving components that retain a consistent meaning and phonology, though its accent-placement (with accentuation in its case of the compositional vowel) is not distinctively that of many 'regular' nominal compounds, but it is itself obvious, and sometimes can be merely phonologically determined. It is likely that there is much variation among speakers of English in the extent to which these historically compounded forms are parsed as compounds, with the two instances we have just looked at in this and the preceding paragraph being extreme cases of (un)parsability; but they both conform to English phonological accentuation. The placement of accent on the combining vowel is a frequent side-effect of this. But the commonness of English phonological accentuation, as formulated in (31), can be seen as a sign of integration, just as is the frotting involving imported derivational affixes and their base.

Even potentially transparent synchronically-sourceless compounds can have their accentuation distributed in either of the ways encountered so far. Thus in *philosophy* and the nouns and adjective in (81) the accent in the expression is in accord with (31) or suffix determined, whereas in (80b) we have 'compound stress'.

(81)   télegram/télegraph ≈ telégraphy ≈ telegráphic
(80)   a.   philósophy
         b.   bíbliophìle

Iconoclast is compatible with either. But also, although (82a) show again phonological accent placement, the examples in (82b) seem to manifest 'phrasal stress', with only secondary accent on the first component, though accent placement within the second elements is 'phonological'.

(82)   a.   hydrólogy, physiólogy
         b.   hỳdro-eléctric, phỳsiothérapy

The accentuation in (82b) is elsewhere associated with lexical phrases, but, since one at least of the components is sourceless (though *hydro* occurs as an independent item that is specialized in another way), there is necessarily in English no syn-

tactic structure that is the source of this lexical sequence. We confront the paradox of 'phrasal neo-classical compounds', if we rely on the accent-placement criterion.

But the paradox is resolved by the recognition that the transparency and sourcelessness combine to mark a morphological rather than syntactic status for the sequence. In Chapter 30 I allowed for other markers of compound status with verbs and adjectives, such as particularly non-syntactic word order, as in the adjective of (78c), where it is the second component that is accented, and the compound has a suffix.

(78) c.

```
                        {P:N} ◄-------------------┐
                         │                         ┆
                        {P;N/{abs}{{gol}}}        ┆
                       ╱  │                        ┆
          { {{gol}}}    { {abs}}                   ┆
             │             │                        ┆
            {N}           {N}                       ┆
             ⭡             ⭡                        ⭣
         [[[out]       [stand]]              [ing]]
```
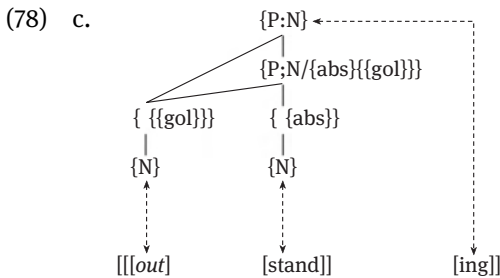
Also, though 'phrasal stress' is the accentuation of *hydro-electric* in isolation, in order to be a prenominal attributive it tends to acquire 'compound stress', as in *hydro-electric power*. As we have observed this alternation is also a common phenomenon outside 'neo-classical compounds': compare *a recently-married couple*.

The very synchronic sourcelessness of these compounds also makes it difficult, when they are relatively transparent, to motivate a morphological status for the components other than that of compound, in the absence of positive evidence otherwise. Positive evidence might consist in evidence for their having followed the path to affix status that has characterized the history of recognized affixes in English. One common indication of affix status is susceptibility to phonological reduction, as with the suffix in *kingdom*, for instance. And I have, indeed, noted the possibility of reduction in the second component of *philosophy*, which is unaccented. But what is etymologically the same component, and shares spellings, occurs initially in the compound *sophomore*. The *sopho-* component, which bears primary accent, doesn't reduce, of course. The morphophonological behaviour of neo-classical compounds is distinctive, and an instance of reduction may have little relevance to compound status. Also, that many components of 'neo-classical compounds' occur in both first and second position is unusual for affixes, unless this is illustrated, after all, by *outlook* vs. *lookout* and the like – though these were regarded as compound components in Chapter 30. But there are synchronically sourceless components that seem to occur in only one of the positions. This does not necessarily entail affix status, but deserves some scrutiny.

Initial-only components, such as, it seems, *bibli-o-* would be, however, a semantically, and phonologically unusual addition to English prefixes, which are typically locational or negative or (eventually) simply class-changing, as well as monosyllabic. Moreover, there are sourceless 'non-neo-classical' compound components that occur only as first components. These include *step-*, as in *stepson*, etc. – assuming this is a different component from the second component of *doorstep*. Also so restricted is the first component of half-neo-classical *miniskirt*, which also occurs, via clipping as a separate word, particularly in the related name (or noun) *Mini*. There is a similar development of the neo-classical first component *retro-*, now also, as we have observed, an independent word, and also occurring with non-classical second components, as in *retrofit(ting)*. A slightly different development is associated with the usually initial neo-classical component *archi-* (though note *hierarchy*, etc.): it is naturalized as *arch-* with a [tʃ] (*arch-duke*) or *archi-* with a [k] (*architect*), depending on the route of its etymological naturalization. And the sequences it initiates often develop 'phrasal' accent. None of these constitute typical English prefixes, however.

We might expect second components, whether limited or not to that position, to be more vulnerable to affixization, given the greater diversity of the historical origins of suffixes, and particularly if the component does not bear tonic accent, and is monosyllabic and contains a transitive vowel without adjunct. Of components that seem to be limited to second position a common one is *-crat*. Often compounds ending in this component have developed via back formation from compounds ending in the complex component *-cracy*, but not always. Though *aristócracy* shows phonological accent-placement, with accent on the linking vowel, and possible reduction of the penultimate vowel, *aristocrat*, with secondary accent on the second component, or at least no reduction of it, behaves, if accented, like an English compound, albeit non-prototypical.

The productive *-crat* component has also retained a much more specific sense (sometimes including for some users a pejorative element, as with *technocrat* or *plutocrat*) than typical suffixes, such as *-ity*, or *-dom*, or even *-er* or (as suggested above) the *-man* of *postman*; and suffixes are typically reduced phonologically. Perhaps even the reduction of *aristocracy* is compensated for, in assessment of its status, by association with *aristocrat*, which is more commonly accented as a compound. However, this is again an area where different users may vary in conceptualization of morphological status. But sourceless second components do not seem to be particularly prone to develop as suffixes. One sign of this is that second-position neo-classical formatives do not normally combine with native suffixes, either before or after.

Combinations with *-crat/-cracy* also illustrate that some 'neo-classical' components combine with non-classical, or no longer classical, components, as in

bureaucrat and *meritocracy*. But more commonly the complete compound is 'neo-classical' or classical. Thus, I've already observed that the *philosophy* of (80a) is descended from an ancient Greek compound, but compounds in *bio-*, for instance, are not found in ancient Greek – though the equivalent of *biography* is found in mediaeval Greek. And post-classical coining of such compounds is typical. The senses of the components of *philosophy* are also rather specific and consistent or at least obviously related in the different compounds in which they appear, rather than sometimes being obviously notionally bleached. So too the components of *biography*, particularly in other compounds in which they are found. In *biography* itself, however, the first component retains the sense of 'course of a life', and indeed *biography* is etymologically tautologous, in that in Greek one meaning of the ancestral form of *bio-* was indeed, and still is, a 'recorded history of a life' (as in English *a new life of Byron*). But in compounds unrelated to *biography*, *bio-* has a sense 'to do with living things', as in *biology*, *biorhythm*, *biosatellite, biodynamics* – though the components in the compound may bear different functional relations to each other.

Many of these compounds might be described as 'correlative compounds', on the analogy with 'correlative' adjectives, etc., in so far as they remove the need for potential compounds based on lexical items from English, such as, say, *far-see-er*, or allow such a compound to specialize in a different sense, as in *life-study* vs. *biology*. And *far-seeing* has nothing to do with the hybrid *television* (cf. Greek *τηλεόραση*). But it is time to look in a little more detail at how the different kinds of sourceless compounds are to be represented structurally. Here, given source-lessness, we are guided in categorization by analogy with notionally similar normal compounds. Let us start with the formation in (83a) illustrating (English) phonological accentuation in (80a).

(83)   a.

b.

$$\{N\}$$
$$\{N;P\}$$
$$\{N_j/\{src\}\}$$
$$\{\ \{src\}\}$$
$$\{N;P\} \qquad\qquad \{N_i\}$$
$$\{P;N/\{abs\}\{src\{loc\}\}\} \qquad \{N;P\}$$
$$\{\ \{src\{loc\}\}\} \ .... \ \{\ \{abs\}\}$$
$$\{N_j\} \qquad\qquad \{N_i\}$$

$$[[[[\qquad \{V_2\} \qquad] \quad \{V_4\} \ ]] \ [\ \{V_2\} \quad]] \ [\ \{V_2\}_E \ ]]$$

ph   i   l   o   s o ph   y

In (83a) the compositional vowel is again interpreted as an otherwise contentless inflection, and the accentuation is, as elsewhere, indicated by subscripts to the respective vowels: tonic accent is indicated by the subscript '4', and placement of accent is in accord with (31), repeated below for ease of reference.

Here, with the addition of a linking element, which is regarded as an 'empty inflection' that is part of compounding, the lexicosyntactic categorization and configuration is standard for a compound; and the head is to the left.

Alternatively, if we take the first component to have been nominalized, we have (83b), where also the compositional vowel is interpreted, rather speculatively, as a compositional inflection incorporated in the head. However the accentuation of both representations is as for the phonology of a single item. I have taken this to be an indication of the integration of the components of such sourceless compound components, in particular.

(31)   a.   *THE PHONOLOGY OF WORD ACCENT IN CONTENTIVES*
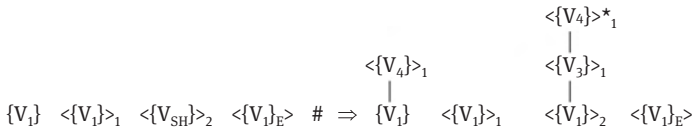
$$\langle\{V_4\}\rangle^*{}_1$$
$$\langle\{V_4\}\rangle_1 \qquad\qquad \langle\{V_3\}\rangle_1$$
$$\{V_1\} \quad \langle\{V_1\}\rangle_1 \quad \langle\{V_{SH}\}\rangle_2 \quad \langle\{V_1\}_E\rangle \ \# \ \Rightarrow \ \{V_1\} \quad \langle\{V_1\}\rangle_1 \qquad \langle\{V_1\}\rangle_2 \quad \langle\{V_1\}_E\rangle$$

      b.   *FINAL EXTRAMETRICALITY IN ENTITATIVES*

         i. $\{V_{INTR,\ SH}\}$ = *(31bii)

         ii. $\{N;P\}$

         $\{V_1\}_E$ #   = ___

iii.
$$\{V_{1,\ \text{INTR, H}}\}_E \ = \ \begin{array}{c} \{V_3\} \\ | \\ \{V_1\} \end{array}$$

In (84a), representing (80b), we have a partitive structure where the dependent noun is based on a verbal structure. And the alternative in (84b) again assumes that the composition vowel -*o(u)* may be a marker of the { {src}} of the partitive construction.

(84) a.

```
        {N}
         |
        {N;P} ◄- - - - - - - - -
         |                      ┊
       {Nⱼ/{src}}               ┊
         |          ╲           ┊
        {N}          ╲          ┊        { {src}}
         |            ╲         ┊           |
       {N;P}           ╲        ┊          {Nᵢ}
         ┊              ╲       ┊           |
         ┊               ╲      ┊         {N;P}
         ┊                ╲     ┊           |
         ┊                 ╲    ┊      {P;N/{abs}{src}}
         ┊                 ╲    ┊           |
         ┊                 ╲    ┊    { {src{loc}}} .... { {abs}}
         ┊                 ╲    ┊        |            |
         ┊                 ╲    ┊       {Nᵢ}         {Nⱼ}
         ┊                 ╲    ┊        ┊            ┊
 [[[  {V₄}      {V₂} ]   {V₂}]] [  {V₃}         ]]
      b   i    bl   i       o      ph  i-    l-e
```

b.

```
        {N}
         |
        {N;P}
         |
       {Nⱼ/{src}}
         |          ╲
      { {src}} ◄- - - - - - -
         |            ╲       ┊
        {N}            ╲      ┊        {Nᵢ}
         |              ╲     ┊          |
       {N;P}             ╲    ┊        {N;P}
         ┊               ╲    ┊          |
         ┊               ╲    ┊     {P;N/{abs}{src}}
         ┊               ╲    ┊          |
         ┊               ╲    ┊   { {src{loc}}} ..... { {abs}}
         ┊               ╲    ┊       |              |
         ┊               ╲    ┊      {Nᵢ}           {Nⱼ}
         ┊               ╲    ┊       ┊              ┊
 [[[  {V₄}      {V₂} ]  {V₂}]]        [    {V₃}    ]]
      b   i    bl   i      o            ph   i-   l-e
```
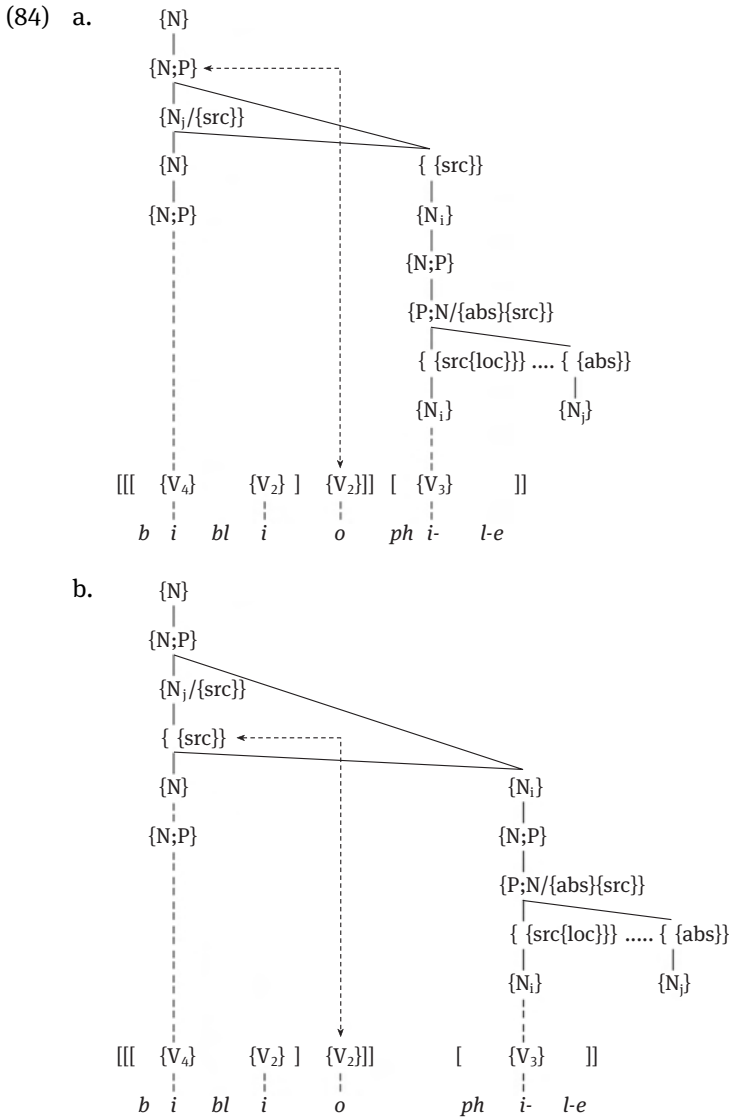
The same source might be suggested for the *-s-* of *yachtsman* and the like.

(83a–b), as I have suggested, are integrated as far as accentuation is concerned. And (84a–b) are overall exactly what we would expect of a typical compound (with an ictus, $\{V_3\}$, on the second component), but for the sourcelessness of the components and the presence of the compositional vowel. Compare (84a) with (74c) from Chapter 30.

(74)   c.   {N}
              |
           {N;P}
              |
         {N$_j$/{src}}
              |
         {N;P}   { {src}}
                                      |
                                   {N$_i$}
                                      |
                                   {N;P}
                                      |
                              {P;N/{abs}{src}}
                                      |
                            { {abs}} .... { {src}}
                                   | |
                                {N$_j$}   {N}

           [[*house*]   [*keep*   [*er*]]]
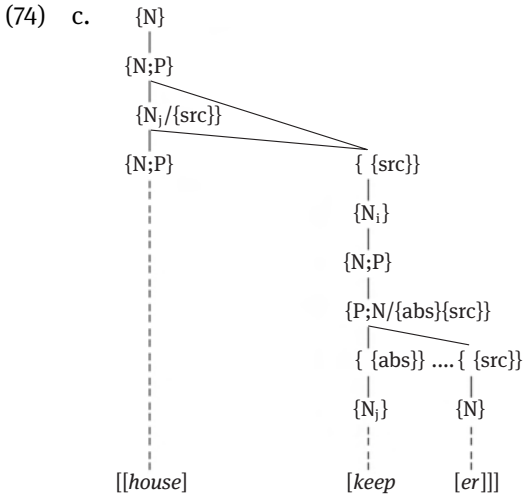
These representations are otherwise identical except for the presence of an overt agentive suffix in (74c) and for the absence vs. presence of a compositional vowel. Notionally and structurally, 'neo-classical compounds' are compounds.

However, since they cannot easily be mistaken for a syntactic phrase, the accentuation of 'neo-classical' compounds can also manifest a third option, otherwise associated in English with 'phrasal stress', as in (82b). I suggest a representation for the first, adjectival compound in (82b), as in (85a), or, if we again identify the compositional vowel with the expounding of the partitive functor, (85b).

(82)   b.   hỳdro-eléctric, phỳsiothérapy

(85)   a.

```
        {P.N}
          |
        {P:N} ◄- - - - - - - - - - - - - - - - - - - - - - - - ┐
          |                                                    ¦
        {N/{src}}                                              ¦
          |────────────────────────────────┐                  ¦
        {N}                            { {src}}                ¦
          |                                 |                  ¦
        {N;P}                             {N}                  ¦
          ¦                                 |                  ¦
          ¦                               {N;P}                ¦
          ¦                                 ¦                  ¦
    [[[[  {V₃}    ]   {V₂}]  [  {V₂}   {V₄}   ]]   [{V₂}    ]]
          ¦    ¦    ¦         ¦    ¦    ¦     ¦
          hy   dr   o         e    l    e    ctr   i    c
```

   b.

```
        {P.N}
          |
        {P:N} ◄- - - - - - - - - - - - - - - - - - - - - - - - - ┐
          |                                                      ¦
        {N/{src}}                                                ¦
          |───────┐                                              ¦
        { {src}} - - - - - - - - - - - - - ┐                     ¦
          |                                ↘                     ¦
        {N}                               {N}                    ¦
          |                                 |                    ¦
        {N;P}                             {N;P}                   ¦
          ¦                                 ¦                     ¦
    [[[[  {V₃}    ]              {V₂}]  [ {V₂}   {V₄}  ]]  [{V₂}  ]]
          ¦    ¦              ¦    ¦    ¦    ¦
          hy   dr              o    e    l    e   ctr   i   c
```
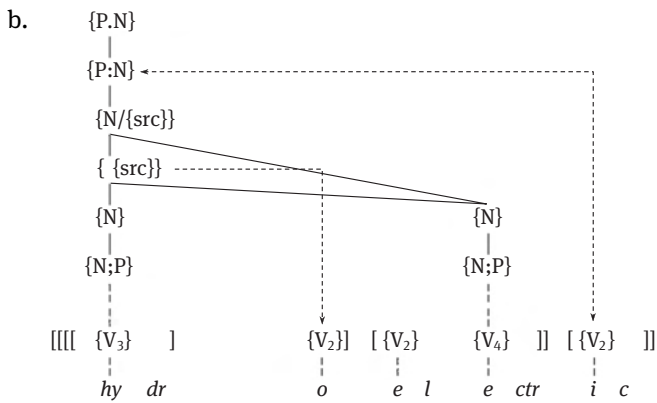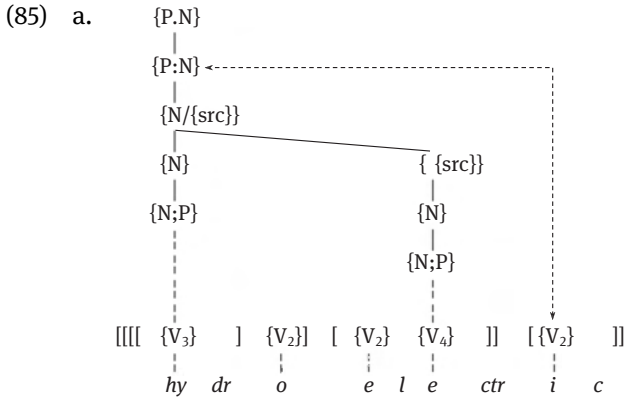
This form is interpreted as a compound consisting of two noun categories that is adjectivalized by *-ic*. The partitive structure is the minimal that we can assign to (85a–b), given that a pro-verb is lurking in the background, unless we take adjective status to belong to the second component even before compounding, when compared with *electron* etc. vs. *electric*. (85) take the second component to be *electr*.

   Compare these last formations again with the native formation with final stress in (78a), here an adjective based on a verbal compound.

(78)   c.
                                    {P:N} ◂-------------------┐
                                      │   ┆
                                   {P;N/{abs}{{gol}}}   ┆
                                      │   ┆
                  ┌───────────────────┤   ┆
               { {{gol}}}   { {abs}}   ┆
                  │   │   ┆
                {N}   {N}   ┆
                  ┆   ┆   ┆
                  ▼   ▼   ▼
              [[[*out*]   [stand]]   [ing]]
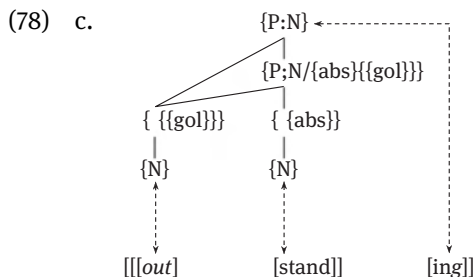
The latter displays, like (85a–b), accent on the final component, but it is also right-headed and departs from the sequence of the apparent syntactic source. With (85a–b) there is not only no syntactic source but they are, like the others we have looked at in this chapter, left-headed, and – as anticipated by (80d) – like many native compounds in this respect.

'Neo-classical' compounds, in being composed of 'bound' components, lie at one modular boundary, that within morphology between compounding and affixation, given that both affixes and these neo-classical compounds typically do not occur as independent elements. But more typical compound components share this property, as in *cranberry* or *costermonger*; and native components are at least as likely to undergo affixization. And, as noted above, some 'neo-classical' components become more typical, in developing an independent synchronic source, and thus moving from the classical system of compounding sourced from stems to the word-sourced native system.

In order to complete this sketch of sourceless formatives we need to return to what in the previous chapter I dismissed as 'prefixes' in the classical languages that ultimately derive historically from prepositions/adverbs but, when adopted into English, lack cognate word sources. I included among these *syn-*, *pre-*, *per-*. Since these are sourceless, like neo-classical compound components, it behoves us to consider how the 'prefixes' are to be differentiated from 'components' of compounds, particularly 'components' like *retro-* or *micro-*, that confine themselves to initial position in the compound.

We can say, in the first place, that those classical formatives that belong to the set of extrametrical verb initials exemplified among the list in (24) from Chapter 28 are prefixes like the native ones included there.

(24)   [[an]$_E$nul], [[be]$_E$head], [[re]$_E$pel], [[de]$_E$mit], [[per]$_E$mit], [[dis]$_E$pel], [[com]$_E$bine], [[un]$_E$pick], [[in]$_E$stil]

I'm aware of no need to appeal to extrametrical compound components. Many of them also exhibit the phonological reduction that affixes are prone to. Similarly, *ad-* and *ab-* in Latin, which are phonologically, and often notionally obscure, and often reduced (even further), will be taken by users to be prefixes, if at all analysable. Recall the diversity of *ad-* illustrated in (39), again from Chapter 28.

(39)   a. adore, adage, adumbrate, admire, advance, adhere, address
      b. adduce, adjoin
      c. aspire, astringent, ascend
      d. appear, attract, accuse, assist, assault, affront, annul, abbreviate, aggravate, alleviate
      e. accept

And these tend to be confused with other sources of *a-*, as observed in that chapter.

However, as with the *out-* of *outstanding*, and despite the absence of sources and their occupation of initial position, there is no reason to withhold compound-component status (when parsed) from neo-classical adverbial forms that do not manifest evidence of more severe morphologization (affix status), particularly in the form of reduction. Such are *inter-, super-, hyper-, intro-, ana-, para-*. The exclusion of non-inflecting words from compound-component status in classical grammars is arbitrary, and even more so in minimally-inflectional English, where almost none of neo-classical formatives have sources (except by clipping). Their initial position in a complex word is a natural signal of the morphologization (but not necessarily prefix status) of adverbs in (possibly nominalized) verb compounds such as that in *undergo* and *overcome*, as well as being natural for (accented) attributives like the initial component of *megalith* or *micro-dot*. A number of clippings look like back-formations. Consider the last word in *He's just been visiting his ex* – which admittedly often depends on encyclopaedic information in establishing identity: *ex-wife/partner/boss/boyfriend*? But so do both *Meg* and *Margaret*.

We move now to the other boundary area alluded to at the beginning of this chapter, concerning not differences within the set of morphological units, but between syntax and morphology. One segment of this area involves the relationship and difference between inflection and clitic, and the place of functional categories in the description of them. We pursue this issue at the beginning of Part IV. In the chapter that follows, however, it is necessary to take up again another aspect of morphology vs. syntax, the difference between compound and lexical phrase. This will introduce us to a consideration of the lexical role in general of syntactic structure. It will involve not just the possibly complex syntactic categorization associated with derived and inflected forms, as well as 'simple'

words, as studied in preceding chapters but also lexical items containing words in syntactic relations more varied and idiosyncratic than those which are associated with the sources of typical compounds or even compounds of compounds.

To conclude this chapter. 'Neo-classical compounds' may exhibit 'compound stress', as in *bíbliophìle*, or the accent may conform to the regularities associated with morphologically simple words, as in *philósophy*, or they may exhibit 'phrasal stress', as in *phỳsiothérapy*. But all of these placements conform to the phonological accent-placement associated with particular word categories; they are accented like simple words or bases with suffixes like *-ic* and *-y*. These neo-classical forms also often exhibit a compositional or combining element, especially *-o-*. Neither these compound components nor the compositional element conform to the notional or distributional pattern of affixes in English, except in generally lacking synchronic sources. As compound components, this lack, and the frequent presence of the compositional vowel, sets them off from prototypical English (particularly noun) compounds, and allows them to depart more easily from the predominant accentuation associated with the latter that I have just alluded to.

However, before abandoning the interest of these last two chapters, I should acknowledge here another kind of 'compounding', associated with a non-contentive part of speech, that raises slightly different questions than simple synchronic 'sourcelessness'. In many languages it is possible to recognize personal names that consist of two identifiable components. English examples in some areas are typically applied to females, and include such as *Mary-Ann* and *Sarah-Jane*. These obviously are not based on a syntactic construction, but are onomastic formations combining two potentially independent simple names. And, as names, they lack any sense beyond gender, whatever the motivations of the name-giver(s), such as signalling family relationships; they have no semantics to be obscured, but the identity of the components can be obscured over time, as in *Alfred*.

But the development of this form introduces us to a slightly different way of forming compound names, one familiar in the other Germanic languages (including Old English, for instance: its original components have their sources in non-names, typically nouns and adjectives. While many of the sources reflect the traditional culture (*æðel* 'noble', *wulf* 'wolf', *ric* 'powerful', *gar* 'spear', …), the compounds themselves are difficult to assign any sense beyond gender. Consider such examples as *Wigfrith* 'battle-peace' and *Frithu-wulf* 'peace-wolf'. As mentioned, the giving of names provides indexical information, so that the names of family members may alliterate or even share a component. As again just alluded to, descendants of such compounds in Modern English have their dual structure obscured.

Chapter 32
Lexical Phrases, and Localism

lexicalization – and morphologization and idiomatization – figurativeness – hypermetaphors, localism, and the lexicon – lexical phrases – idioms – localist idioms – lexical periphrases

In Chapter 30 I distinguished between the two sequences in (75a) as a compound vs. a phrase, differentiated in this case by the accent placement, on the assumption that compounds are distinguished as morphological on the basis of there being aspects of them that do not simply reflect a syntactic structure.

(75)   a.   ápple cake, apple pie

   b.
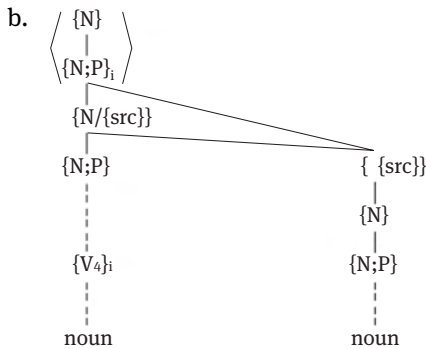
The first example in (75a) expounds the whole of the structure in (75b), including the optional categories, which are lacking in the representation of the second example. Nevertheless, I suspect that for many speakers such a common collocation as *apple* and *pie* is just as likely as *apple-cake* to be stored in the lexicon, or **lexicalized**.

   'Lexicalization' as a term is often reserved for phrases that show what I shall refer to as 'further lexicalization' – the development of idiosyncrasy, semantic non-compositionality and/or phonological obscuration of the components. Compounds show characteristic properties, of accentuation or sequence, overt indications of simple lexicalization, or, indeed, **morphologization**, but idiosyncrasies may develop. Phrases, as well as compounds, may be associated with idiosyncrasies of interpretation. But it is possible that **lexicalization** of phrases may be manifested only by frequency of cooccurrence of its components, as with greetings and other social, including legal, formulae. Common, lexicalized phrases that have the internal categorial structures I have associated with compounds, are susceptible to the development of that 'idiosyncrasy', i.e. compounding, as indicated in the typical

compound by accent or sequence. The most common compound-internal structures are attributive phrases and verb phrases, but sometimes the source structure is, intentionally or inadvertently, obscure. But many lexicalized phrases may show idiosyncrasies other than those associated with compound status as such. In particular they may be semantically **idiomatized**, rather than simply obscured by use or non-clarity of source.

Many idioms have a figurative basis, as in *He went out on a limb*. Such figurative expressions in particular can fall victim to obsolescence: compare *golden handshake* (still current, as far as I am aware) with *golden handcuffs* (not). **Figurativeness**, involving especially **tropes** such as metaphor and metonymy, is a fruitful source of lexicalized phrases and whole sentences (and we return to the nature of tropes and other figures in the next two chapters). These two trope types involve the 'transport' of an expression from one semantic domain to another (metaphor), on the basis of perceived or imposed similarity, or from one denotation to an adjacent one (metonymy): compare respectively *That guy is a pig* and *All hands on deck.*

Such figurativeness does not necessarily involve lexical idiosyncrasy, however. Metonymy, for instance, often consists in favouring reference and compact identification at the expense of what is stored lexically. Use of an utterance such as *Table four wants a cappuccino* does not betoken a change in the lexicon, but rather referential metonymy – which may of course be eventually lexicalized. Synecdoche, in particular, may come to be accepted as idiomatic, as in *I'm afraid the suits have arrived*. So too may an isolated metaphor, as in *You're a treasure*. And the tropic basis may be forgotten.

But often metaphor is systematic rather than isolated or idiosyncratic, especially when what we might call 'hypermetaphor' leads to the structuring of an intractable lexical domain, rather than simply supplementing non-metaphorical terminology. The representations that result from the applying of such **suppletive hypermetaphors** are an indispensable part of lexical structure (recall Chapter 18), but commonly routinized, with its metaphorical basis being lost to recognition by many language users, at least. We have already met the most pervasive of these.

Chapter 4, indeed, introduced a restriction on the range of functor types that has major hyper-metaphorical consequences; this was the **localist** theory of case, or rather of functors in general. The version of that theory adopted here was formulated in terms of a diagram showing the set of features that are associated, universally, with the functor category and the combinations of features that are allowed, as repeated here.

Among the minor features, the set of secondary features associated with the functor is limited to the three in the top line of Figure III.a: absolute, source, and locative, but they can each be attached as a tertiary feature to the other secondary features. And a dedicated tertiary feature goal may be attached to absolute and
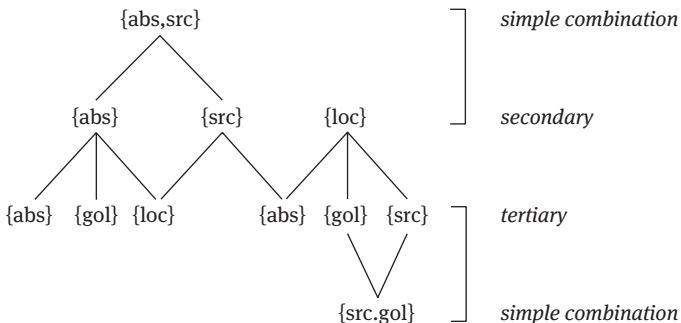
Figure III.a: Non-primary Functor Features

locative. Normally, this can be present only in the presence of source, respectively causal or locative, on another functor that complements the predicator involved. The combination of goal and non-causal source thus marks full locational directionality, and absolutive goal, in copresence in a valency of secondary source indicates causal directionality, or transitivity. There is also a simple combination at the same rank of goal and source as both tertiary to the same locative, giving a 'path'.

There are also further limitations concerning the combinations that can constitute a valency. The same predicator cannot take separate locative and source secondaries: secondary source defines a causal predication and locative a locational; a single predicator cannot be both. This is matched by the limitation imposed by another restriction. Thus, a simple predicator cannot take two instances of the same secondary feature – except in the case of absolutive, where copresence marks an equative predication, or when we have both a tertiary source and a goal, both locative. As marking the neutral functor, the absolutive is also the only secondary that can appear alone in valency. And there is, indeed, also a constraint at the lexicosyntactic interface whereby a predication must contain an absolutive, even if no absolutive appears in the valency of the predicator involved. Such a syntactically required instance of the neutral or absolutive feature is what I have called a free absolutive functor.

The most obvious manifestation of this system of functor features is in the representation of concrete space, based on our perception of this, including location and movement, spatial or actional. Thus, in relation to the basic secondaries, an absolutive entity may be located (as locatee) or it may be acted upon (as goal of the action), or neither; but even a lone absolutive participant is assumed to denote something in the speaker's perceived world; it has existence therein, it is located therein. We also perceive movement and distance; and they are a concrete manifestation of the directionality introduced by the tertiaries source and goal when attached to a locative; but we also perceive causal directionality.

These applications of functor representation are the most obviously concrete. Other combinations are less obviously concretely based, so that, for instance, a {src{abs}} combination involves some recognition of self-motivated action if we are to distinguish it from a process undergone by a simple absolutive secondary; and the 'experiencer' combination {src{loc}} involves recognition of the existence of an experiential entity. The most basic transitive scene involves a perceived interaction, just as the basic perception of external experience is what can be perceived of its overt manifestation.

The relation between locatee and its location or trajectory is the most concrete scene. And it is the basis for the most widespread hypermetaphors that are applied to abstract domains. It is also the skeleton for the introduction of representations of dimensionality and orientation. As we have also seen, multi-dimensionality of space is signaled by functor-dependent dimensional {N}s, distinguishing occupation of a location from placement *on* it or *in* it, though which is used varies with other circumstances. Also involved are subjoined {N}s that are orientational functors, exemplified by *above*, *behind*. These basic locational representations are the most transparent basis for the development of hypermetaphors over increasingly abstract, covert domains.

Thus, most obviously perhaps, and least abstract, perceiving movement 'takes place in' time, and different places on the latitudinal dimension are at different times, though we typically conflate adjacent places on the west-east axis into zones. Journeys in extraterrestrial space are journeys in time. Back to earth, time itself can readily be conceived of as a moving entity (*time flies*), or a dimension along which the entity or the rest of the world moves (*through time*) to the future. Time involves directionality, either way. But it is commonly perceived as unidimensional, and we can thus talk about direction as a series of points or a continuous line. And, given unidimensionality, multidimensional locative functor complexes can take on other roles in relation to the representation of time.

Notably, the 'dimensional' functors can provide a metaphorical representation of point vs. line: cf. *from then* vs. *out of the past*, with source having past time reference, while future is typically a goal; typical of it is the dedicated future-oriented line preposition *till/until*. But in the representation of time there are less obvious distinctions than point vs. line being drawn by 'dimensionals': cf. *They arrived on Tuesday* but *They arrived in June/the afternoon*. In *at night* or *at six* the noun is treated as a point – cf. *in the night*, point within line, though *in the morning* is ambiguous between beginning-point and line. And both these nouns can complement *during*, indicating point within line or simple line.

Further orientational or relative functors, many of which can be used of simple space, are such as *after*, *before*, *around*, which locate a point or line with reference to a reference point. Deictic orientation is what also differentiates the

dedicated temporal *since* from *from*, where both denote beginning-point. The representations for distinctions in tense suggested in Chapter 29 involved deictic location and location relative to it or to such an immediately relative point. Recall (59), which contains a deictic or absolute tense {N} associated via a locative with the lowest {P}, which includes the time of utterance, as indicated in relation to the mood {P}, and a relative tense associated with the {P;N}.

(59)
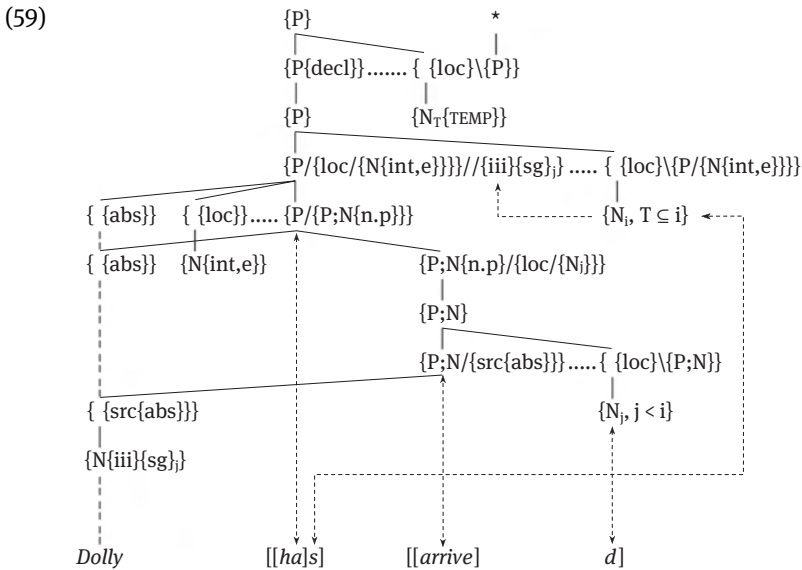
Notice too, once again, that the absolute tense modifies a {P} that is existential, has an existential argument. Existence too is represented as being a place, a location, in the world we conceive, and truth is the existence, presence in this world we recognize, of the situation asserted by a proposition, as instantiated in (59). And there are still other locational relations that can be relatively abstract as well as concrete, such as, most obviously perhaps, possession.

From localist interpretations of time and tense and existence it is but a small step to localist representation of perceived aspectual distinctions. Imperfectives, both progressive and habitual, are perceived in spatial terms: progressives attach the representation of a process to some point in a period and habitual to (points or a line within) a period. In English a locational has been overtly expressed sporadically in 'proto-progressives', as in *He is a-dying*, where, as we have recalled, the *a-* is a reduced locative and *-ing* indicates a reverbalized and generalized form that was and is also a derived noun/ adjective form that 'merged' the expression of these parts of speech.

The notional presence of location is recognized categorially in the provisional representation of (53a) suggested in (53b) from Chapter 29, which ignores tense.

(53) a. Frances is running

  b.

```
                    {P/{loc/{N/{P;N}}}}
              _____|_____
        { {abs}}              { {loc}}
           |                     |
           |                  {N{int}/{P;N}} ←----
           |                     |               |
           |                  {P;N/{src{abs}}}    |
           |_____|             |
        { {src{abs}}}                             |
           |                                      |
         {N}                                      |
           |                                      |
        Frances          [[is]] [[runn|          ing]
```
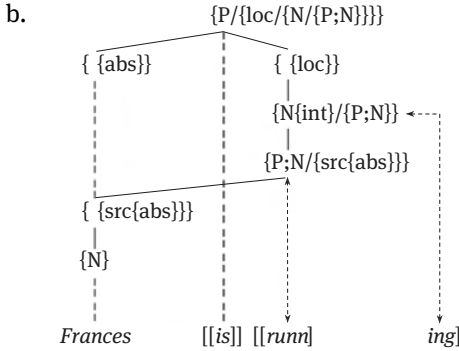
The argument selected as subject of {P;N} satisfies the free absolutive of a 'copula' of the valency shown in (53b), a grammatical periphrast.

The habitual is the unmarked aspect in present-tense verbals and its linear locational character is introduced by redundancy, in the absence of a progressive specification of a dependent {P;N}; only in some moods or only in some registers, such as imperatives and sports commentary, is the perfective regularly associated with the present tense. The past tense, however, is ambiguous as to perfective vs. habitual, but a habitual interpretation may be insisted on by the use of the disambiguating 'grammatical periphrasis' headed by *used (to)*, as in (86b), rather than (86a).

(86) a. She drank red wine
  b. She used to drink red wine

  c.

```
                    {P/{loc{src,gol}/{N{int}/{P;N}}}}
              _____|_____
        { {abs}}       { {loc{src,gol}}}
           |                |
           |             {N{int}/{P;N}}
           |                |
           |             {P;N/{src{abs}}}
           |_____|_____
        { {src}}                      { {abs}}
           |                             |
         {N}                           {N}
           |                             |
         she            drank         red wine
```
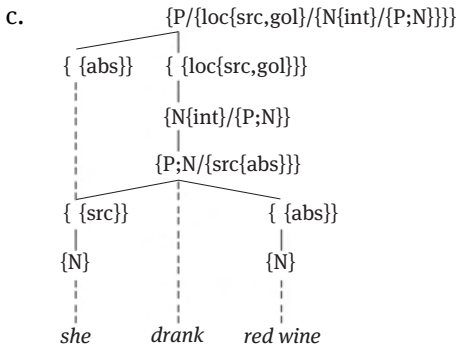
The habitual meaning of (86a) can be distinguished from the perfective by the presence in its lexical specification of the path locative component in (86c), which assumes that the habitual is a path (and simplifies the structure of the {P;N}). In the representation for (86b), *used (to)* would be a {P}, or a {P;N} (for those users who have the usage in *Did you used to?* rather than *Used you (to) go*). Whichever it is, the {P(;N)} has the valency '/{loc{src,gol}/{N{int}/{P;N}}}}'. (86c) concentrates on the aspect and again ignores tense, as well as abbreviating the valency of the {P;N}. In the present tense the configuration above {P;N} is introduced by redundancy in most circumstances, as suggested above. We return in Part IV to the notion 'grammatical periphrasis'.

Lest I be accused of straying at this point too far from the topic of lexical phrases, let me plead that 'grammatical periphrases' are no doubt lexical phrases. But then the traditional term 'grammatical periphrasis' might be thought to be misleading. Indeed, I suggest instead that **inflectional periphrasis** replace the term, and be opposed to **derivational periphrases** such as *take a walk*, which will be considered below, rather than referring to the latter as 'lexical periphrases'. Both types of periphrasis are lexical phrases.

Perhaps the most striking instance of the application of a hypermetaphor is the interpretation of the 'organs' of the mind in bodily terms, which comes close to metonymy, given the perceived correlation between emotion and cardiac activity – though the 'adjacency' of the related entities is largely imposed by the figure itself. The exponents of vital body parts can denote the location or, often more specifically, containers for what are conceived of as aspects of mind. The most obvious is illustrated by *Bill ♥ Bessie*, where an icon of the heart expresses strong positive feelings, just as *brain* or *cranium* can express intellectual functioning. Others are more sporadic: *I can't stomach his behaviour*, with a verb converted from the noun for the digestive organ, or *She gets up my nose*, where the annoyance engendered by someone is metaphorically equated with the significant but disproportionate nasal discomfort associated with the presence therein of foreign bodies – particularly if animated, one would imagine.

This pervasive hypermetaphor that involves localism is the representation of mental or social activity in terms of body parts or their operation is illustrated further in *He is broken-hearted, It's in your hands, I can't stomach your suggestion, He again demonstrated his spleen, He ain't got no balls, Nosey Parker, They're sitting on it, That was inspiring*. As we've already observed, these can also involve metonymy, so that the heart is viewed as the location or specifically container of emotion, and therefore a possible metonym for the latter: *My heart is full/ over-flowing*. Compare thoughts that *never entered my head/brain* or *were at the back of my mind*, or words that *were on the tip of my tongue*. Again these are not isolated metaphors but reflect a persistent cognitive attitude.

My intention here has been to illustrate the systematicity of hypermetaphors, and thus the importance of such figurativeness, particularly where suppletive, in the composition of the lexicon. Such metaphors have a denotative role, not the referential one we can associate, at least initially, with instances of metonymy, for instance. Much of the application of the localist hypermetaphor is general in language, in involving universal aspects of perception. Moreover, such hypermetaphors, applying so generally, and in circumstances where the only alternatives are other applications of the metaphor appealed to, may not be recognized as such by language users. Hypermetaphors apply to whole notional domains, and manifestations of them range from generalized grammatical phenomena, such as tense and aspect, to particular words or lexical phrases, such as *(calm) down* or *in my lifetime* or *What is he engaged in at the moment?*.

But there can, of course, be different localist interpretations of how a hypermetaphor should be applied, both between languages and within the same language. We have already observed the familiar differences in how time may be interpreted. And dimensionality, for instance, may be applied and discriminated differently. This is particularly evident in the deployment of dimensional and orientational expressions in metaphors associated with emotional status. Thus, *up*, for instance, given our own typically vertical adult orientation in the world, is often applied to happy or improved states: *She cheered/brightened/loosened up*. But this is not always the case in all circumstances: *She gave/flared/slipped up*, or *She calmed down* alongside *She felt down*. Whether (this week's) current cliché *open up (about)*, which has 'gone viral', involves (un)happiness I'm not sure.

Moreover, metaphors, particularly isolated ones, are subject to the development of opacity. The metaphorical relation between the words *clue* and *clew* is now obscure, and this is reflected in the difference in spelling. More striking are phrasal metaphors or metonymies whose basis is now unclear. Some of these have invited different speculations concerning their origin, as with the apparently metonymy-based *kick the bucket*. Here the syntactic structure is not merely non-compositional but irrelevant, given the interpretation of the phrase as 'die', which may be deconstructed as a negatively-oriented existential. Only the whole idiomatic phrase can be given an interpretation; the structure and the individual items do not contribute anything. We have what we might call lexicosyntactic routinization, as opposed to the routinization that can develop in syntax proper. We have in such lexical cases an **idiom**.

The subject-formation illustrated by (86c) above, for instance, exemplifies syntactic routinization; it involves a routinization of the expression-type, a weakening of notional function. Any inherent topicalizing role, for instance, is not evident – though, because of their history, subjects are often, though not necessarily, also topical. This routinization is characterized by the typical lack

of any consistent notional motivation for the structure; and other languages manifest alternative routinizations of participant syntax, such as the more transparent 'ergative' selection of arguments. These constructions are built at the lexicosyntactic interface. But how are we to characterize the idiosyncratic lexicosyntactic routinization of idiomatic phrases in the lexicon such as the now old-fashioned *kick the bucket*? A clue comes from the properties of compounds we have looked at.

Prototypical compounding involves the conversion of items in a particular syntactic relation to a single item; and this is signalled by one or more markers of morphologization, typically non-syntactically-motivated accentuation but also non-syntactic sequencing, and the existence of affix-derived compounds (usually by suffixation) as well as the presence (though sparingly in non-classical compounds) of a combining formative (typically a compositional vowel in Greek sources). These marks of morphologization are associated with formation of a single lexical item. Compositionality may or may not be maintained within a compound, however.

Commonly used phrases or sentences may be stored as a single item in the lexicon complete with any routinized syntax, sometimes regarded as clichés. But these too may undergo further lexicalization, or idiomatization, reflected in semantic mismatching, non-compositionality, particularly if they involve figurativeness. The semantics of an idiom like *kick the bucket* is only tenuously related to that of the individual components of the phrase, though the syntax of these phrases may be well-formed and indeed interpretable 'literally'. These idioms are marked lexical phrases, but, as well as metaphorical phrases that are 'reliteralized' (such that an enactment of *Mr Bean painted himself into a corner* may be presented on television, and even kicking the bucket accompanied a death in at least one movie). There may also be unmarked lexical phrases, transparent and non-figurative phrases that have not been lexicalized further than being simply stored.

The internal syntax of an unmarked lexical phrase, such as, say, *I'll see you tomorrow*, conforms to what would be expected, notionally and syntactically, of the combination of items of which it is composed. We know from experience that transparent phrases, and indeed more extensive sequences, can be stored, but there is no indication of status as a stored item – except by the recognition of established lexical phrases that have become rituals or clichés (such as *I take this (wo)man to be my* . . . or the figurative *There's no smoke without fire*, etc.). But individual users will vary in what they internalize in the lexicon in this area too.

The structure of (87a), which ignores the complexity of the determiner phrase, is in conformity with the expressed or suppressed valencies in (87b), whether it is purely syntactic or idiomatized (lexically marked).

(87) a.   {P;N/{src}{abs{loc}}}

                    { {abs{loc}}}

                    {N{def}}

                         {N;P}

            kick   the   bucket

b.   {P;N/{src}{abs{loc}}}, {N{def}}, {N;P}

            kick   the   bucket

c.   {P}

      { {abs}}   [{P;N/{abs}{loc{src}/{N{e}}}}}...........'die'

      { {abs}}   {P;N/{src}{abs{loc}}} .... { {loc{src}}}

      { {src}}   { {abs{loc}}}   {N{e}}

                            {N{def}}

                                 {N;P}]

         Bob   kicked   the   bucket
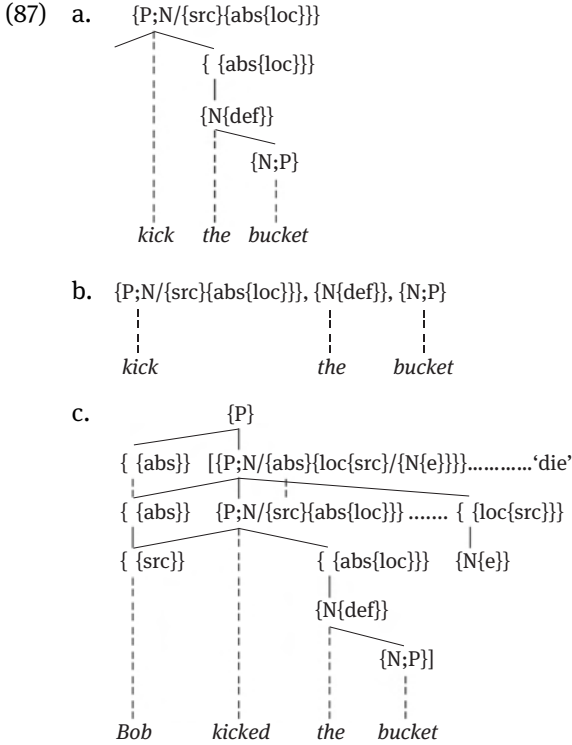
But, as in compounds, the idiom has an extra level, the upper {P;N}, and the lower is enclosed in (87c) with the rest of the idiom in a pair of square brackets, beginning at this {P;N} and terminating at {N;P}. It is a single lexical item associated with the meaning 'die'. In (87c) the de-existential part of the valency of the upper {P;N} I take to be satisfied internally, thus not expressed overtly except by interpretation of the figure. The absolutive in this valency is linked lexically with the source of the action in the valency of the lower {P;N}; and, in such an idiom, where this absolutive is not a free { {abs}}, it overrides the sense of the source. The syntactic subject of the idiom is not an agentive source, but this absolutive. The lower {P;N} and its dependents are not necessarily interpretable, without specialized access to the supposed historical source of the connection between the two levels of the idiom. Compare compounds like *costermonger*.

As shown in (87c), {P} is outside the idiom, and this allows for a range of superstructures (*Bob may have kicked the bucket*, etc.); and the content of the subject is also variable, but normally living; otherwise it does not behave as part of the idiom. Other idioms leave an undetermined category or categories internally, and such idioms are likely to be less obscure; a figurative basis is more obvious.

This is exemplified by the representation of the metaphor in (88a).

(88) a.   [{P;N/{{src}}
             | |
            {P;N/{{src}}{abs}{{gol}}}
             |⟍ |
             | { {loc{gol}}}]
             | |
             | |
            leave   *out in the cold*

      b.   {P}
              ⟋‾‾‾‾‾‾‾‾‾‾‾⟍
            { {abs}}   [{P;N/ {src}}.........'exclude'
             | | |
            { {src}}   {P;N/{{src}}{abs}{{gol}}}   { {abs}}]
             | | ⟍‾‾‾‾‾‾‾‾‾‾‾‾⟍
            { {loc{src}}} | { {abs}}   [{ {loc{gol}}}]
             | | | |
            {N} | {N} |
             | | | |
            they   [*left*]   *Fred*   [*out in the cold*]
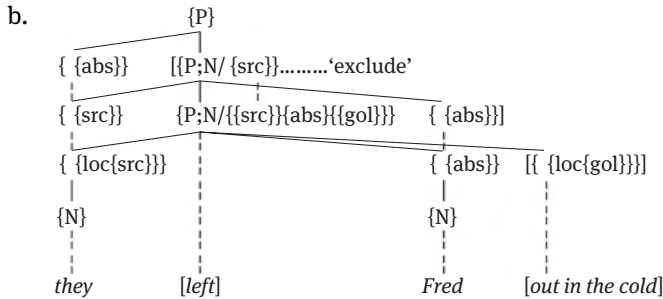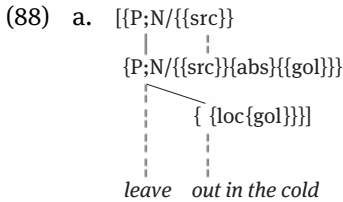
Here both source and absolutive, realized in (88b) by *they* and *Fred*, are left
unfilled by the skeleton of the idiom given in (88a). Both functors are linked lexi-
cally: one functor of the lower {P;N} is overtly linked to the upper {src}, another
to the free absolutive of the upper {P;N}. The participants of these are filled in the
syntactic representation in (88b), which again includes the finiteness element,
also outside the idiom. The idiom involves a concretizing metaphor. In *They left
him out (of the team)* we have simply an instance of a more general localist hyper-
metaphor. (88a) adds a less generalized metaphorical element; but there is also
the related *Coming in from the cold*. The basis of some idioms, however, is not so
obvious. This is the case with *Frances is up to something/no good*, for instance, as
well as the idiom in (87).

In the notes to Chapter 8 we looked at an idiomatic locative phrase that has
been converted to an adjective, which we can compare with the verbs of (87) and
(88), as roughly indicated by the bracketing inserted in *She is a very* [$_{ADJ}$[$_{LOC}$ *down-
to-earth*]] *person*. This illustrates what is a characteristic property of idioms,
phrase-to-word conversion, which often creates a more graphic and memorable
item than one that is not phrase-based. Such idiomatizing is not uncommon with
circumstantial adverbial arguments in general, even with adverbs that are not
marked as locative, such as the varyingly obscure *hammer and tongs* or *hell for
leather*.

But idiomatizing also occurs particularly with adverbs whose 'lightness' allows them to appear in immediately post-verbal position, preceding the 'object', as with the non-idiomatic use of the goal-participant adverbs in (89a).

(89) a. He threw out/up her belongings
      b. They loaded up the truck, He ate up his supper

      c.
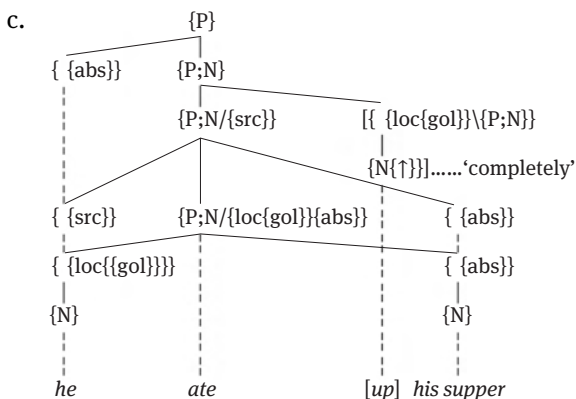
      d. Bill cried (out) his heart (out), They danced (away) the night (away)
      e. She looked up the word (in a dictionary)

The use of a positive upwardly oriented directional as marking completeness, as in (89b), is an obvious, if compact, application of localism: the goal circumstantial in (89c) introduces the metaphor, again enclosed by a pair of square brackets. This substructure introduces the anticipated completion of an upward goal of the eating/ingestion represented by the rest.

In (89a–b) an immediately-post-verbal position for the adverb is unmarked, and almost obligatory if the absolutive argument is a pronoun. The former observation is not evidently appropriate with (89d), which is also notionally and structurally rather different, but again involves a localist completion of consumption metaphor. However, in the idiom (89e), where *up*, unlike *from, to*, *through for, etc.*, does not introduce a directional participant of *look*, but, as in (89b), is syntactically mobile (*she looked the entry up*) and circumstantial, though forming with *look* a single lexical item; and *up* marks again a kind of completeness, 'completeness of identification'. Unusually for this verb, it takes here an unmarked absolutive 'object'. However, *look* or *see* + directional is the basis for many metaphorical interpretations.

In (89d) the basic verbs *cry* and *dance* are in addition subordinated to a causative directional, with the basic verb as 'instrumental' – as in, e.g., *He walked*

as far as Winchester). And it might be helpful to recall here the representation suggested in (II.149d) from Chapter 26.

(II.149) d.

```
                              {P}
           { {abs}}      {P;N/{src{abs}}{loc{gol}}}
           { {src{abs}}}   { {loc{src,gol}}\{P;N}}      { {loc{gol}}}
           {Nᵢ{def}}      {P;N/{src{abs}}}              {N{def}/{N}}
           { ᴿ}            { {src{abs}}}
                           {Nᵢ}

           Bobbie          walks                    to   the club
```
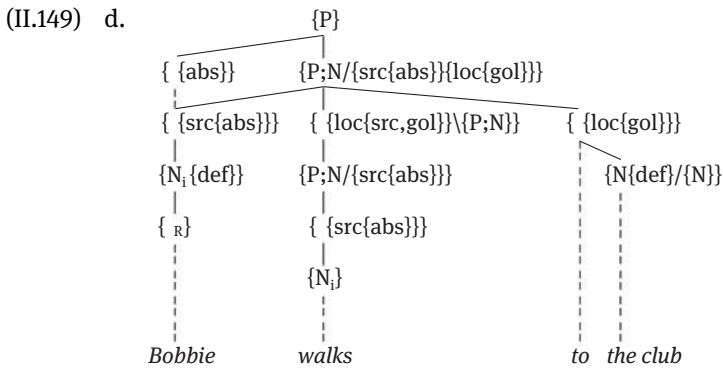
The subjoined adverb is a path-existential circumstantial, again an obvious application of a localist analogy. Bobbie gets to the club by walking.

A final important type of lexical phrase invites use of the term 'periphrasis'. But here, in the present context, our concern is with lexical (or lexicosyntactic/ derivational) periphrases rather than the grammatical (or morphosyntactic/ inflectional) periphrases, such as *is going*, mentioned above, whose fuller treatment has been assigned to Part IV. The former, as described in Chapter 21, are phrases that essentially perform by the valency of the periphrast – i.e. syntactically – the derivational function of affixation or conversion. The verb phrases in (90) can be said to be such, indeed the most commonly-agreed manifestation of such.

(90) a. Let's take/have a break
      b. Dolly had a shower/bath
      c. I had/took a look
      d. They did a strange dance/the washing-up

These phrases have a nominal argument dependent on a minimally specified verb; and the nominal itself is more or less obviously based on a {P;N}. The (governing) periphrastic verbs concerned are already notionally of little notional weight elsewhere, but the periphrast has a detailed valency. I shall firstly look at *have* in some detail, in order to illustrate this and also the developments whereby the item is bleached of notional particularity.

Have is associated with a variety of valencies, but none of these current *have*'s has a detailed notional content. All of them are notionally bleached compared

with earlier types apparently involving the more contentful sense area of 'grasp, seize, hold on to'. This is well illustrated by the grammatically periphrastic *have* we have already encountered in (I.169c) of Chapter 15, where its categorization was suggested as here repeated.

```
(I.169)   c.                    {P{decl}}
                                 |
                         {P/{loc/{N{int,e}}}}
                   ┌─────────────┤
            { {abs}}      {P{pres}/{P;N{past}}} ·················· { {loc}}
               |                   │                                 |
            { {abs}}          {P;N{past}/{src{abs}}}            {N{int,e}}
               |           ┌───────┤                                 ┊
            { {src{abs}}}  ┊       ┊                                 ┊
               |           ┊       ┊                                 ┊
              {N}          ┊       ┊                                 ┊
               ┊           ┊       ┊                                 ┊
             Dolly        has    arrived
```
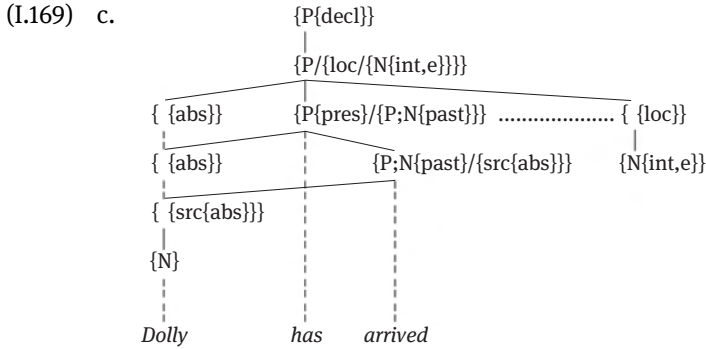
We expanded (I.169c) as in (51) of Chapter 29, and then (59), repeated above.

```
(51)                        {P{decl}}
                             |
                            {P}
                    ┌────────┤
           {P/{P;N}{loc/{N{int,e}}}} ··················· { {loc}\{P{e}}}
              ┌──────┤                                          |
       { {abs}}  {P/{P;N{n.p}}} ····· { {loc}\{P{int,e}}}   {N{pres}}
          |        │                      |
       { {abs}}    ┊   {P:N{n.p}}     {N{int,e}}
          |        ┊   ┌───┤
       { {abs}}    ┊  {P;N}
          ┌────────┤   ┌──────┤
          ┊        ┊  {P;N/{src{abs}}} ····· { {loc}\{P;N}}
     { {src{abs}}} ┊      ↑                       |
          |        ┊      ┊                   {N{past}}
         {N}       ┊      ┊                       ↑
          ┊        ┊      ┊                       ┊
        Dolly     has  [[arrive]              [d]
```
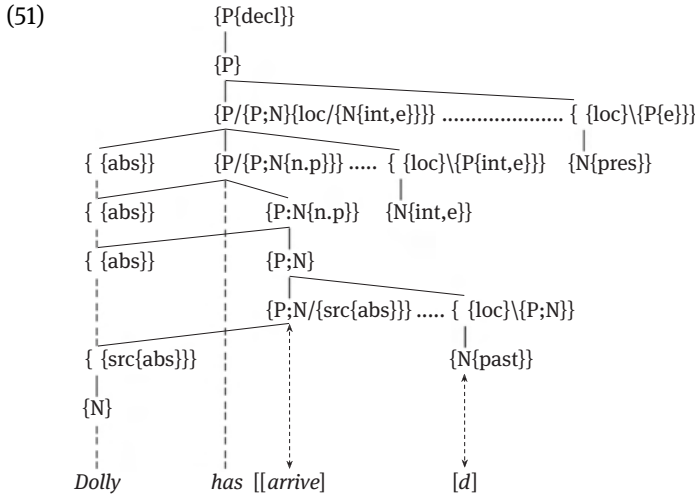
We can extract the specification of this *have* as in (91).

(91)   {P{n.p}/{P;N{n.p}}} + circumstantial {loc/{N{past}}\{P;N}}

And this contains the feature {stat(ive)}, or rather {n.p}, as argued for in Part IV, and, indeed, in arguing for the more complexly articulated than here in (59). But (51/91) are sufficient to illustrate that the non-primary categorization includes only the valency, with nothing substantive to add to its lexical specification, which we shall find to be typical of *have*, and which contrasts with the notional density of the nouns in (90).

This periphrasis seems to be a routinization of instances of the stative *have* such as is illustrated in (92a), where the adjective is a deverbal alternative to (92b): and they are both elaborations of the possessive (92c).

(92) a. Dolly has it finished
 b. Dolly has it ready
 c. Dolly has a/the book
 d. There is a book on the table

I have included at the end of the list a construction that I hope will clarify the representations with *have*, most importantly that for (92c). I shall therefore start with suggesting a representation for the *have*-less final example in (92), which is notionally closest to it.

(93) a.

```
                {P}
              /    |
       { {abs}}   {P{n.p}/{abs}{loc}}
          |          :       \
         {Nᵢ}        :    { {abs}}   { {loc}}
          :          :        |          |
          :          :       {N}       {Nᵢ}
          :          :        :          :
        there       is     a book   on the table
```

b.

```
                {P}
              /    |              :
       { {abs}}   {P≈P;N{n.p}/{abs}{loc}}
          |          :       \
       { {loc}}      :    { {abs}}
          |          :        |
         {N}         :       {N}
          :          :        :
        Dolly       has    a/the book
```

c.

```
                       {P}
     { {abs}}    {P;N{n.p}/{abs}{loc}{P.N}}
     { {loc}}        { {abs}}   {P.N}
     {N<i>}           {Nj}      {P:N}
                             {P;N{past}/{abs}{src}}
                             { {abs}} .....{ {src}}
                               {Nj}         {N<i>}

      Dolly         has  it   finished/ready
```
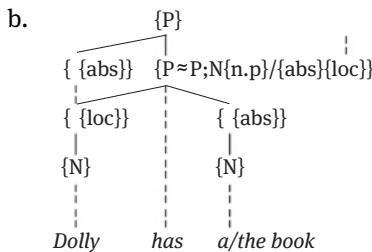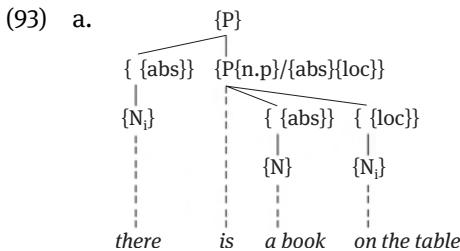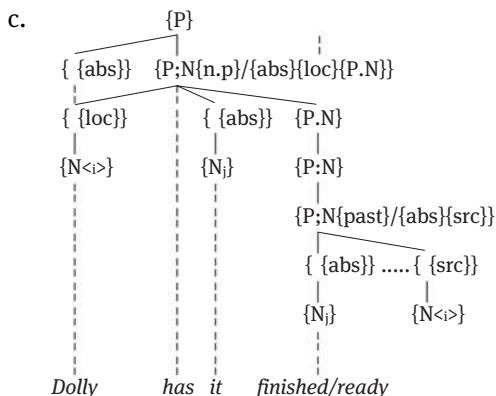
(93a) is intended to represent a simple locative construction where subject-formation has failed (as happens in various languages with existential sentences): cf. *A book is on the table*, with typically disfavoured indefinite subject. Accordingly, in English the free absolute of the existential {P} is satisfied by an expletive coreferential with the locative.

(93b) illustrates a 'possessive' variant of this non-subject-forming structure where the locative is linked upwards, thus to the free absolute of the existential when it is introduced in the interface from the lexicon. Such lexical linking we return to in Chapter 36, in relation to the weakening of, for example, agentive *contain* to locative-subject *contain*. Such marked subjects are the historical residue of loss of a superordinate agentive

However, this 'possessive' verbal can in different sets of users be an operative or a full verb, as testified to by the alternation in (94), and as indicated by '≈' in (93b).

(94) a. Has Dolly a book?
      b. Does Dolly have a book?

I take the overt locative in *Dolly has a/the book at home* to be a circumstantial. The lower verbal in (93a) is, of course, an operative. The valency of (93b) is a 'reduction' of that in (93c), which contains a further, adjectival participant, a predicative.

In (92a) this adjective is overtly derived from a transitive verb with, as in other *-ed*-forms, an incorporated agent (which may or may not be presumed to be the same as that of the subject) – but there is also an internally expressed absolutive that is co-indexed with the 'object' *it*. I have assigned the same structure, on notional grounds, to (92b), despite the absence of morphological indication of

the {P;N} subjoined to the adjective. And I have assumed optional coreference between subject and the incorporated agent. The *have* in (93c) is normally a full verb: thus, *Does Dolly have it finished/ready?* There is also an indirect causative *have*; such that (92a) is ambiguous; the history of *have* also involves 'weakening' of a causative.

Now, the *have* verbal in all these structures is notionally rather empty. And the lexical periphrases (a–c) in (90), repeated here (since the reader may well at this point have forgotten about some of them), look as if they are more complex, at least in involving agency (as well as a specific kind of complement), which seems to have been bleached out in (92a–c).

(90) a. Let's take/have a break
      b. Dolly had a shower/bath
      c. I had/took a look
      d. They did a strange dance/the washing-up

In this respect, the (90a–c) examples with *have* are closer to the indirect causatives alluded to above, and illustrated more obviously in (95).

(95) a. He had Dolly dismissed/leave

b.
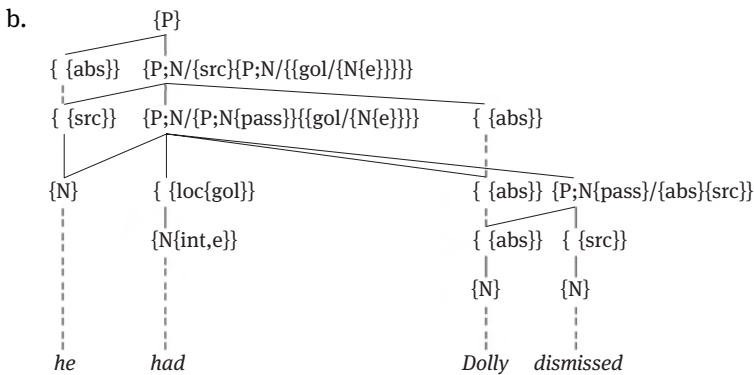
To allow for the 'indirectness', (95a) is interpreted as the causative existential (roughly 'cause to occur/come into existence') in (95b), which represents more obviously the passive alternative of (95a) rather than that with *leave*. 'Indirectness' is reflected in the absence of co-indexing of the subject and the subjoined agentive of *dismissed*. *Dolly* is hosted by the existential free absolutive, which itself is hosted by the causative absolutive.

(95b) is more complex than all of these, but almost entirely in primary categorization and valency; there need be no appeal to secondary features or notional particularity, let alone idiosyncrasy. And, while the grammatical periphrasis of (91) is a weakening of the 'possessives' of (93b–c), the lexical-periphrastic *have* of (90b) seems to involve a simplification that shares properties with the 'causative' type of (95b), in particular its agentive character.

Let's have a look at (90b), which is schematically interpreted as in (96) – omitting tense and other details.

(90)   b.   Dolly had a shower/bath

(96)
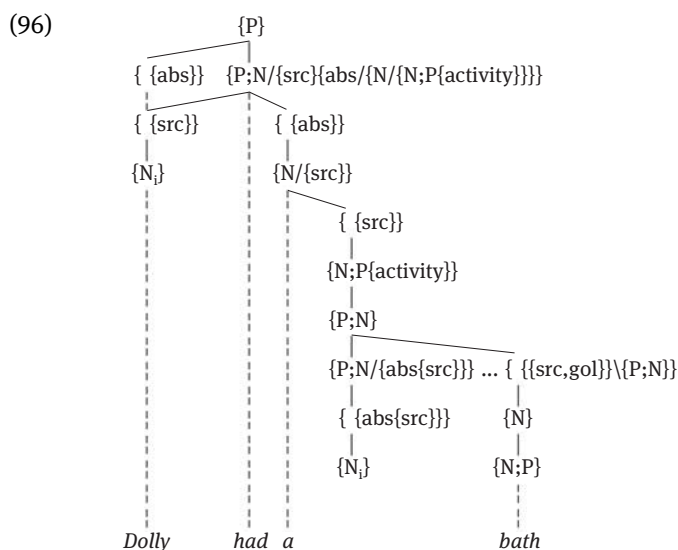
All of the complexity of *have* here is in the valency, particularly in allowing an activity noun access to an agentive predication. The two types of periphrasis thus have alternative motivations for their bleaching.

The ultimate base of the complex activity noun in (96) is a concrete noun that is generally viewed as an 'implementizer', i.e. an entity that figures as 'instrumental' in relation to a verb, and it is incorporated as such in (96) to the {P;N} that is the non-overt base for the activity noun. This is perhaps not the most obvious way to form a verb from a noun. But the obvious candidate in the present instance, *bathe*, is not necessarily or indeed usually conceived of as involving a bath, rather than, say, the sea. Its semantics is not constrained by necessarily including such an instrument. In (96) there is nevertheless a covert agentive verb that serves as the immediate base for the activity noun. And the latter is given access to verbal-

ity via the periphrasis. In the case of the alternative noun in (90b) the difference between *shower* the verb and *have a shower* is not as salient, with some speakers seeing an aspectual difference. So too with many of the other periphrases; and the different expressions can be used for different contextual motives. Sometimes the periphrasis *have a shower* can involve greater prominence of the activity, or even deliberation. Consider *walk* and *have a walk*, where the latter can insist more on the walking itself as its purpose.

Something similar seems to be going on, more or less strongly, with the other lexical periphrases in (90), but in some cases, such as (90a) a competing simple verb is lacking, though there is a competing periphrast, which can introduce a different nuance.

(90)   a.   Let's take/have a break
         c.   I had/took a look
         d.   They did a strange dance/the washing-up

But all the other verbs in these periphrases also have minimal content.

Do, in particular, has a limited valency as a 'full' agentive verb, of which *Bill did very little* is not an untypical example. And, as well as acting as an overt pro-verb, as in *What have you done?*, it occurs as a different kind of suppletive verbal, as in *(When) Did she leave?*, in which it expounds finiteness distinctively in affective contexts, in the absence of a non-empty operative. *Do* does quite a lot, but on the basis of a limited valency. And *take* is a basic complex of causative and subjoined directional lower predication, as in *She took it to Paris*. Both of these actional verbs are often associated, as lexical periphrasts, with more active activity.

Go is a different type of lexically periphrastic verb, in competition with the older *become*. Both illustrate a localist metaphor for expressing 'transition' (which itself involves another such metaphor) to a(nother) state or, in the case of *go*, the undertaking (metaphor!) of an(other) activity. The state is generally instantiated by an adjective, and the verb provides an inceptive verb-headed phrase that may be agentive or not. A few of many common instances with *go* + adjective, otherwise a rather basic directional verb, are *go mad, go viral, go blank, go operational*. Examples with a activity noun include *go walk-about, go surfing, go cherry-picking* (this last also the basis for another metaphor). Lexical periphrases are typically lexicon items that are frequently accessed.

This and the previous chapter have bracketed between them the domain of compounds as characterized in Chapter 30, with a discussion of **neo-classical compounds** such as *physiotherapy*, on the one hand, and of idiosyncratic and non-idiosyncratic **lexical phrases** such as *leave out in the cold* and *first door on the left*. The former resemble affixes in only so far as the components of these

compounds lack independent synchronic sources in English; they do not partic-ipate independently in the syntax and inflectional morphology of English. And the latter are lexicalized but not morphologized, though they may contain mor-phologically complex items.

Here, then, we have been concerned with lexical phrases, making a distinc-tion between unmarked phrases stored in the lexicon that are syntactically and notionally compositional and marked lexical phrases, which latter exhibit further lexicalization in the form of idiosyncrasy of interpretation. Before embarking on the treatment of marked lexical phrases and their idiosyncrasy, we had a look at some of the **figurative** processes often associated with the genesis of such phrases as well as the development of particular senses that create homonymy. But we found too that some figurative developments are not idiosyncratic but instantiate a more inclusive metaphor: a **suppletive metaphor**. Their wide-spread deployment highlights the indispensable status of metaphorical structur-ing of abstract domains. We recalled one pervasive example of such a suppletive hypermetaphor in the discussion of functor features in Chapter 4: the **localist** hypothesis, which asserts the reduction of functor relations to three, locative, source, and absolutive, with a parasitic fourth, goal. And some of the domains where localism is appropriate were briefly illustrated. Items belonging to meta-phorically structured domains are often not perceived as metaphorical, and as such not taken to be idiomatic. This is especially so when a normally 'concrete', say 'movement-signifying', word is colligated with a dedicated abstract, as in *He gave her his love* or *She threw away that opportunity*. The discussion then returned to opaque phrases, figuratively based or not, and particularly to their representa-tion at the lexicosyntactic and morphological levels. This considered among other things particular localist metaphors that are partially idiomatic, as is not untypical of lexical phrases.

The chapter concludes with an examination of **lexical periphrases**, as illus-trated in a little detail with those headed by *have*, such as *have a bath*. These offer, among other things, a syntactic equivalent to morphological means of giving nouns and adjectives of particular types access to verbal status. The syn-tactic means are provided by verbals with minimal content other than primary features and valency. Such verbs are often described as 'light' verbs, and thus grouped with other sets of verbs (in English and other languages) that are also so labeled. But it is my impression that these other sets may involve rather different considerations from those that seemed to be appropriate here in looking at what I have called 'lexical periphrases'.

As anticipated above, we shall return to periphrasis early in Part IV, where such lexical periphrases will be compared and contrasted with **grammatical periphrases** such as that in (52a), simply represented in (52b) (from Chapter 29).

(52) a. Fred was rescued (by Rosie)

b.

```
                        {P/{P;N{pass}}}
        { {abs}}              {P;N{pass}/{src}{abs}}
        { {abs}}              { {src}}  ←------
          {N}                   {N}
          Fred       was    rescue        d
```

c.

```
                   {P} ←-----------------------------
                                                    ↓
          {P/{loc/{N{int,e}}}} ............... { {loc}\{P}}
      { {abs}}  {P/{P;N{pass}}} .... { {loc}}      {N{past}}
      { {abs}}              {P;N}      {N{int,e}}
                       {P;N/{abs}} ←------  { {{src}}\{P;N//{ /{N_i}}}}
      { {abs}}      {P;N/{src}{abs}}           {N_i}
        {N}            { {src}}
                         {N_i}
        Fred   [[was]]  [[rescue]              d]  by Rosie
```
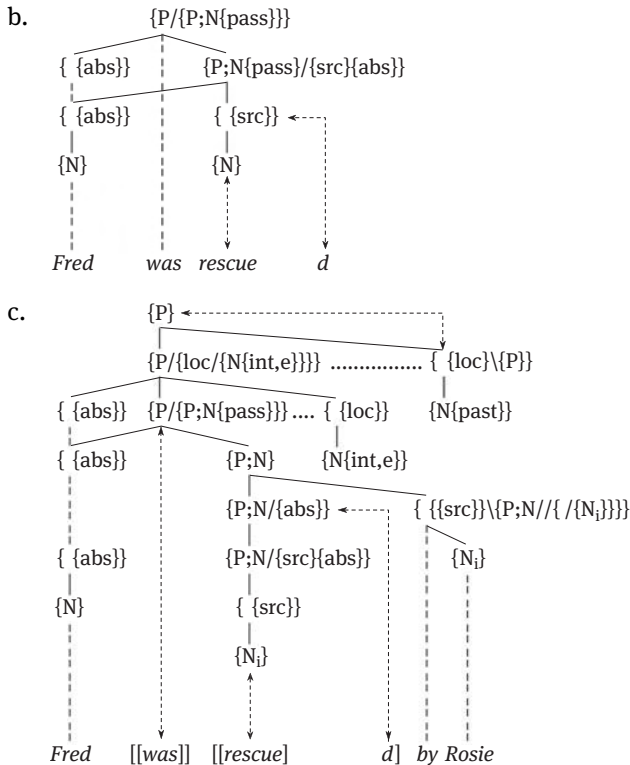
Again we have a periphrastic head, or periphrast, once more with minimal content though somewhat abbreviated as shown in (52b), but a head with a very different role, in offering suppletion for inflectional systems rather than the derivational equivalent of suppletion, which replaces morphology in forming new lexical items. (52b) and, more fully, (52c) allow for a finite passive 'form' on the basis of demanding a suitable non-finite complement.

I should insist that what we have been concerned with here are lexicalized phrases, sequences of lexical items with a syntactic structure. I am not claiming that we store 'constructions' – unlexicalized syntactic skeletons such as what is conveyed by the perfidious abbreviation 'SVO'. What sequences are stored are the structures created by combining the compatible valencies of lexical items at the lexicosyntactic interface. Syntactic structures are created by interchanges between full lexical items, especially minimal signs. It is unnecessary and misleading to suggest that language users store 'constructions', except in their unfortunate role as recipients of prescriptive grammar teaching. Even further from

'constructions' are collocational links, involving lexical items that often occur close to each other in discourses, but not necessarily in a fixed syntactic relation or any syntactic relation at all. I have not explored here how to integrate these in the view of grammar adopted here, though the phenomenon is not inimical to that view.

Thus, again, again, we leave a chapter wherein it is even more of an understatement to say that much more could be said (perhaps with a sigh of relief from the reader that it isn't). The next chapter, however, takes further our interest in the importance of figurativeness, and particularly metaphor, and the relation of this to evidence of iconicity in linguistic structure, as always, of course, as exemplified in English.

Chapter 33
Icon and Metaphor

iconicity – onomatopoeia – gesture – phonosemantics – repetition – lexical and pre-utterance phonology – intonation – iconicity and structural analogy – morphological and syntactic iconicity – hypermetaphors and suppletion – conceptual closeness – scope – routinization of iconicity – metaphor and indirect and active iconicity

It may not be obvious to some readers at least why the attention in the last chapter given to figurativeness, particularly metaphor, also leads on to the topic of iconicity – as might be deduced from the title of this chapter. Others may be surprised at how little 'iconicity' has figured in the text so far, particularly given the arguably iconic role of the content plane as a whole in relation to cognition. This situation, if accurately described as above, reflects some uncertainty concerning the sense of iconicity and its importance in language. In Ancient Greek *εἰκών* is 'image', which is a particular kind of representation. I take an **icon** to be a representation that preserves, to a varying degree, a likeness to what it represents (cf. the verb form *εἰκάζει*, with a major sense 'represents by a likeness'). Such iconic representation is most obvious when the representee and the representation share a medium, as with portrait paintings; there they share the visual medium, the icon is 'imagistic'. But in this circumstance *icon* in Greek and elsewhere came to mean also specifically a sacred representation.

More recently, in English the word has come to mean, apparently, a representation, or rather representative, that embodies the essence of a (often unstated) representee (as perhaps in 'Firefighters are to be honoured later by Glasgow School of Art … after they saved its iconic Mackintosh building', BBC News Website 20/06/14). This interpretation may be further eviscerated to mean 'symbolic' or just 'outstanding' in some way with respect to a certain context, or merely 'celebrated', a 'celebrity', if a human 'icon' is involved.

Here I shall aim to preserve icon in roughly the familiar Ancient Greek sense, but specifically applied to intra-linguistic iconicity, which mainly does not involve use of the same medium, and where more schematic, diagrammatic iconicity is involved – i.e. mainly structural iconicity, where a linguistic form embodies a property attributed to the sense. But in some instances the iconicity may depend on shared manifestation in time, so that, most obviously, a syntactic sequence may iconize more 'imagistically' a sequence of events; or it may be the sound medium that is shared, where a sound image is involved.

In language use iconicity is perhaps most obvious with utterances whose speech sounds are intended to represent iconically other sounds – or even other

speech sounds – in a kind of mimicry. Again there is a shared medium. Such mimicry constitutes **onomatopoeia**, which has but a limited role in the representations provided by language. But from the attempt at onomatopoeia of *woof* can be derived metonymically a *woofer*, denoting dog, and by metaphor a low-frequency component in a loudspeaker (though *sub-woofer* has no connection with the dachshund).

Closely related within another shared medium are **gestures** often shared with other species which convey or concede power to another specimen, where the 'iconicity' has been transmitted biologically. Confrontational gestures of various kinds (threatening, submissive, conciliatory, seductive, approving) have a long genetic history. We shall recur to these shortly.

Sound by sound iconicity in language can range from simple signs, as in Greek *γαβγίζει* 'makes the sound *γαβ γαβ*, barks', to the combined effect of parts of extended utterances such as is exhibited in the following passage from Pope's 'Essay on Criticism' (II, ll.362–73).

> True ease in writing comes from art, not chance,
> As those move easiest who have learned to dance.
> 'Tis not enough no harshness gives offence,
> The sound must seem an echo to the sense:
> Soft is the strain when Zephyr gently blows,
> And the smooth stream in smoother numbers flows;
> But when loud surges lash the sounding shore,
> The hoarse, rough verse should like the torrent roar:
> When Ajax strives some rock's vast weight to throw,
> The line too labours, and the words move slow;
> Not so when swift Camilla scours the plain,
> Flies o'er the unbending corn, and skims along the main.

But this passage contains not just individual sound by sound representation, as in *The hoarse, rough verse should like the torrent roar: When Ajax strives some rock's vast weight to throw,* with its combinations of 'rough' rhotics and onomatopoeic back vowels. In the latter sequence even the continuity of the rhythm is broken up, staccato-like, by the succession of monosyllables and the asyndetic effect associated with the delay of the expected non-finite verb to final position. Also, in the last two lines, for instance, the perceived speed of the utterance, conveyed by the repeated high front vowels, sonorants and sibilants, simple or in initial clusters, is an icon of the speed of 'Swift Camilla': heard/read speed iconizes seen speed.

We have **cross-media iconicity**; but both icon and representee involve perception. This phenomenon too is of restricted currency. But it begins to bring in iconization, in this case by sound, of concepts, meaning – **phonosemantics**; the

character of the individual sound, cluster or syllable, or the rhythm conveys the properties of a concept, albeit one concerning perception. However, more generally manifested phonosemantic relations are associated with particular sounds or combinations, often cross-linguistically.

Ever since Plato's *Κρατύλος*, in particular, there has been much debate concerning the extent of such phenomena and their importance. There is, for instance, a prominent common correlation between two opposed sets of sounds and 'size'. Sounds in which the **i** feature is prominent are more common in words denoting 'small', whereas bulky denotata are associated with combinations of **u** and **a**. The English expression *teeny-weeny* is a striking example of the former, where the repetition intensifies this sense. So too a 'tweet' has to be small, but not a 'blog'. And such a correlation has been confirmed in a number of languages in experimental and statistical studies – though some counter-examples have also been offered. Acoustically, the **i** element lacks sonority (compared with **a**) and concentrates energy in the upper formants (unlike **u**). We find elsewhere a representational correlation between smallness and relative weakness of expression in language, some of which will be addressed below.

Certain combinations of sounds often seem to correlate with a shared part of the meaning of a set of words, as with the 'smooth moving over a surface' involved in *slide*, *slither*, *slug, slush* – or even that slippery character *sleaze*. But there are apparent counter-examples, or at least forms that are not obviously exemplary of the claimed correlation, such as *slab* or *slum* – though some of these may show the counter-influence of the other sounds in the form. *Slum*, for instance, goes quite well, in terms of level of appeal, with *slug* and *slush*, and maybe *slut* and *sludge*. Also, languages vary in what correlations are prominent. And language users are varyingly sensitive to such correlations, whose presence, moreover, is not typical of the vocabulary of English and other languages.

Potential iconicity can, however, be highlighted by repetition, as in the first coordination of this sequence from Hugh Walpole's 'The Young Enchanted', bk.1, Chapter 4.

> ... he felt tumbled, rumpled, and crumpled, whereas only a quarter of an hour ago walking down Hill Street he had felt debonair, smart, and fashionable ...

Further highlighting comes from the absence of such obvious symbolism in the notionally contrastive coordination that ends the sequence. This and the Pope passage illustrate the relative facility with which language may be manipulated in such a way as to highlight phonosemantic correlations (without our underrating the skills of the authors concerned). This suggests that this property is more fundamental than much current linguistic literature allows.

Nevertheless, more widespread, both cross-linguistically and within English, is iconicity associated with **intonation**. Particularly striking is the correlation between raising of fundamental frequency and questioning in the course of utterance of a **tone**; often such intonation may be the only indication of interrogation. Thus, as well as (I.174a) and (I.175b) from Part I, Chapter 15, with the mood {q} and its valency of an element whose identity is not known, or whose truth value is not known, and realization including 'fronting' of the operative, we can have such as (97).

(I.174) a.
```
                          {P{q}//{0}}
                              |
   { {abs}}          {P{past}/{P;N}{loc/{N{int,e}}}}
      |                |          |          |
                   { {loc}}   { {abs}}     {P;N}
      |                |          |          |
 { {loc}\{P;N}}   {N{int,e}}   :      {P;N/{src{abs}}}
      |                |          |          |
 {N{TEMP,0}}           :      { {src{abs}}}   :
      |                |          |          |
      :                :         {N}          :
      :                :          |           :
      :                :          :           :
    when             did        Dolly      arrive?
```

(I.175) b.
```
        {P{q}//{0}}}
            |
   {P{pres}/{P;N{past}}{loc/{N{e}}}}
      |         |              |
   { {loc}}  { {abs}}   {P;N{past}/{src{abs}}}
      |         |              |
   {N{e,0}}  { {src{abs}}}     :
      |         |              :
      :        {N}             :
      :         |              :
      :         :              :
     has      Dolly         arrived?
```

(97)
```
                   {P{q}//{0}}
                       |
   { {abs}}     {P{pres}/{P;N{past}}{loc/{N{e}}}}
      |              |                    |
   { {abs}}      { {loc}}      {P:N{past}/{src{abs}}}
      |              |                    |
 { {src{abs}}}    {N{e}}                  :
      |              |                    :
     {N}            :                     :
      |             :                     :
      :             :                    ↗ :
    Dolly          has                 árrived?
```
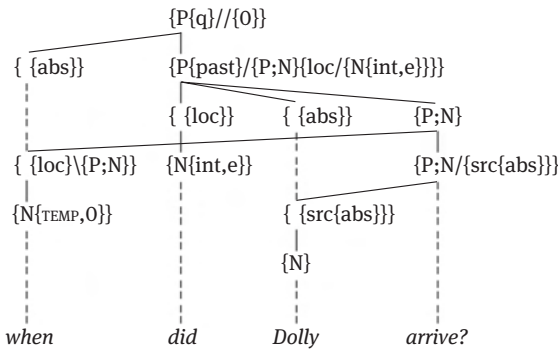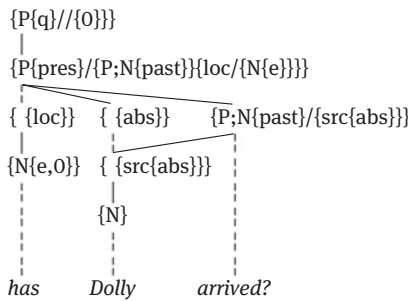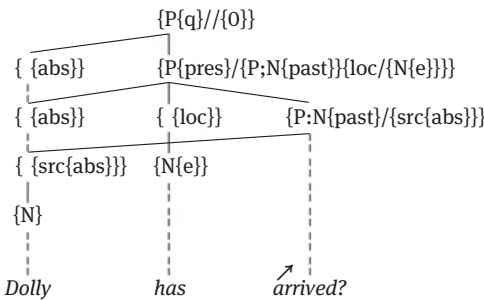
In (I.174a) and (I.175b) the '0' iconizes lack of knowledge, and this is expounded by 'inversion' and the unidentified pronoun. In the abbreviated (97), in the absence of realization by inversion, there is solely manifestation by rising fundamental frequency on, in the unmarked case, the phonological head of the utterance. This is a more 'imagistic' icon: the absence of 'closure', the incompleteness of such a weakening tone movement (cf. the diffuseness of segmental **i**), iconizes the missing knowledge, the uncertainty.

The pre-utterance tonic typically falls on the final lexical tonic (main accent) in the tone group. Placement elsewhere usually, given a suitable tone movement, signals that the uncertainty lies there. Placement of the tonic on *Dolly* in (97) would ask for confirmation that it was Dolly that arrived rather than someone else. Similarly, in declaratives, a different placement of the tonic may indicate the information being conveyed takes a different topic from the unmarked one. Thus in *Bob came yesterday* the initial tonic marks *Bob* as a new argument, and the topical material is 'who came yesterday'. Sequence and tonic placement together iconize the user's state of information.

Thus raising of the tone in (97) iconizes, in its perceived incompleteness, the uncertainty associated with the unidentified element. But we also find a degree of raising in declaratives, where it indicates tentativeness or a desire for the listener's attention and approval. It has been suggested that this intonation-type **evolved** from confrontational behaviour, where the more aggressive can lower the tone (also metaphorically) to suggest importance, power, associated with greater bulk, while the less aggressive raise the tone as part of behaviour indicating dependence, placation, or at least the desire for attention from the interlocutor. This kind of correlation is found in other species and thus its presence in language seems to be not merely conventional in origin – though it may become conventionalized in language, and not stimulated by such inherited factors. Moreover, some differences in the capacity of individuals to sound 'bulky', and so 'powerful', are associated with differences in age and gender, and thus with physiological development, notably of the larynx and vocal cords.

The same physical bulking-out is also associated with courtship routines in many species (with spreading of wing or tail feathers, torso-stiffening, muscle flexing). These evolved associations may also be manifested in the correlation between small size and sounds with prominent **i,** mentioned above. Again, higher location of energy iconizes lack of bulk. These correlations are a linguistic part, along with paralinguistic behaviour, of a battery of evolved potentially agonistic associations. Also, other choices of tone or tone movement can convey a range of speaker attitudes, only some of which are grammaticalized, as with questioning.

Another 'bulk' phenomenon is **emphasis**, marked by raising the volume and/or the sustained height of a tone, to contradict or reaffirm some element.

Bob arrived yesterday. Emphasis iconizes the affirmatory or contradictory force. There is an alternative, syntactic bulking that can iconize these forces, as in *It was Bob who came yesterday*, where *Bob* may not bear full phonological emphasis. Now recall here (I.171a), Chapter 15.

(I.171) a.

	{P/{P}{loc{src}/{N{int,e}}}}		
{ {abs}}	{P/{P;N}{loc{src}/{N{int,e}}}}		{ {loc{src}}}
{ {abs}}	{ {loc{src}}}	{P;N/{abs}}	{N{int,e}}
{ {abs}}	{N{int,e}}		
{N}			
John	*did*	*survive*	
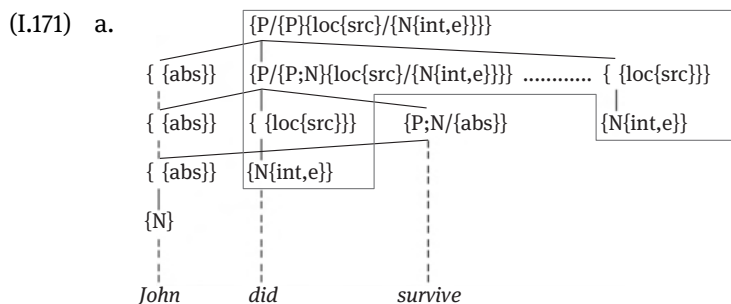
Here it is the truth value that is emphasized and this is grammaticalized in terms of the reiterated negative existentials inside the irregular box enclosing the internal structure of *did*. Structural bulk is expounded by increased volume. But other elements may be marked as emphatic in the same way, as in *John survived*. And emphasis can be given by syntactic bulk as in the equatives *John is/was the one who/that survived* and *The one who survived is/was John*, as well as a variant where neither absolutive undergoes subject-formation: *It is/was John (who) survived*.

Recurrent speech sounds, particularly within forms linked in meaning can acquire an iconic role, as in the familiar first two lines of Keats 'La Belle Dame sans Merci'.

> O. What can ail thee, Knight-at-arms
> Alone and palely loitering; ...

Here the [l] of *ail* is picked up throughout the following line, and, along with repetition of the preceding vowel, is itself prolonged in *palely*, drawing attention, particularly in the case of the two words cited, to a recurrent sense of weakness.

Musical settings offer a further complex aural dimension, which can not only act in the same way as rhyming but also express more affectingly the meaning of words and phrases. This is particularly evident in the work of Monteverdi and his contemporaries. But instances are difficult to illustrate precisely without allusion to musical scores, which would, unfortunately, take us too far afield from our focus on language structure. I shall content myself here with a simple example of the figurative effect that a musical setting can have. The musical phrase to which are set the opening words of the third setting of 'Confitebur Tibi, Domine' (Psalm

110) ('I acknowledge thee, o Lord', in the 'Selva morale e spirituale' [1640]) recurs towards the end at the words *Sicut erat in principio* 'as it was in the beginning'. This provides a musically-based **paronomasia** that highlights the otherwise conventionalized words: set in this way, the words can refer to the beginning of everything or merely the beginning of the setting, the words and music of *Confitebur tibi, domine ...* .

Phonological iconicity in English in relation to meaning is in general limited, however, and perceived by users of English in different ways and to different extents. But figurative utterances involving metre, alliteration, rhyming, repetition, etc. can impose more structuring on interpretation, beyond highlighting phonosemantic correlations. Thus, for instance the bathos of the **syllepsis** in this familiar couplet from Pope's 'Rape of the Lock' Canto III, ll.7–8, where two incongruous objects of *take*, balanced on each side, are yoked together, is intensified by the bathetic rhyming.

> Here thou, great Anna! Whom three realms obey
> Dost sometimes counsel take – and sometimes tea.

Part of the interpretation of the passage is iconized by the rhyme that opposes the semantic spheres of the rhyming forms.

Word-formation can involve iconicity, as with the use of, again, the **i** feature in affixation that signals diminutives or hypocoristics: *Billy, doggy*, etc. More striking are many blends, as exemplified by *geep*: the blending of the expressions *goat* and *sheep* iconizes the blending that characterizes the creature so denoted. So too with *brunch*. The recent blends *Grexit* and *Brexit* – and certainly *Megxit* – fail in this respect, as one might expect of such a politico-journalistic promotion, all too typical of the tedious currents of abbreviations, blends, semi-compounds, and conversions that are 'trending' at the time of writing (a recent instance being *doorscape*).

But within language, exponence is predominantly arbitrary. However, consideration of iconicity in relation to phonology invites questioning of the status of the kind of **analogies** between particularly phonological and syntactic structures that we have distinguished. Phonological structure is iconic with respect to our perceptions of speech. Could this iconicity provide the basis for a metaphor for the iconization by syntactic structure of our conceptualization of the world? Let's recall some structural properties of phonological representation.

The properties of phonology involve perception of physical phenomena ordered in time, and though roughly continuous, segmentable (though not always uncontroversially) into units of different sizes, on the basis of recurrence. Certain minimal units, or segments, have a special status: the syllabic category of segment is distinguished by perception of its high relative sonority and coincidence with

the peak of the syllable pulse; grouping within the pulse into the onset and rhyme is motivated by the perception of greater interaction between the syllabic and the coda, particularly transitivity (where present, as in English); among syllabics, the ictus is a segmental category that is strengthened, accented, the tonic syllabic is one that has tone-carrying accent. These special segmental categories form a hierarchy on the basis of their identifying as subordinates more and more inclusive constituents distinguished by presence in them of these segment-types, their heads. It is evident that the hierarchy of categories, with their adherents, is suitable for representation by dependency structures that embrace both subjunction and adjunction.

We can distinguish, on the basis of perception, phonological representations that were represented graphically as in the syllable structure (I.72b) from Chapter 6.

(I.72)   a.

```
                                                {V}
          {C{u}\{V}}              {V}  ⇒      {V}
                      {V{i/}}  ⇒  {V}          {V}
                                      {V;C}        {C\{V}}

         [ [kʰ]   +   [ [ɪ]    +      [l]    +      [t] ] ]
            ⇑            ⇑              ⇑
            S   O   N   O   R   I   T   Y
```

b.
```
                       {V}
          {C{u}\{V}}   {V}
                       {V{i}/}          {C\{V}}
                            {V;C}

          [kʰ]         [ɪ]    [l]       [t]
```
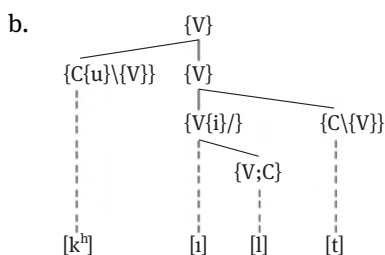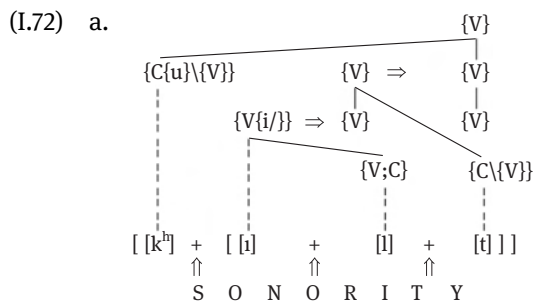
(I.72a) tries to record how the representation is built up, recursively, on the basis of transitivity and, as far as sequence in concerned, relative sonority, and (I.72b) is the resultant structure, but here ignoring consonant-to-consonant dependencies. This monosyllabic form has a transitive syllabic; and the following consonant is thus its complement; there are initial (onset) and final (coda) adjuncts. Both direct recursion and sonority, as well as transitivity, are fundamental properties of the lexical phonology of English.

If we add an ictus and tonic, as in (I.153a) from Chapter 13, but here to (I.72b), which is monosyllabic, and given as pronounced in isolation, so lexically, we get representation (98a), with further recurrent subjunction of {V} added to those in (I.72).

(I.153) a. *noun*   {V}
                      |
                     {V}   {V}
                      | |
                     {V}   {V}
                      | |
                   {V{v}/}   {V}
                         \   / \
                       {C{v}}   {V{v,c{c}}/}   {C}
                                      \   /
                                    {C{c}}

                       [a]   [d]   [ε]   [p]   [t]

(98)   a.   {V}
                                |
                               {V}
                                |
                               {V}
                              / |
                   {C{u}\{V}}   {V}
                                 \   \
                              {V{i}/}   {C\{V}}
                                    \   /
                                  {V;C}

                    [kʰ]   [ɪ]   [l]   [t]

       b.   {V}
                                |
                               {V}
                                |
                               {V}
                              / |
                   {C{u}\{V}}   {V}
                                 \   \
                              {V{i}/}   {C\{V}}
                                    \   /
                                  {V;C}

                    [kʰ]   [ɪ]   [l]   [t]
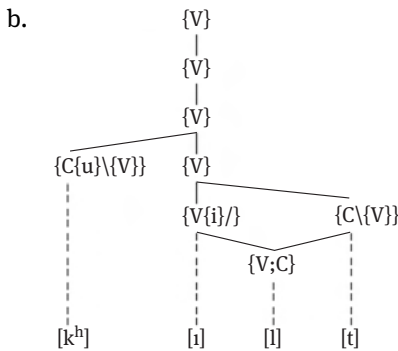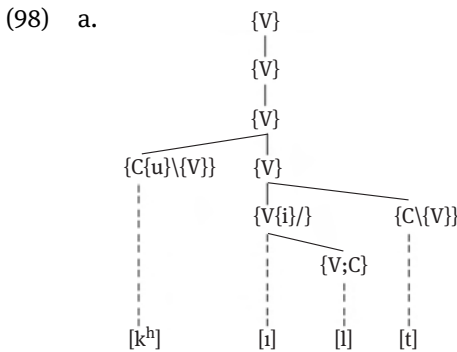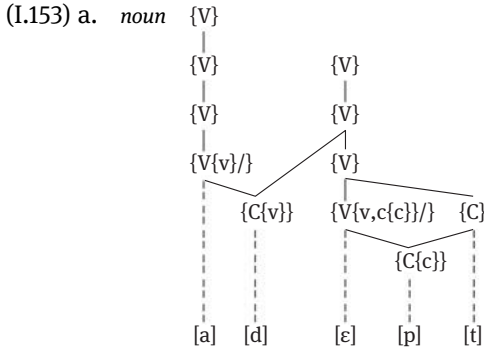
This again leaves out the dependency between [l] and [t]: compare the final rhyme in (I.153) and the addition to (98b). A more sonorous consonant adjacent to a less depends on the latter. I have already suggested that its presence is in accordance with the specifically phonological property of exhaustive connectedness, which I assumed has a role in timing, not relevant as such to syntax (as discussed in Part I, Chapter 13). Do the other basic structural properties of these representations provide the source of a metaphor for analogous syntactic structure? Before we look at that, we should acknowledge a more obvious analogy within the phonology, between lexical and pre-utterance phonology.

Chapter 13 provided examples of pre-utterance phonology that structurally share the basic properties of lexical phonology, but also resolve the structural incompleteness of some lexical units, such as that of the verb form in (I.154b), which begins with a 'stray'; syllable – with no supra-syllabic attachment.

(I.154) b. *verb*

```
                                                    {V}
                                                     |
                                                    {V}
                                                     |
                    {V}                             {V}
                     |                               |
        {C{c}}   {V{ }}/}           {V;C{c{c}}}   {V{c{c}}/}
                         {V;C{v}}                       {C}

         [p]      [ə]    [r]          [m]        [ɪ]    [t]
```
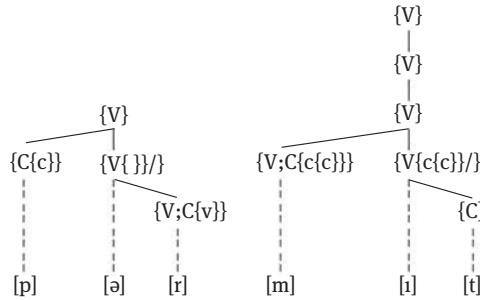
This is resolved in the short utterance in (155b), *Permit Bill*!, where this syllable is attached to an ictus with no categorial content, but which is realized as a reinforced syllable pulse – it is not a zero:

(I.155) b.

```
                                                              {V}
                                                               |
          { }                           {V}                   {V}
                                         |                     |
                    {V}                 {V}                   {V}
                     |                   |                     |
        {C{u}}  {V{ }/}  {V;C{c}}   {V{i}/}   {C{v,u}}   {V{i}/}
                         {V;C}                  {C}            {V;C}

        [◌]  [p]  [ə]   [r]   [m]      [ɪ]  [t]  [b]    [ɪ]    [l]
```
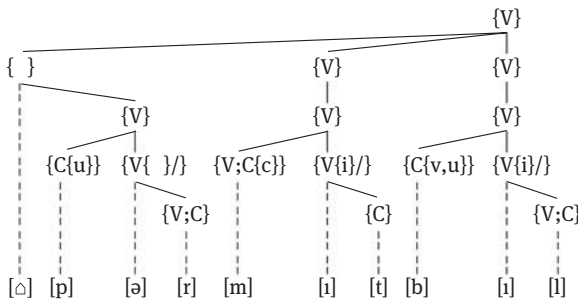
Also, the lexical tonic of *permit*, which appears in isolation, is suppressed at the interface in the environment in (155b), in deference to the immediately following

lexical tonic which is also the pre-utterance tonic. Pre-utterance phonology expands on and partially refashions lexical phonology, both ontologically and in its ultimate full development. But, to be sure, it involves more (suprasegmental) structure, much of which is not well understood; nor is its relation to syntax. But the two phonological domains share the same physically manifested properties that we perceive in speech.

This sharing of phonic manifestation by these domains is obviously not true of syntactic structure, though the exponence of emphasis and contrast and of some mood features involves suprasegmental phonology. Collectively, however, this perceived (since physically-manifested) phonological structure could plausibly be said to form a metaphorical source for our basic conception of abstract syntactic structures. Of course, syntax must cope with complications unnecessary in characterizing phonological structure, even pre-utterance phonology, in view of the complexity of the conceptual, rather than merely perceptual, domain it seeks to represent (as discussed in Chapter 14). Much of the complexity of pre-utterance phonology is, indeed, attributable to syntactic requirements.

Moreover, not all of the phonological properties embodied in (98b) or (I.155b) are universal. For instance, particular syllables in particular languages (including English) may be coda-less, and some languages are as a whole (or almost so) coda-less, and, of course, in the latter case but also elsewhere, lacking transitivity. Onset-less-ness is less common, and in some languages such an empty onset attracts implementation by a glottal stop. Many languages lack, or almost lack, systematic vowel-reduction, and this has consequences for the accentual system. Overall, enough remains of phonological structure in any language to serve a metrical role, whatever the syllabic type of the language concerned.

Like phonology, syntactic structure can be represented graphically as a hierarchy of categories that forms a tree structure; this hierarchy is established by the categorization, including more crucially the valency, of the basic units. Such a tree conforms to the requirements of dependency notation; no constituent labelling is necessary. The syntactic or phonological tree built in the interfaces is a 'wild' one, to which the lexicosyntactic and lexicophonological interfaces assign sequencing. But 'internal' (unsequenced) dependencies, subjunctions, of the same category are found in both phonology and syntax. Recursion of heads of the rhyme and the syllable provide a place in the application of the analogy for recursion of the operative, for instance. The presence of an onset is (almost) universal, and constitutes the iconic source of the metaphor for typical placement of a topical element, though the position is also communicatively unmarked, indeed communicatively iconic. In English and similar languages vowel-transitivity provides a basis for participants, which of course must be much elaborated numerically and in type.

These **structural analogies** are possible because we recognize similarities in the perceived content of syntax and phonology. Compare (I.72b) with (I.62a) from Chapter 5.

(I.72) b.

```
                        {V}
                         |
  {C{u}\{V}}    {V}
     ┆           |
              {V{i}/}         {C\{V}}
                 ┆      |        ┆
                     {V;C}
                       ┆
     [kʰ]          [ɪ]    [l]      [t]
```

(I.62) a.

```
                        {P}
                         |
  { {abs}}       {P;N}
     ┆            |
              {P;N/{abs}{src{loc}}}   { {loc}\{P;N}}
                 ┆          |            ┆
  { {src{loc}}}  ┆    { {abs}}        {N}
     |           ┆       |              ┆
    {N}          ┆      {N}
     ┆           ┆       ┆
    John       liked   Judy          yesterday
```
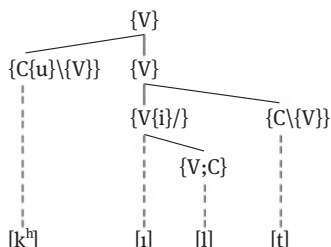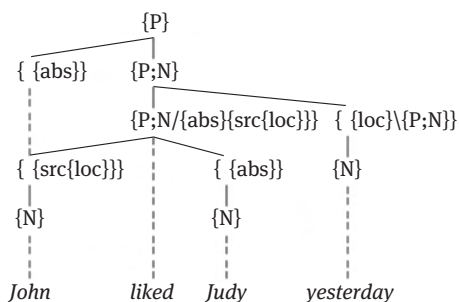
The basic sequenced configurations are the same, but instead of one complement, in syntactic structures we have to distinguish several, here two, one of them 'preposed', but extensible, as in *John gave Judy a kiss*; and distinguishing of these relies not just on relative sequence but also on the presence of the functional category of functor, as in *Judy moved from Wessex to Ruritania*, even though the functor may often not be expressed overtly except by their effect on sequencing. And another functional category is associated with a functor that is not part of a valency, the free absolutive, which here is associated with subject-formation and argument-sharing, and ultimately front position of the subject.

The subject in English is a routinized topic, reflecting the saliency of agent topics. Already, this absolutive associated with subjecthood in (I.62a) illustrates the other bits that have to be added on to serve the needs of syntax, as again discussed in Chapter 14. Moreover, not all languages have a subject, let alone an initial one, or post-verbal other complements. Whereas phonology, which iconizes perception of sounds that are implemented externally, has little scope for such variation. And syntax has a different, more complex role in language, a role that stretches into areas of abstract conceptualization whose representation

is beyond the metaphor underlying the syntax-phonology analogies that we can observe. Nevertheless, we can say that phonological structure is a metaphorical source for syntax, particularly the appropriateness of the dependency tree structure that the early-acquired syllable calls for.

But, perhaps more importantly, we have seen that both planar levels of representation are themselves iconic with respect to the domains that they represent: representation is iconic. I have pointed up the limitations of phonosemantic iconicity. But phonological representations are fully iconic with respect to another domain, that of our perception of speech. Relative prominence in accent is iconized by the head-dependent relation, and perceived relative sonority by the proportion of **V**-ness, with perceived combinatory relations represented as valencies, complementary or adjunctive; and time is, of course, inherent in speech, and represented as an iconic sequencing even in the graphic medium. Dependency diagrams in phonology iconize a structured perception.

Headedness is shared by phonology and syntax: the **structural salience** associated with the relational role of heads iconizes the **cognitive salience** of what they represent in their respective domains. And both syntax and the lexicon iconize the conceptual structures that come to be linearized at their different levels, and to be ultimately expounded by the perceptual structures of phonology that can be associated with, or implemented by, articulations and sound, the means of producing and the measurable results that externalize these represented perceptions.

Phonological sequencing is iconic, but sequencing in syntactic and morphology is largely conventional, though in the former it may iconize perceived or ontological order, as I shall illustrate below. Morphology I take to be a diachronic lexicalization of syntax. Syntax and morphology also share(s) some of the more particular iconic properties of phonology, such as repetition as a representation of intensity, exemplified in *She's very very very big*, involving a dedicated intensifier. And in morphology another kind of 'repetition' is also associated with intensification in forms like *gi-normous*, with blending of two semantically similar forms. Given the notional character of adjectives and adjective-based adverbs, such a formation is not surprising; nor is the devotion of some simple adjectives to an intense manifestation of some quality, often reinforced phonologically, such as *immense(ly), swift(ly)*, and the invocation by simile of extreme exemplars as in *snail-like*. The *-like*-formation here is overtly iconizing. With some adjectives the particular quality involved is unspecified in the adjective itself, as with *superb*, *extreme*.

Repetition of more extended syntactic structures and climaxing of content, recognized as figurative schemes, are also intensifying and iconic. This is illustrated in the following passage from Shakespeare's *Henry VI,* Part III, II.v, ll.21–30.

> O God! methinks it were a happy life,
> To be no better than a homely swain;
> To sit upon a hill, as I do now,
> To carve out dials, quaintly, point by point,
> Thereby to see the minutes how they run:
> How many makes the hour full complete;
> How many hours brings about the day;
> How many days will finish up the year;
> How many years a mortal man may live.

This also combines with culminative lexicophonological repetition, with successive items from the time domain. However, the inherent meaningfulness of syntax means that it can offer its own array of iconicities, as well as those associated with intensification by repetition and culmination.

For instance, the sequencing property shared with phonology can form an icon for precedence of various kinds. Most obvious perhaps is representation by simple coordination of the temporal priority of represented events, as illustrated by (99).

(99)   a.   She (has) walked out and burst into tears
     b.   She (has) burst into tears and walked out

Given that language is implemented in time and syntax is obviously no exception, syntactic order can thus represent scenes, particularly events, that are often ordered in time; the iconic correlations in (99) are natural, to be expected – but can be thwarted.

In the first place, the aspect of the conjuncts, particularly the imperfectivity associated with many verb occurrences that typically signify activity may make time sequencing of conjuncts less likely, as in (I.229a) from Chapter 17.

(I.229)   a.
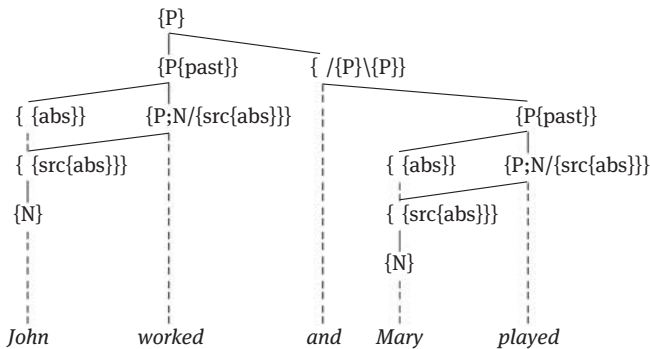
The minimal subordination involved in *and*, represented in { /{P}\{P}}, however, is taken advantage of in associating sequencing of conjuncts, particularly if interpretable as perfective, and thus with succession in time, with priority assigned to the (initial) head clause, as in (99).

Such interpretations can also be supported or suppressed by a main clause temporal circumstantial, as in (100), or by turning one of the clauses into a perfect non-finite circumstantial (101) or a circumstantial introduced by a temporal subordinating conjunction, as in (102).

(100) She (has) walked out and then/before that burst into tears

(101) a. Bursting/Having burst into tears she walked out
       b. She walked out, bursting/having burst into tears

(102) a. She walked out before she burst into tears
       b. She burst into tears after she walked out

Both the perfect variants of (101) and the subordinator-containers of (102) show that the subordination can overcome the iconic interpretation of the sequence. The interpretation of the equivalent non-perfect in (101) does not invite a sequence in time interpretation: cf. *Weeping, she walked out* or *She walked out weeping*. So too, as we have seen, the aspectual content of coordinations can discourage interpretations involving temporal sequencing: *He works all day and plays all night* illustrates another such possibility.

Sequences of coordinators involving the addition of consequence to temporality are restricted in permutability: *He lost his balance and fell over*. This is striking in a conjunction of an imperative and an indicative representing an indirect speech act of threat or warning, as in (103a).

(103) a. Try that again and you'll regret it
       b. If you try that again you'll regret it
       c. You'll regret it if you try that again

Rather different is the Australian cursing optative *May your chooks turn into emus and kick your dunny door down*. Such a threat as (103a) can also be represented by the sequence of protasis and apodosis (as in (103b)). This structure can also signal simple consequence. Postposition of the protasis (though less common in English), as in (103c), is interpretable as a threat, but one that is much weakened.

A particular construction in English illustrates rather strikingly the potential iconicity of juxtaposition. I have in mind the constructions headed by verbs of

direct perception, exemplified by *see, hear, feel, smell*, constructed as in (104a), with no overt functor introducing the infinitive (as described in Chapter 10 in Part I).

(104) a. I saw them leave
       b. I liked/expected them to visit me
       c. I expected them to leave

In (104b–c) we have an infinitival functor, as represented, for *expected*, in (105a), whereas such an overt functor is lacking in (105b), the structure given to (104a).

(105) a.

b.
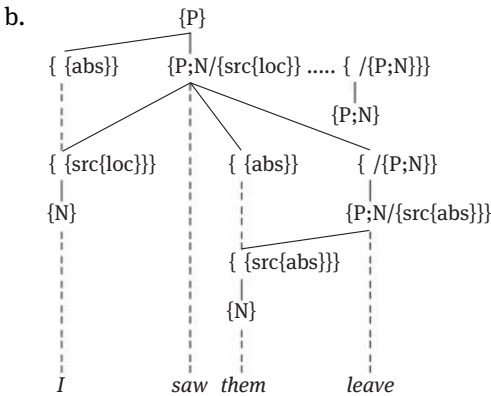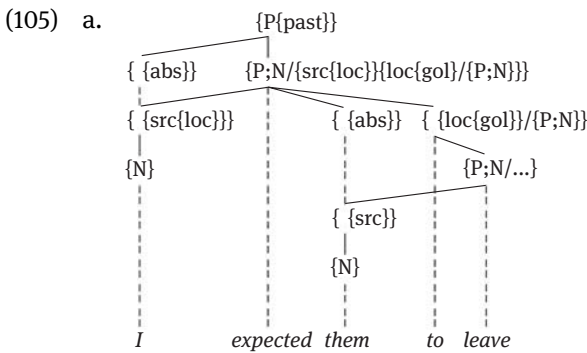
The stative verb *like* and the simple (non-directional) infinitive functor it requires impose a habitual meaning on the lower verb, while *expect*, on the other hand, and specifically its locative goal functor – { {loc{gol}}/{P;N}} – are associated with future interpretation of the lower verb, though the expression may additionally be habitual. The infinitival functor in the representation headed by *saw* in (105b)

is secondary-feature-free, and indeed the functor is not expressed overtly. This allows the juxtaposition of the words in *saw them leave* to serve as an icon for the simultaneity of the seeing and the leaving, where the two verbs not merely share the argument *them* but are both adjacent to it.

This juxtaposition is not possible if the main verb is passivized and thus the shared argument is not adjacent to the two verbs, as in (106a), represented schematically as in (106b).

(106)   a.   They were seen to leave

   b.


```
                    {P}
    { {abs}}              {P;N/{P;N}}
    { {abs}}              {P;N/{src{loc}}{ /{P;N}}}
    { {abs}}           { {src{loc}}}    { /{P;N}}
                           {N⟨i⟩}           {P;N/{src{abs}}}
    { {src{abs}}}
        {N}

        they      were  seen      to  leave
```
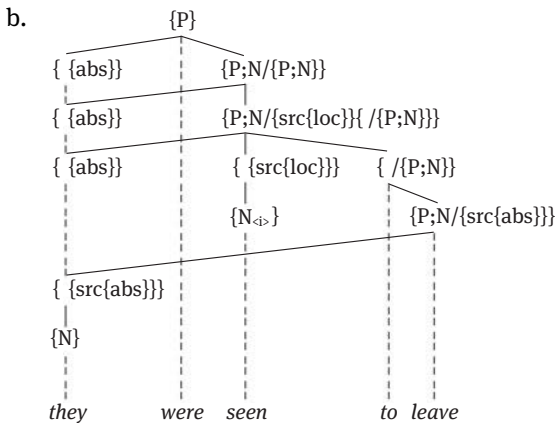
   c.   They seemed (to them) to disappear

Recall the discussion of the structure of passives in Chapter 29. Here the absorption of the subject of *see* means that only its free absolutive can immediately satisfy the free absolutive of passive *be*, and it in turn is satisfied by the subject of *leave*. In this circumstance – of the impossibility of juxtaposition of the three crucial words – the lower verb reverts to the usual, unmarked overt infinitival functor. With the intransitive simultaneous-perception verb of (106c) such a juxtaposition as is observed in (105a) is never possible, of course. Here the perceiver, if invoked, is circumstantial.

Such iconicity based on juxtaposition is also observed with a verb of 'direct causation' such as that in *Margery made him leave* – with concatenation of causative, causee, 'bare' infinitive. Compare this with the 'indirect' *Margery caused him to leave*. Even the causative verb *have* in *Margery had him dismissed* shows juxtaposition, and, though implying an intermediary of some sort, it suggests 'direct intervention' of Margery via some 'instrument'. Compare this with *Margery caused him to be dismissed*, which may not involve Margery's volition or inten-

tion. In this domain too a *to* appears if the direct causative verb is passive: *He was made to leave*. Moreover, the causative *have* is even not normally passivizable. The structures associated with these 'direct causatives' is similar in the crucial respects to that in (105b). And notice that in both cases the subordination of one {P;N} to another, with one indirectly complementing the other, shown in (105b) by the valency of the upper {P;N}. As non-overt, the functor again does not interfere with expression of simultaneity. It is expressed in this case also by the juxtaposition of three elements involved in the two predications, which are also all directly linked to each other by dependency.

More generally, conceptually related items cluster together: closeness of expression iconizes **conceptual closeness**. The latter is at least partially reflected in the notional notation in terms of a sharing of notionaly related components, and the phenomenon is most noticeable among the entitatives. The relationality of verbals, contrasting with the leaf status of nouns, and particularly the access of the former, via a range of functors to a range of arguments of varying complexity allows for a widespread construction-building, frequently interrupted. The main restraint on this is the avoidance, where possible, of creating parsing problems. But the avoiding of parsing constraints at least enhances the predicational continuity based on valency requirements.

However, particularly when nouns are involved, there is represented an entity whose description may be amplified by adjacent words, particularly words that refine the denotation or introduce reference. Simple determiners, attributives, and nouns are heavy with **N**, and juxtapose; and in order to function as attributives items must be converted to {<P.>N/{src}}, unless the item itself is complemented and so would pollute the prenominal cluster, otherwise high in '**N**-ness', unless postposed. Nevertheless, post-nominal would-be attributives do modify a partitive {N}, as in (I.93c) from Chapter 8.

(I.93) c.   {N{sg}/{src}}

```
              ┌─────────
              ¦   { {src}}
              ¦      |
              ¦   {N}
              ¦   ┌──────────
              ¦   {N{sg}/{src}}    { {loc{src}}\{N/{src}}}
              ¦      |             ┌──────────────
              ¦   { {src}}         ¦        {N{sg}}
              ¦      |             ¦           ¦
              ¦   {N{*pl}}         ¦           ¦
              ¦      |             ¦           ¦
              ¦   {N;P}            ¦           ¦
              ¦      ¦             ¦           ¦
              ¦      ¦             ¦           ¦
              a    violin        from      Italy
```

(I.92)　b.　{N{sg}/{src}}

```
          {N{sg}/{src}}
           ⌐‾‾‾\
          ┊    { {src}}
          ┊      |
          ┊    {N/{src}//{*pl}}
          ┊     ⌐‾‾\
          ┊  {P:N}  { {src}}
          ┊   ┊       |
          ┊   ┊     {N{*pl}}
          ┊   ┊       |
          ┊   ┊     {N;P}
          ┊   ┊       ┊
          a  red   violin
```
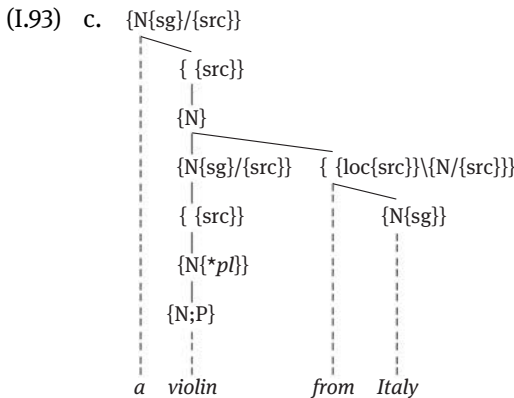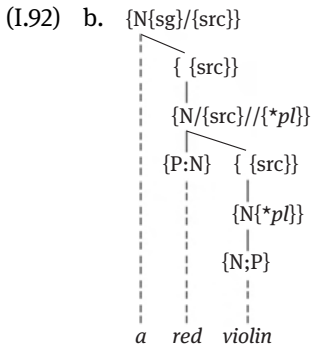
Compare this with the prenominal attributive in (I.92b). The relationality of verbs inhibits such clustering, except in the case of the {P}-heavy operative and verb sequences, which are limited in their extent without the intrusion of a subordination marker. But the range of arguments of verbs are for the most part headed by functors, which, as a functional category, are necessarily relational, and more varied than the partitive { {src}}.

Associated with continuity is the conceptual integrity of determiner phrases and of (finite) clauses: the determiner refers to instances of a denoted entity type, the clause tenses a designated scene-type; and both phrase and clause are anchored in the world by a {N}. The discreteness of nouns, their non-relationality, accentuates the specificity of the entity type, and integrity of the determiner phrase is not threatened even by the presence of one noun, as an attributive, functioning to cut down the denotational scope of another, as in *custard pie*. So too with the integrity of clauses, even if contemporaneity of two conjoined clauses can be involved, as e.g. in (105a) above; this introduces a more inclusive integrity than a simple clause. Necessarily, derived nouns are expressively less discrete: if one is aware of the derived character of *kingdom*, this introduces its conceptual dependence on what is denoted by its base. Subordinate clauses, even if not involving contemporaneity, are perceived as within the speech act envelope established by the mood, or root, verbal, and are understood via their role in the superordinate clause. Syntactic categories and structures give a picture of a conceptualization of the scenes we perceive, internally or via the senses.

Another manifestation of the representation of conceptual closeness is the attraction of certain secondary features or configurations to particular parts of speech. We have already observed verbals as a notionally natural focus for tensing and aspect and mood, and as in many languages indications of its participant types. Tense and mood are properties of {P} and {N}, but they relate the scene designated by a particular verb to its context and the character of the utterance. Nouns, on the other hand tend to manifest gender, categories of entity types, but

also signals of reference and number; these last are properties of {N} but serve to anchor a particular instance of an entity type, and (suppletive) inflectional gender is a property of pronouns. This battery of clustered categories serves to iconize the conceptualization the speaker has in mind.

Languages with complex functional morphology may signal conceptual closeness and integrity by agreement, even if separated, so that the components of a determiner phrase – and particularly attributives – may be scattered through a clause. A mild example is Latin [*Ager*] *cum multōs annōs quiēvit ūberiōrēs efferre frūgēs solet* '[A field], when it has many years remained-dormant, more-abundant to-bring-forth fruits is-wont' (Cicero, cited by Gildersleeve and Lodge [1968: §§567, 676]). But this does not mean that even in Latin conceptual closeness is not often iconized by juxtaposition; but placement is more sensitive to context.

A phenomenon analogous to conceptual closeness in phonology may be manifested by syllabification and syllable structure, involving integration, based on the relativity of the sonority hierarchy, which establishes, however, a sequence of very similar clusters formed in the same way and bound by dependency maximization. The result of the operation of the hierarchy is illustrated in (I.75a–b) (from Chapter 6), such that the order of segments within the onset and rhyme is prototypically in accordance with relative sonority, and this can be read off even from the incomplete categorizations in (I.75b), with the proportion of **V** increasing towards the centre of the syllable cluster.

(I.75) a. [g,r,[t,n,a]]

      b.

```
                                {V}
                ┌────────────────┘
      {C{v,u}\{V}}              {V}
          │                 ┌────┘
      {V;C{v}\{V}}      {V{v}/}              {C\{V}}
                             └──────┐   ┌────┘
                              {V;C{c}\{C}}
          ┆       ┆           ┆      ┆         ┆
         [g]     [r]         [a]    [n]       [t]
```
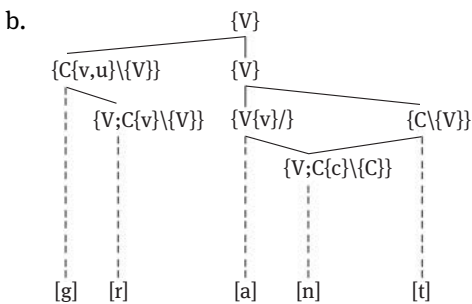
Consider too *swift*, or the *kilt* of the abbreviated (I.72b) above. More subtle is the rhyme gradation in *kiln* or *film* – i.e. {V} + {V;C} + {V;C{c}}. Perhaps this gradation is an icon for perceptual closeness, culminating in prosodies. But there is a countervailing perceptual preference for maximizing the difference between adjacent segments: *peak* or *craft* is preferable to *lull* or *Milne*, the former being easier to parse, particularly in poor acoustic environments.

More strikingly, however, the sequenced syllable structure in (I.75b) iconizes, indeed is rather a consequence of, the aerodynamics of the syllable. This and the aerodynamics of the foot are also manifested in the distribution of the results of lenition and fortition of consonants: foot-initial position, when the initiation of the pulse is powerful, favours strong consonants, maximizing obstruction, and in some languages a strong release, aspiration; intervocalic and particularly foot-medial position is weakening, given such an environment, so that voicing is encouraged; and final position, as the pulse declines, favours a more general weakness often manifested in neutralization (such as loss of voicing), as is familiar from German, for instance. Here the 'icons' are imposed by the iconizee. Alternation associated with such positional differences may routinize, however, and be morpho(phono)logized.

Integration is also associated with another familiar notional property associated with syntactic categories, **scope**. We briefly encountered an instance of this in connection with the representation of tense, as formulated in (59) of Chapter 29.

(59)

```
                        {P}                    *
                         |                      |
                {P{decl}}....... { {loc}\{P}}
                         |                      |
                        {P}              {N_T{TEMP}}
                         |
            {P/{loc/{N{int,e}}}//{iii}{sg}_j} ....... { {loc}\{P/{N{int,e}}}}
                                                 ↑
  { {abs}}   { {loc}}.....{P/{P;N{n.p}}}    ⌐------- {N_i, T ⊆ i} ←----⌐
                                                                        |
  { {abs}}   {N{int,e}}        {P;N{n.p}/{loc/{N_j}}}                    |
                                      |                                 |
                                    {P;N}                               |
                                      |                                 |
                         {P;N/{src{abs}}}.....{ {loc}\{P;N}}             |
                                                                        |
  { {src{abs}}}                              {N_j, j < i}               |
       |                                                                |
  {N{iii}{sg}_j}                                                        |
       ¦                  ¦                     ¦               ¦
       ¦                  ¦                     ¦               ¦
     Dolly             [[ha]s]             [[arrive]          d]
```
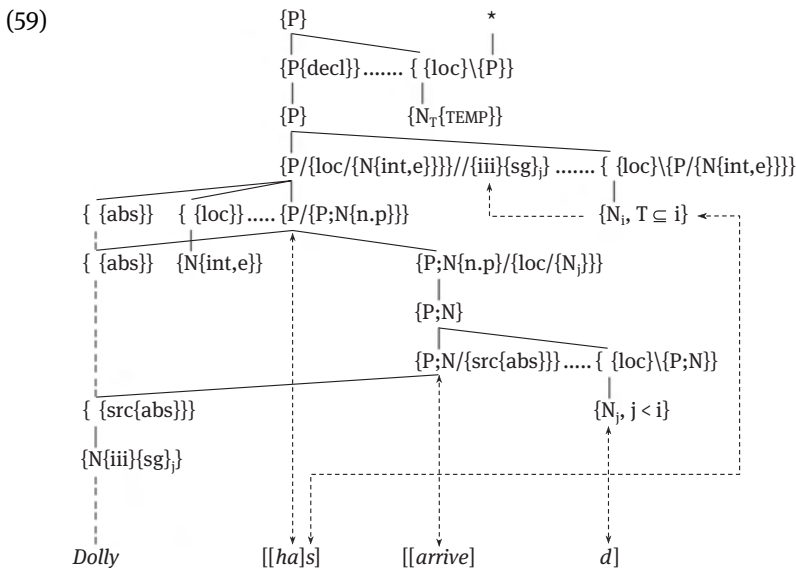
Here, lower temporal nominals are within the scope of the 'T' subscript of the speech-act time, set in the locative modifier of the mood {P}; their times are located, directly or indirectly, to 'T'. The time at which the predication existed, occurred, or was true includes the present, as indicated; it is an **absolute tense**. And the time of the non-finite perfect verb in (59) is placed relative to that of the basic {P}, the absolute tense that heads the predication, the representation of the

scene; the perfect verb is associated with a **relative past**, past relative to the absolute tense. Here scope is iconized by height in the tree: tense is assigned in relation to a higher tense, the highest of which, though prosodic, is not expressed.

Moreover, also directly or indirectly oriented in this way, are other temporal locatives that are not incorporated into a verbal but are adverbial (or adjectives based on such adverbs). The timing of *tomorrow* is direct, in relation to $\{N_T\}$, and that of *on the morrow* is not; its time is relative to another $\{N\{\text{TEMP}\}\}$. Scope of time expressions is hierarchically expressed within a sentence. Cyclical time names (*Wednesday*, etc.) may be absolute or relative. Cumulative time names (such as *2017 AD*) are independent of $\{N_T\}$, but express distance in either direction (past or future) relative to what was the alleged timing of a hypothetical event. The bizarre alternative *2017 CE,* expanded as '*common era*' (or 'current era'), abandons any alleged motivation for the turning point.

But perhaps the most familiar instance of scope in syntax is associated with quantifier {N}s. It is not directly pragmatic, but determined ultimately by properties of the mood/truth configuration. Consider the clichéed example type in (107).

(107) a. Every guest liked some of the dishes
      b. Some of the dishes pleased every guest
      c. Some of the dishes every guest liked

The second, and lower, of the quantifiers is hierarchically within the scope of the first, and this correlates with conceptualization of the relative inclusiveness of *every* and *some*. This is even clearer, perhaps, if we paraphrase in terms of the *there is/are* construction, as in (108).

(108) a. There is no guest (that) didn't like some of the dishes
      b. There are some of the dishes (that) pleased every guest
      c. There is no guest (that) there weren't some of the dishes (that) he liked
      d. There are some of the dishes that there was no guest they didn't please

(108a) also deconstructs the 'universal quantifier' into a (non-redundant) double negation. When the 'universal' is in the scope of the simple 'existential', as in (108b), the deconstruction attempted in (108c–d) is more cumbersome, perhaps, but, as in (108a), they reveal the scope relation as well as the need to consider the relation between quantification and negation.

We shall look at the syntax of predications like those in (108) in Part IV. What is interesting at this point, apart from their providing further illustration

of the iconic expression of scope, is that they make clear the existential basis for quantification. This is familiar in the case of 'existential' quantifiers such as *some*, but (108a) suggests that this is true of 'universal' quantifiers – provided we invoke negation, 'non-existence' – twice. As already observed concerning (108c), the overt expression of the hierarchy of existentials involved in these examples gets to be rather cumbersome. Consider, if we decompose (108b), (108d). Nevertheless, we can characterize (107), or, more specifically, deconstruct them, in these terms, given the presence of such lexical existentials as have already been proposed (in Chapter 15) for the finiteness complex – as again we shall pursue in Part IV.

Tense scope, in particular, is to some extent analogous to the relationship between the syllabic and the elements in the onset and coda; expression of the syllable whose peak is the syllabic forms an envelope on which the consonants of the onset and coda are formed: they are within the formational and perceptual scope of the syllabic. This may constitute a perceptomotoric phenomenon that is a source for the hierarchization within syntactic structure that represents logical scope. The consequences of expression of the syllabic or the ictic envelope are, however, also linear (with respect to lenition/fortition, for instance). But so too scope in (107) is expressed linearly as well as configurationally. This is also the case in (109a–b).

(109)   a.   He promised every guest one of the pieces
        b.   He promised one of the pieces to every guest
        c.   Everyone will die on a certain day
        d.   On a certain day everyone will die

And in (109c–d) only linear priority expresses relative scope.

Of course, scope of tense can penetrate into subordinate clauses, but relevant further hierarchization is lacking in the expression of the syllable envelope, though there is the foot envelope (sounds rather uncomfortable, though not so much as the 'foot head'!). Perhaps a closer analogy to scope in syntax is the spreading of the pre-utterance tone beyond the tonic syllable, or the exercise of feature so-called 'harmony' in such languages as Turkish. But this is more plausibly a manifestation of a prosodic feature; prosodies, involving suprasegmental features, are the ultimate phonological unifiers.

Conceptual closeness may not be based on structural relations but simply in terms of the recurrence of particular **collocations**, irrespective of any obvious grammatical relation, though what collocates will vary for different communities and, indeed individuals. And they often reflect speaker attitudes, attitudes that may be codified as one aspect of 'jargons' associated with social or occupational

groups, or spread more generally as clichés. This is illustrated by the social groups who collocate at least some of *innovative* and *ground-breaking* and *cutting-edge* and *empowering* and *diversification* and *career-building* and *league-tables* and *world-class* and *up-to-date* etc. etc.

Awareness of the presence of evidence of iconicity in language is unsurprising in the context of attempting to formulate a representational grammar. In terms of the latter, language is associated with a number of substance-based levels. And it is natural that representations in a lower level in the schema offered in Figure IV in Chapter 11, thus closer to direct perception, should be the basis for iconization at a higher, and that the levels on the right, again closer to implementation, may be the basis for metaphorical interpretation of those on the left. Moreover, all of these representations are intended to iconize the capacities that language users display.
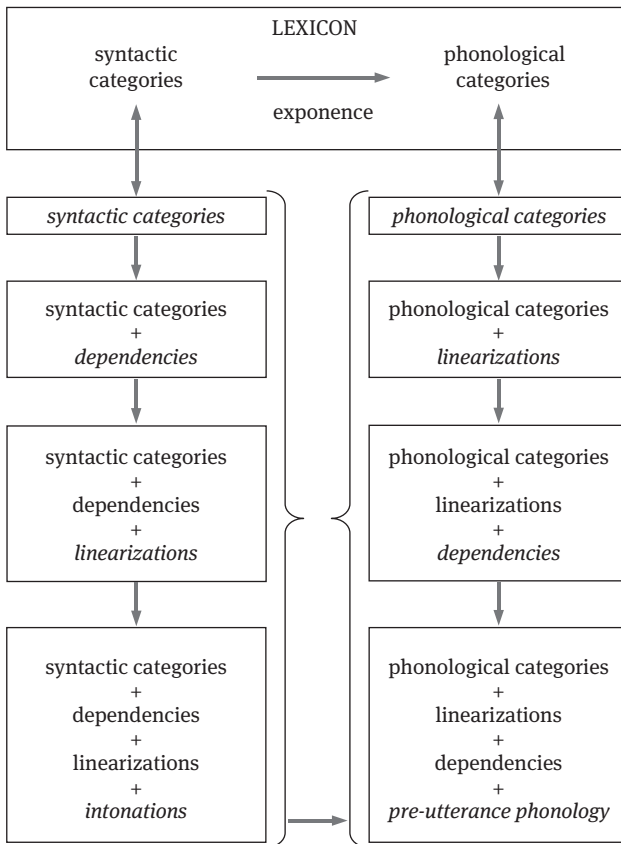
Figure IV: Substance, Modules, and Re-representation

However, though we can identify phonology-internal iconicities, we have seen that the phonological categories at the top of this figure have only a limited iconic role in relation to our conceptions, while the syntactic categories to the left in the figure and their valencies are fundamentally iconic, whether they are implemented in the lexicon or in the syntax.

They iconize our conceptualizations, often by means of metaphor, when conceptualizations of abstract domains are involved. But metaphors, especially suppletive metaphors (such as that called 'localism'), are not typical icons; metaphors are 'actively iconic'. They select the conceptualizations to be iconized, and can shape them: they can be said to be epiphanous rather than merely iconic. Indeed, they can provide **models**: a model is a would-be icon, a potential icon that is seeking fodder. This is salient in the case of suppletive metaphors. But, more generally, recognition of the iconization by language of our conceptualizations is vital to understanding why language is the way it is and how it relates to how we see the world.

Iconicity is functional; and recourse to purely formal representations is not 'natural' as a response to evidence for the structuring of language. However, iconicity, as with any substance-based representation, is subject to **routinization**. The iconicity of representations may by usage become less salient. Maintenance of iconicity may be in conflict with particular features of usage, such as economy and the pervasiveness of certain combinations of properties, such as topic and agent vs. topic + other functors. Such factors favour the de-iconization and generalization of the neutralization of functors that is associated with subjects, for instance, which are preferably agents and in default of them other functors that are also likely topics. Subject, by routinization, is no longer topical but a non-iconic category selected on the basis of a hierarchy of functor types.

Often such routinizations have also been recycled, rather than constituting formal 'junk'. In English and many other languages subjects are put to use as, among other things, a functional device that allows for omission of subjects of subordinate clauses or of non-initial conjuncts without ambiguity: their role in the clause is signalled by the lexical valency of the subordinate verb and their identity supplied by the main clause, as in (100), (101), (104), and (106a,c).

(100)   She (has) walked out and then/before that burst into tears

(101)   a.   Bursting/Having burst into tears she walked out
        b.   She walked out, bursting/having burst into tears

(104)   a.   I saw them leave
        b.   I like them to visit
        c.   I expect them to leave

(106) a. They were seen to leave
     c. They seemed to disappear

The constructions involved here are focused on in Part IV. What I am commenting on here is their functional compactness, the achievement of economy achieved thanks to the recoverability of subjecthood.

Such constructions deserve our attention if only because some languages are 'topic-prominent' rather than subject-forming and still others ('ergative' languages) that do not routinize subjecthood, but any economizing in this area involves the least marked functor feature, absolute. More generally, the occurrence of different word order patterns (conventionally represented as 'OSV, VSO', etc.) reflects different choices of what is cognitively more important to take as a starting point or ending point in the clause, but this results in different routinizations. In the lexicon in particular the developments of routinizations is also 'natural', given the prominence of formulaic choices in usage.

We have seen the fundamental role played by metaphor in the modelling functioning of language. In the first chapter of this Part (Chapter 18), indeed, I introduced the role of metaphor in lexical derivation by contrasting it with metonymy.

> In metonymy the shift relates base source and derived items denoting cognitively or perceptually adjacent concepts. With metaphor the derived item belongs to a different cognitive domain, and the shift is based on perceived similarity of the related concepts within the two domains.

In metaphorical derivation the signification of the derived (initially, coined) item is perceived – or, more actively, is taken to be – as being like that of the signification of the source, particularly in terms of their place or relationships within their respective domains. Often, though not necessarily, the domain of the source is more 'concrete', more perceivable than that of the derived item. When someone talks of *restraining a desire* they are invoking a source verb from a 'concrete' domain to denote something less 'concrete' that is seen as similar. Use of this transfer occurs whether or, more likely, not, there is an awareness of the metaphor on the part of the user – given the great antiquity in this case of the derivational relation. The transfer between these domains encourages and is encouraged by the occurring of the same kind of transfer in other instances involving these domains. *Desire* may be *unleashed*, for instance. By invoking a domain as a model for another an iconicity relation is set up or identified. A metametaphor or hypermetaphor has been established, applying within particular domains (recall Chapter 18). They are often also suppletive rather than merely supplementary.

And the hypermetaphor may encourage the finding of resemblances, with the metaphor thus acting as a model.

This is what drives the localist hypothesis, for instance; it is a hypermetaphor that is also suppletive. As we have seen, its implementation allows the transfer of items from the concrete space domain to help represent the structure of other domains of varying 'concreteness'. The further from 'concreteness' or perceptibility, the less extensive the transfers – though this also depends on the ingenuity, or imagination, of language users, as well as culture-specific factors. Recurrent sources for metaphorical derivations, on the other hand, reflect not just our perceptual apparatus but also the way we confront and interact with the world. A familiar example is the prevalent associations of words whose 'concrete' significations include that of *up* and its cognates with 'happy', 'good', 'fortunate', 'complete', 'correct', 'genuine' – generally 'positive' – but not always, if other metaphorical relations supervene, as noted in the previous chapter. There is now an extensive repertoire of transfers from familiar concrete 'paper-based' culture to the digital.

It is striking, but after a second's contemplation very natural, that even use of our perceptions is expressed in diverse localist terms, as in (110a).

(110) a   She saw her mother (through the telescope)
       b.
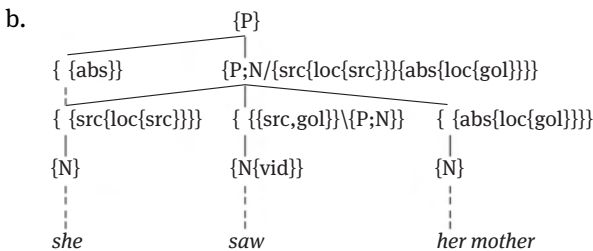
       c.   She looked at her mother
       d.
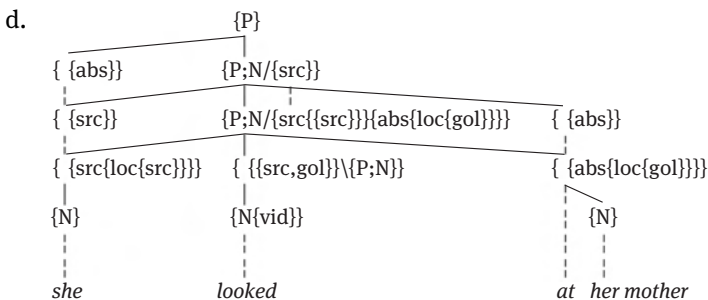
e.   She heard her mother (through two concrete partitions)

f.

```
                              {P}
        ┌──────────────────────┘
 { {abs}}          {P;N/{src{loc{src}}}{abs{loc{gol}}}}
    |          ┌──────────────┴──────────────┐
 { {src{loc{gol}}}}   { {{src,gol}}\{P;N}}   { {abs{loc{src}}}}
    |                    |                    |
  {N}                 {N{aud}}              {N}


  she                  heard              her mother
```

g.   She listened to her mother

h.
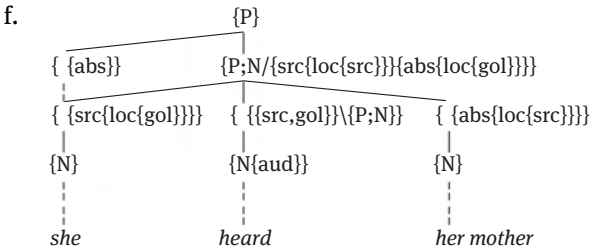
```
                              {P}
        ┌──────────────────────┘
 { {abs}}          {P;N/{src}}
    |          ┌──────────────┴───────────────────────────┐
 { {src}}      {P;N/{src{{src}}}{abs{loc{gol}}}}        { {abs}{{gol}}}
    |          ┌──────────────┴──────────────┐              |
 { {src{loc{gol}}}}   { {{src,gol}}\{P;N}}              { {abs{loc{src}}}}
    |                    |                               |    |
  {N}                 {N{aud}}                               {N}


  she                 listened                         to  her mother
```
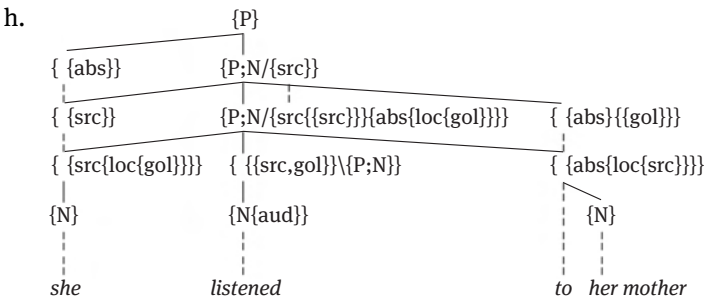
Here the functor in the circumstantial can be given an 'instrumental' interpreta-
tion, but it can also be a simple path, as more obviously in *through the window*.
Consider too *I can see as far as the next headland*. Such instances give us clues
that we're dealing with a locational, indeed directional sentence, with the person
seeing as the starting point, as represented in (110b), where vision is a lexical
path. (110c) is in addition agentive, with lexical linking, as expressed in (110d).
The simple audition of (110e) reverses the directionality, as suggested by the fig-
urative *She heard from her mother last week*. So the representation is as in (110f).
However, the causative in (110g) introduces causative orientation directed to the
source of the hearing, expressed specifically by *to*. Simple *smell* and *taste* are
oriented like *hear*; but they may be converted to causatives, as can *touch*, which,
however, is based on a simple reciprocal.

A hypermetaphor such as localism extends a metaphor potentially over a
lexical domain. There can also be, as we saw in Chapter 18, extension of a metaphor
over a discourse, particularly a literary text, involving an **allegory**, such as that
in 'Piers Plowman'. And initially in this chapter we also witnessed the extended
onomatopoeia of a passage from Pope's 'Essay on Criticism' (II, ll.362–73).

> True ease in writing comes from art, not chance,
> As those move easiest who have learned to dance.
> 'Tis not enough no harshness gives offence,
> The sound must seem an echo to the sense: ...

Re-confronting this is taking us back to the area of figurativeness. And indeed in the chapter that immediately follows we look in a more extended way at the classification and role of figures, both in non-literary language and in its more intensive deployment in literary works.

Before moving on to that, let's recall a failure in iconicity I've introduced into the representations I've been proposing here. This failure results from the preference for '{ {abs}/}' in representing the empty feature of the empty category as '{ { }/}', which graphically represents the pure relationality of the case type involved. But the former is easier than empty bracketing on an eye that may already be taxed by series of brackets elsewhere, particularly in complex valencies. I apologize, however, to any unhappy graphic 'purists'.

In this Chapter I have focused on some of the diverse roles, albeit briefly, of iconicity in English, notably as manifested in intensification in general, in sound symbolism, in structural analogy, in constituency and conceptual closeness, and in manifesting priority, as well as in hypermetaphors such as localism, where the iconicity is 'active', and provides a model for conceptions that may otherwise be inchoate. Overall, language is indeed an iconic vehicle for our perceptions and conceptualizations. But we also attested to its limitations and erosions dictated by the routinization that is associated with economy and conflicting claims on structure, as well as to the complications arising from variation in modelling. What is fundamental here is the gross discrepancy between what presses for representation and the limited means of exponency: iconizing is in conflict with the means to do so. However, this should be seen within the context of the basicness of iconicity to our perception. There is evidence, for instance, that neurones configure themselves as icons of objects of perception.

Chapter 34
Figurativeness

the linguistic classification of figures – tropes – metonymy and metaphor – hypermetaphors and suppletive metaphors – personification – puns – oxymoron – schemes – repetition and climax – anastrophe and chiasmus – homeoteleuton – pre-utterance phonology and metrics – local prominence – lifts and dips – metrical feet – lexical schemes – onomatopoeia and iconicity – parenthesis – figures of speech – irony – rhetorical questions – hyperbole and litotes – the status of simile

As traditionally acknowledged, no grammar of a language is complete without some attention to **figures**. Diachronically, figures comprise the addition of a new structure to some aspect of linguistic representation. It should have already become clear from the preceding that the result of figurative activity such as metaphor and metonymy are central to the structure of language; they are not limited to particular styles of language use, such as the literary or rhetorical. It is therefore slightly misleading to talk of 'figurative language', rather than, say, 'figurative aspects of language'. This chapter is devoted to the classification and (further) illustration of figures, in terms of which aspects of language they affect and how. I shall often, as in preceding sporadic illustrations, invoke literary examples, since in many literary genres we find intensification and freshness in the use of figures. In records of 'everyday language' use, figurative novelty is usually less striking than the evidence for routinized and idiomatized figures – the familiar results of a figurative act rather than the act itself. Much of the classification of figures proposed below employs traditional terms, but their definitions here are based overtly on their different effects on language structure and the aspects of structure that are involved.

I distinguish three linguistically defined classes of figure, to which I shall apply the hitherto variously interpreted traditional terms 'tropic figure' or 'trope', 'schematic figure' or 'scheme', and 'pragmatic figure' or 'figure of speech'. **Tropes** in general (etymologically 'a turn, change'), add structure to lexical representations, complicate them; they are typically a kind of lexical derivation. As we have seen, this status is most obvious in the case of figurative conversion; it is particularly clear with the tropes **metonymy** ('change of name') and **metaphor** ('transfer, transport'), as illustrated in the previous two chapters.

We contrasted these with non-figurative conversions, which involve merely a change of mode of signifying rather than introducing a mode of troping. Non-figurative conversion was illustrated by the nominalized verb mentioned in Chapter 19 by re-quoting (I.2).

(I.2)   I am tired after my walk

My walk here refers to an instance of a set of action-types denoted by *walk*, and the source verb of the converted noun signifies an act. There is merely a difference in mode of signifying, entity rather than event. This can be contrasted with the routinized metonymy, indeed its sub-type **synecdoche** ('receiving together'), of *All hands on deck!*, for instance, where the source denotes part of what the metonymized conversion denotes. A metonymy that is not necessarily synecdoche occurs in *Give him a hand*, whether this involves helping or clapping. *Hand* can denote the instrument whereby an action of aid or applause can be carried out, though the helping hand may be synecdochic. And a metaphorical conversion is illustrated in *She fell asleep*, where the source is a movement verb that instead denotes change of state when derived.

Traditionally, 'metonymy' in particular is usually associated with conversions involving the same part of speech. And cross-word-class metonymy is traditionally distinguished by a distinct figurative label, **anthimeria** ('not of today, not current usage'). But it seems to be the same kind of denotational 'shift' that is involved in the two cases (i.e. cross-class shift and shift within the same major class). Take as potentially an example of traditional metonymy the noun in *The suits have arrived*, for instance, which, as such, is ambiguous. On one reading, *the suits* refers to instances of a particular clothing ensemble – say, as having been returned from the cleaners. But there is another interpretation based on metonymy, where reference is to instances of humans with a particular occupation, one more likely in some cases to take someone to the cleaners. The denotational 'shift' of the metonymy is based on their reputed characteristic dress. Again, the metonymic relation may fade on use.

However, the conversion in (111a) creates a new sense and a new denotational set compared to what is signified by (111b), but the cross-class metonymy here removes the kind of ambiguity we found with the same-class example, because of the change of class, and so in syntactic behaviour.

(111) a. He is a competent cook
 b. He cooks competently

 c. $\{N_i\}$
    |
    $\{N;P\}$
    |
    $\{P;N/\{src\}...\}$
    |
    $\{ \{src\}\}$
    |
    $\{N_i\}$
    ┊
    cook
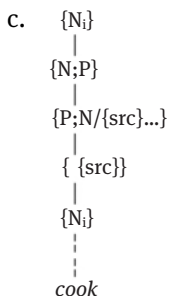
The verb in (111b) signifies a set of action-types; the noun in (111a) denotes a set of human entities associated with the performance of such actions, often professionally. (111a) involves a metonymic conversion based on the agent of the action, as shown in the lexicosyntactic representation for the noun in (111c). The syntax signals that the metonymy involves a change of signification from its source for the form in (111c) that is its base. But the absence of the ambiguity that we find with *The suits have arrived* does not seem to be central to the characterization of the trope, or to require a different term for the cross-class instance. The availability of ambiguity is a function of the absence of a change in part of speech.

Similarly, the metonymic causative verb in (II.7a) from Chapter 18 has its source in an instrumental noun.

(II.7) a.   They bussed the party to Berwick

b.
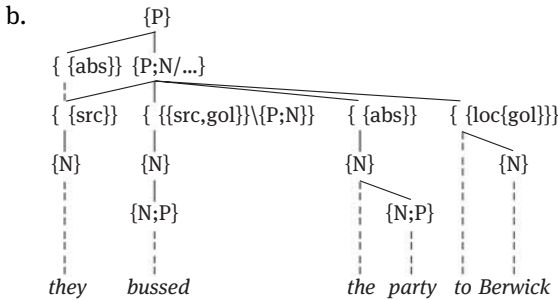
The representation in (II.7b) of the lexical structure is an abbreviation for that in (112), which highlights causativity as well as the verb's base in an 'instrumental' path.

(112)
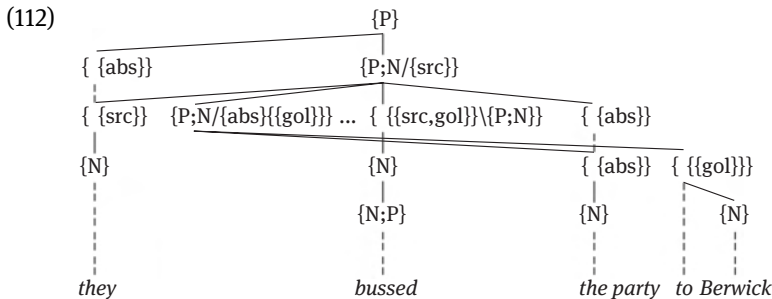
As we shall see, metonymy shares with other tropes such denotational 'shifts' based on derivation. In the case of metonymy the shift of denotation is to a set

closely connected with the source set, creating a lexical item that does not simply denote the source set (as would be the case with *walk* in (I.2)).

What I have described is the creation of a metonym by conversion; but once established in usage, the forms so related may come to be treated as in an only ill-defined relationship, or even as homonyms. Often awareness of the metonym is transient. This is particularly the case, naturally enough, with 'pragmatic' or 'referential' metonymies, such as (113), mentioned in Chapter 31.

(113)   Table five ordered an omelette

These typically do not involve a lexical change.

A metonymic denotational 'shift' is marked overtly in many morphologically derived forms, such as that in (114a), represented in (114c), which uses the notation of Chapter 27 to indicate which categories the morphological formatives expound – though, strictly in (114c), the suffix also expounds the change of word class, i.e. the {N;P}.

(114)   a.   He is a baker with flair
         b.   He bakes with flair

         c.   {N$_i$}
                       |
                     {N;P}
                       |
            ⌐-→ {P;N/{src}...}
            ¦ |
            ¦   { {src}} ←--¬
            ¦ | ¦
            ¦   {N$_i$}   ¦
            ¦   ¦
            ¦   ¦
            ↓   ↓
         [*bake*   [*er*]]
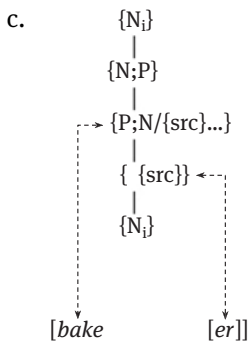
But even in such a case, recognition of a derivational relationship or its metonymic character may not be involved in language use or even storage in individual mental lexicons. Also, morphologically-expressed metonymy, by virtue of this overt signalling of the metonymic relation, does not have the same figurative force as converted metonymy, and fails of recognition as such. Nevertheless, I suggest that we must acknowledge metonymy as an important resource in lexical expansion, expressed both by conversion and morphological marking.

One fruitful and distinctive source of metonyms of both types, as well as metaphor, are names; the encyclopaedic information associated with a famous name

is the basis for tropic expressions such as *Byronic* and *a Shakespeare* or *Arcadian* and *an Arcadia*. *Byronic* derives an adjective denoting some encyclopaedic quality of the named person; *a Shakespeare* converts the name to a noun denoting some properties of the owner of the name, and usually applies it metaphorically to some other named person or noun.

With **metaphor** also there is a coining that involves a 'shift' in signification via derivation, as discussed in the previous chapter, but a 'shift' based on perceived similarity rather than a salient, deictic, or characteristic connection. A form is 'transported' from one notional domain to another on the basis of a perceived likeness within their domains between the significance of the source and its new significatum.

In (115a), *gush*, a verb usually applied to liquids, is the source for an established conversion of a verb applied to an aspect of human behaviour, whose likeness is otherwise difficult to describe independently of the metaphor.

(115) a. He greeted his gushing hostess

   b. {P;N/{src{abs}/{N/{N;P{human}}}}
       |
       {P;N/{abs/{N/{N;P{liquid}}}}}
       ⋮
       gush
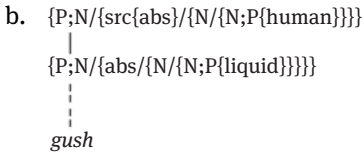
As made semi-explicit in (115b), the conversion is reflected in the valency of the verb. Compare the noun-based metaphor in (II.10) from Chapter 18, which of course does not involve valency, as again roughly represented in (II.11).

(II.10) the heart of the problem/matter/issue/...

(II.11) {N}
      |
      {N;P{ABSTRACT{SITUATION::gist}}}
      |
      {N;P{ANIMATE{CORPOREAL::heart}}}
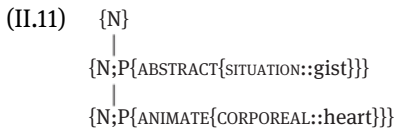
In both this and the previous cases the metaphor involves a change in subclass that violates the hierarchical relation in generality between the source and the metaphorical signification. This is trivially true of (II.10/11), for instance: {animate} is a sub-feature to {concrete}, which is incompatible with {abstract}. And this is not uncommon. But in general the point of troping is to avoid the explaining of what the trope by-passes.

We have also encountered **hypermetaphors**, a generalized metaphor that underlies a system of individual metaphors within a notional domain. This was illustrated by each of the alternative first nouns in *the crown/shoulder/foot of the hill*. These nouns all denote parts of hills or mountains, but they are based metaphorically on nouns for parts of the human body (though this sense of *crown* is itself derived, metonymically); the body parts are perceived as similar, particularly when viewed as upright, as is usual. Terms in one denotational domain, or field, are applied, by derivation, in another. We spell out the metaphorical source of *metaphor* itself (or rather its Greek source) by describing the terms it relates as being transported from one domain to another. **Transport** is indeed one traditional term in English for metaphor, of course.

The above body/hill metaphors have largely become unnoticed, and thus in normal use add little to alternatives like *top* or *bottom* (which is not usually applied to hills metaphorically). The physical domain of 'hill' allows for the deployment of less tropic alternatives. But things are different with the representation of abstract domains. *Heart* as denoting metonymically the 'seat' (metaphor) of 'feelings' (metaphor) has no obvious non-figurative equivalent that has the same capacity for extensive structuring of the domain. Of course, its metonymic status also loses transparency, but it remains accessible within the abstract domain, given its usefulness in further representing its structure. Thus, the metonymy may be extended metaphorically in expressions like *hearty* or *down-hearted* or *broken heart* or *He gave her his heart* or *She is all heart* or *My heart is full/went out to him*, and so on. And such metaphors can on this model be extended to a non-metonymic abstract 'equivalent' like *love*, as in *He gave her his love*, whose metaphorical status is **lexically covert**, though it is assumed by the construction as a whole.

More important in this respect than individual tropes – it is, after all possible to invent terms (such as *love*) for a proposed particular abstract entity (though they are often trope-derived) – is the structuring of whole abstract domains, the expression of the relationships among entities within the domain. This is where figurativeness becomes essential. Metaphors and metonymies for talking about abstract domains are **suppletive**, rather than supplementary (recall Chapter 18). Suppletive metaphors roughly correspond to the positive sense of the term **catachresis** ('misuse, over-use, use beyond a certain limit') of the rhetorical tradition. Abstract domains come to be structured by what are suppletive hypermetaphors. And I have just suggested that terms that are not obviously figuratively based, such as *love*, nevertheless can participate in the hypermetaphor based on the concretizing and localizing of 'feelings': *They are full of love*, *Love has died*. And, as we have seen, 'love' is often identified with its 'container', as too in the metonymically graphically iconic '♥'.

Take too the domain of knowledge. The mind too, like *heart*, is represented as a location, specifically a container: so, *I have it in mind*, where *mind* is an abstract container. By metonymy, it too can be represented by the more concrete *head*, as in *empty-headed*. The representation for a person can similarly serve figuratively as the container of knowledge: *She didn't take it in.* Here *in* is a goal rather than a simple (static) locative. In *He imparted that to John*, the subject *he* represents (whatever else) the source of the 'transmission' (another metaphor). Once the spatial hypermetaphor is adopted, it can be used to represent transmission from mind to mind. Thus, the sentence in (116b) has the same skeleton of directional structure as that in (116a).

(116) a. He has sent that to London
       b. He has told that to John

And even in the absence of lexical clues such as the presence of *in* or *to*, as in *He has told John that*, the presence of the hypermetaphor can be described.

Thus, more strikingly, the two sentences in (117), superficially, are not structurally and lexically similar, except in the presence of *that* (which is of no great significance here), and the second one is not obviously spatial.

(117) a. That is in London
       b. John knows that

But just as normally the truth of the sentence in (117a) can, on the appropriate interpretation, be inferred from that of the sentence in (116a), the same holds of the respective sentences in (117b) and (116b). The piece of knowledge has come to be located in John, even if only temporarily. Both sentences in (117) are locatives of some sort, despite the differing positions of the locative, with the locative in (117b) in subject position – which asks for an explanation.

Simple locatives are not typical subjects, though a locative subject is apparently selected by verbs like *contain* and *include* (admittedly both loanwords). And a more obvious candidate for locative status than the subject of *know* occurs with the familiar (non-Latinate) verb in (118b).

(118) a. He has sent that to John
       b. John has that

I have associated the subjecthood of the locative in (117b) with the subordination of the {loc} feature to a {src}, giving an 'experiencer'. The subjecthood of the {loc} in *include* and *have* reflects its subordination to {abs} (Chapter 4), or rather

lexical linking (Chapter 18), whereby a locative anticipates association with the free absolutive of {P}.

Given our perceptual apparatus and the way we confront the world, the linguistic representation of many abstract domains is associated with this spatial hypermetaphor, as anticipated in previous chapters and particularly Chapter 32. This draws on distinctions to do with location and movement, with orientation, with dimensionality, all concerned with the representing of (typically egocentric) relations in physical space. These spatially interpreted domains include ownership: *Bill* in *Bill owns the picture* is a kind of locative, the static equivalent of the goal in *Ezra has sold the picture to Bill* (who, it again can be inferred, in the lack of disconfirming evidence, now owns it).

Time, too, more obviously related to our perception, as we have seen, is represented with reference to the locational 'hypermetaphor': events can take 'place' (metaphor) *from 5 onwards* (directional) or *at 6* (locative). So also aspect: *He was working an hour ago and I guess he's still at it* (locative) and *She never ceases from worrying* (source). And simple existence: *There are problems (in that approach)* (locative), and *He brought it to fruition* (directional), *Josh painted the picture* (factitivizing, bringing 'into' existence) and *Bobby exterminated them* (the reverse). Finiteness, negation, and quantification again involve existence, so location: *There are some people (in this village) believe in fairies*. Expression of emotional changes involves directionality and orientation: *His spirits rose*. Correspondingly, as we have noted, emotional states are represented as locations: *She's in love/a temper*.

These briefly re-surveyed suppletive hypermetaphors are constructional rather than merely lexical, though the presence of locational functors is symptomatic: cognitive scenes attributed to abstract domains are articulated by the representation of the structure of lexical items and the syntactic structures they project; these form constructions whose representation is derived from the representation of physical space.

In talking about the 'shifts' brought about by metaphors I have used the rather unspecific term 'signification'. What is involved with nouns is most saliently a change in denotation, or rather denotational domain: thus in the established, indeed clichéd, metaphor *the light of my life*, *light* undergoes a change of domain that brings with it a new understanding of the domain of 'life'. But with verbs, as we have seen, more salient is often a 'shift' in direct or indirect valency: the 'denotation' of verbs, as representations of the core of cognitive scenes, is much more weakly apprehended than that of items representing entities. Verbs, as relationals, typically manifest metaphorical status in terms of their arguments, the entities-in-function that they relate, unless they are internally structured. We have, however, noted 'shifts' from 'scene' (signified by the verb *walk*) to 'entity' (denoted by the noun).

Given the importance of argument-selection, (119a) is interpreted as representing a manifestation of mental rather than, as elsewhere, physical ingestion, indirectly.

(119)   a.   He lapped up all the congratulations

   b.   {P;N/{abs/{N/{{abstract}}}}...}
            |
        {P;N/{abs/{N/{{concrete}}}}...}

This is again signalled by the character of the object of the verb in this case, as indicated schematically in (119b), which ignores the causative structure of *lap*, as well as the rest of its valency, and the detailed domains. But the transfer of domain again brings a different understanding of the domain of personal involvement.

Once more we have an increase, a complication, in lexical structure as a result of the derivation of one lexical item, the tropical, from another, its source, and a 'shift' in signification. The intended identification of the event in (117b) and other metaphors is arrived at indirectly, via a source from a foreign domain; but this brings with it the attribution of properties associated with the sense of the source – perhaps including, if the particular 'shift' transports properties from a physical source, a concrete image of a signification of the metaphoric item, as with the *lap* metaphor of (119). This is enhanced by the deployment of elaborate imagery – as in, say, Keats' 'To Autumn' – and thus corresponds to use of the traditional figure **enargeia** ('palpability, vividness').

Much of this and more has been seen here in terms of ramifications of the localist theory of case, which, in origin interpreted systems of grammatical case as based on the representation of distinctions in location and direction and elaborations of these involving dimensionality and orientation (recall again Chapter 4). And this delimits the content of the functors. But, given our place in the world and what our perceptions make available, localism is very generally applicable. Many whole domains have been the target of the resulting hypermetaphorical derivational schema in (120), where the source is any functor whose valency is a nominal feature of the secondary category of space.

(120)   { /{N::x}}
            |
        { /{N::SPACE}}

Again, as with the other relational category {P;N}, there is a change in domain of the valency. And here, as well as complication in the form of derivationality,

crucially there is a simplification, a generalization, of the valency of the functor. All of the examples of localism I have given are applications of the crude generalization, particularizing (120); and they are long-established and their derivationality non-salient. That, for instance, knowledge occupies mental space and can be transmitted is not apprehended as metaphorical. But (120) remains as a generalization over the lexicon, inviting further extension to fresh aspects of a particular domain or even to new ones.

Interestingly, at least for, and to the benefit of the computationally naive language user, such as myself, the organization of digitally-stored textual information has been characterized in terms of physical filing within an office, as orthographically encoded *documents* in *files*; *mail* documents come in or are *sent* via the *outbox* or remain as merely *drafts*; there are *spreadsheets*; files may be *archived* or consigned to a *recycle bin* (notice the ecological nod), etc. We have in the extreme form of this perhaps overdone metaphor something that warrants the recognition of an iconicity or rather reconstruction in a different medium, one that falls short, alas, with the introduction of *drives* rather than *(filing) cabinets*, though their use of the former embodies another more inclusive metaphor. But let us return to the real world.

Of course, as already alluded to, representation of other aspects of our perception of the physical other than the simply locational can be called into play, as in *His mood darkened*. One can indeed multiply indefinitely examples that show that both the lexical representation and the syntactic articulation of abstract domains are figuratively based. However, as the above localist examples illustrate, after the initial troping is done, representation of the domain concerned may be perceived as autonomous, particularly in view of the suppletive character of the representations and thus the frequent absence of obvious alternatives. The indications of a locative source for an expression may be regarded as involving rather homonymy. But even then extensions in the representation of the domain typically have recourse to figurativeness, as with the *hearty* and *broken heart* examples.

A common sub-type of metaphor, reflecting again the anthropocentricity of language, is **personification** – familiar from **apostrophe**, addresses to non-persons, such as the invocation of gods or nature, in poetry, as in Keats' 'Ode' – which we return to below – or in curses. But there are many other signs of established personifications, such as *The storm moaned and grumbled overhead* or *My computer is dead* – though my computer is not a life form (nor is it intelligent – despite the misnomer *artificial intelligence*). Animals in particular are frequently personified, in stories and in 'real life'. As with metonymy, and in metaphors in general, the 'shift' here involves increase in lexical structure, a derivational relationship. But, of course, perception of the metaphoric relation is once more

vulnerable to usage. A coined trope may be transient, or preserved only in a particular text and references to that text, or it may spread and probably conventionalize, even become opaque.

In both metaphor and metonymy identification of a referent can be indirect, the referents are attributed with properties of the source. And the elements of problem-solving and surprise and even illumination that the indirectness of reference of tropes introduces is part of the pleasure (or frustration) that interpretation of tropes may induce. Not all tropes are aimed at pleasure or illumination, however, but rather, for instance, at **euphemism** ('speaking well of') or (de-)personalization, as in accounts of war (*armour*, *storm* the verb, *collateral damage*, *friendly fire*). Though indirect, both metaphors and metonyms, on the other hand, are often economical in their identifying compared with analytical description – as illustrated by the pragmatically-motivated metonymy in (113), repeated here.

(113)   Table five ordered an omelette

And we have seen, indeed, tropes that are unavoidable.

The trope-types referred to as **puns** also evince increased lexical complexity, but it is scarcely derivational in many cases. This may be illustrated by the core type of pun, or **paronomasia** ('name alteration', later 'nickname, quibble', 'playing on similar-sounding names'), exemplified in (121), where two similar-sounding but semantically and derivationally unrelated – indeed necessarily incongruous – words are brought together by the context, as in this familiar equation of two clichés.

(121)   A chicken crossing the road is truly poultry in motion

The lexical complexity here is associated with interpretation of the lexical items in context rather than with a lexical derivation; there is a **schematic** aspect. The sound similarity – here between *poultry* and *poetry* – of the two words expected in the different parts of the textual context links two incongruous domains, thus increasing the structure involved in interpretation, though not by means of derivation. To labour the point (explaining jokes, even more than tropes in general, is seldom rewarding, particularly when unnecessary), *poultry* continues the domain of the first part of the equative but is incongruous in the second, where *poetry* is expected.

However, the pun-type **syllepsis** ('taking together') does involve simultaneous expression of related words (unlike as with *poetry/poultry*), as in the famous

couplet from Pope's 'The Rape of the Lock', Canto III, ll.7–8, which I enjoy introducing into the text again.

> Here thou, great Anna! Whom three realms obey
> Dost sometimes counsel take – and sometimes tea.

Here two different but related verbs *take* are expressed simultaneously: the same verb form is associated with different, incongruous relationships to its objects, which are in one case abstract (*take* = 'accept') and the other basically liquid (*take* = 'consume'). But again there is no derivational change, merely the increase in complexity of interpretation introduced by the co-presence of two incongruous domains associated with related words.

There is, in this and other ways, usually a schematic element in puns, manifested by parallelisms in structure, or its frustration. Thus, in the Pope couplet incongruity is intensified by the rhyme between *obey* and *tea*. Rhyme is part of metrical structure, which is a schematization of the phonological structure of an utterance; metricalization of syntagmatic phonological structure is added in this case. And the incongruity associated with the couplet comes from a compact **anti-climax** or **bathos** ('deepening'), the reverse of the scheme climax as discussed below.

Schematization in the form of another manifestation of disappointed parallelism is particularly striking in (122), allegedly due to Groucho Marx.

(122)   Time flies like an arrow. Fruit flies like a banana.

Its two component sentences involve apparently parallel structures that resist interpretation as such; interpretation depends on recognition of non-parallelism, based on the punning on *flies*, and the different structures that are associated with whether *flies* is a verb form or a noun. Altogether, puns instantiate well the prominence of the play-and-puzzle motivation for the deployment of figures, as against the derivationally creative one commonly associated with other tropes.

The tropic character of puns exploits the overwhelming arbitrariness (despite the iconicity impulse) of the exponency relation. This is usually at a lexical level, though, as observed, there is usually a schematic element in which it is embedded. But there can be more extended exponencies, as in the (rather artificial and hackneyed) illustration provided by the two sentences in (123), which can be expounded by a common phonological representation.

(123)   a.   The good candy came anyways
        b.   The good can decay many ways

With puns and the like we have thus got into **schematic** ('form, shape') territory.

And, more familiarly, perhaps, a schematic aspect is also associated with the figure **oxymoron** ('sharp-blunt'), involving incompatible close colligation. One of the most insistent set of examples of this last trope is to be found in Shakespeare, *Romeo and Juliet*, I.i, ll.180–7, following the preparatory antithesis of the first line and introduced as personifying addresses.

> Here's much to do with hate, but more with love:
> Why then, O brawling love! O loving hate!
> O anything! of nothing first create.
> O heavy lightness, serious vanity!
> Misshapen chaos of well-seeming forms!
> Feather of lead, bright smoke, cold fire, sick health!
> Still-waking sleep, that is not what it is!
> This love I feel, that feel no love in this.

Here the complexity of the situation is given intense expression by the repeated, apparently paradoxical, colligation of words with normally incompatible senses or implications, whose interpretation requires an adjustment of the lexical structures of the colligated items, a trope. However, there can also be asserted what some may think of as a genuine incompatibility, as in *honest politician*, based on encyclopaedic knowledge or prejudice concerning the denotata of *politician*. *Heavy lightness* is a typical example, of the other sort, in involving the close colligation of attribution where the attributive adjective is normally incompatible with the adjective on which the noun is based. The colligation contributes a schematic element here. And the repetition and the parallelisms of the above passage, however, are also, like the initial antithesis, essentially schematic.

This takes us on to the core of a consideration of **schemes**. I have suggested that tropes involve complication of **lexical structure**: they typically express additional structure of derivational relationships in the lexicon that introduce a denotational 'shift' (or, with some metonymies, a referential 'shift'). **Schemes** involve an increase in the **structuring of utterances**. These additions may involve syntax and/or phonology, and have an intensifying effect.

The syntactic scheme **repetition**, just invoked again, and of which many particular variants are traditionally distinguished, is familiar from other literary instances such as this passage from Shakespeare, *Henry VI,* Part III, II.v, ll.21–30 quoted in Chapter 32, with its redoubled repetition, firstly involving a slowing down of time and then an acceleration, linked by the image of the dial.

> O God! methinks it were a happy life,
> To be no better than a homely swain;
> To sit upon a hill, as I do now,
> To carve out dials, quaintly, point by point,

> Thereby to see the minutes how they run:
> How many makes the hour full complete;
> How many hours brings about the day;
> How many days will finish up the year;
> How many years a mortal man may live.

But, as also observed there, quite generally the intensifier *very* in English can itself be intensified by more local repetition: *very very white*. In Shakespeare's "This was the most unkindest cut of all" (Shakespeare, *Julius Caesar*, III. ii, l.188) superlativity, with alternative expression, analytic and synthetic, is repeated, again adding to the intensity.

Such a repetition may be arranged as a **climax** ('ladder'), as illustrated again by the above passage from *Henry VI*, with its incremental repetitions. This is an obviously affective, further intensifying, device, and not uncommon in a variety of speech situations. And, again, pleasure and insight may be derived from the perception of structure and balance and progression. Some schemes of repetition are more specialized in terms of the type of structure involved and of the discourse type in which they are commonly invoked; they are often blatantly rhetorical, and I shall not pursue them in the main text (but see the commentary). I should recall here too that there are other, non-schematic mechanisms of intensification, such as hyperbole and litotes, on which more below.

The preceding exemplifies parallelism both in lexical selection and in structure. A more purely structural repetition is the parallelism involved in **isocolon** ('of equal members/phrases').

> I praise God for you, sir; your reasons at dinner have been sharp and sententious; pleasant without scurrility, witty without affection, audacious without impudency, learned without opinion, and strange without heresy.　　(Shakespeare, *Love's Labour's Lost*, V.i, ll.2–6)

Here we have repetition of parallel structures, each structure held together by the disassociative item *without* – but also there is lexical contrast, in this case. This linking *without* is also contrasted with the associative *and* of *sharp and sententious*. This is not a simple isocolon.

Simple repetition of syntactic structure can be combined with inversion of elements. Inversion of the position of repeated syntactic classes may or may not involve **anastrophe** ('turning back'), a type of **hyperbaton** ('transposition') in which there is an unusual structural inversion. We have a mild example of this in the second clause of the familiar Biblical example of **chiasmus** ('having the shape of the letter "X").

> I cannot dig, to beg I am ashamed.
> 　(Authorized Version, *Luke* 16:3).

Here, as is again familiar, the latter figure involves the overall reversal, in this case, of the syntactic positions of the infinitive and the subject + finite-verb expression, compared with the first (and recall the inversion in the Pope passage above). The balanced inversions of chiastic anastrophe again add to the structural arsenal of the language.

There are other manipulations of structure that are more drastic, as in **anacoluthon** ('not following'), where there is an abrupt change in structure. This is common in speech, and often goes unnoticed as such; but it is not uncommonly deployed in literature to convey intensity of emotion.

> I will have such revenges on you both,
> That all the world shall – I will do such things,
> What they are, yet I know not.
> (Shakespeare, *King Lear*, II, iv, ll.282–4).

Similarly, in **aposiopesis** ('falling silent') an utterance is left incomplete where what follows is obvious or a vague threat: *Do that again and ...* . Breaking of structure is an addition to structure and what it conveys.

Addition of structure analogous to the syntactic repetitions noted above is witnessed in utterance phonology, in the shape, most obviously, of rhyming, assonance, and alliteration. But other, related additional structures include the line and its metrical units, and, beyond these, the stanza. These impose additional, **metrical** structure on utterances. They are most common in creative works, but in many, particularly non-literate, cultures, rhymes and the like can be an aid to memorability in non-literary contexts, as well as in the oral transmission of creative works. These schemes also draw attention to any link between the alliterating or rhyming words and have sound-symbolic effects, as well as establishing larger units.

A linking and intensifying function is particularly evident when the repetition of rhyme or segment is not part of a conventional scheme but metrically incidental. Recall the lateral sonorants, particularly in thymes, of the opening of Keats 'La Belle Dame sans Merci') quoted in the preceding chapter, which culminate in the lateral onset of the final tonic syllable.

> O. What can ail thee, Knight-at-arms
> Alone and palely loitering;

Such linking of words can also be achieved by **homeoteleuton** ('like ending'), where 'words and sentences in one sort doe finish together, as thus: Weeping, wailing, and her hands wringing, she moved all ... to pittie' (Angel Day *The English Secretorie*, 1586). In highly inflecting languages a sub-type of this is **homeoptoton** ('like declining'), which (strictly interpreted) involves repetition of case inflections.

But let us now look in little more detail at the basis of metrical structure, the repetitive arrangement, in the case of English, of accented and unaccented syllables in the utterance. We have looked at the structure associated with syllabic segments in the lexicon, in terms of the hierarchy of (sub-syllabic) rhyme-head or nucleus, syllabic, ictus, tonic, illustrated by (153) from Part I, Chapter 13.

(I.153) a. *noun*

```
          {V}
           |
          {V}              {V}
           |                |
          {V}              {V}
           |                |
        {V{v}/}            {V}
            {C{v}}    {V{v,c{c}}/}   {C}
                            {C{c}}
         [a]   [d]      [ɛ]   [p]   [t]
```

b. *adjective*

```
                          {V}
                           |
                          {V}
                           |
          {V}             {V}
        {V{ }/}           {V}
            {C{v}}    {V{v,c{c}}/}   {C}
                            {C{c}}
         [ə]   [d]      [ɛ]   [p]   [t]
```
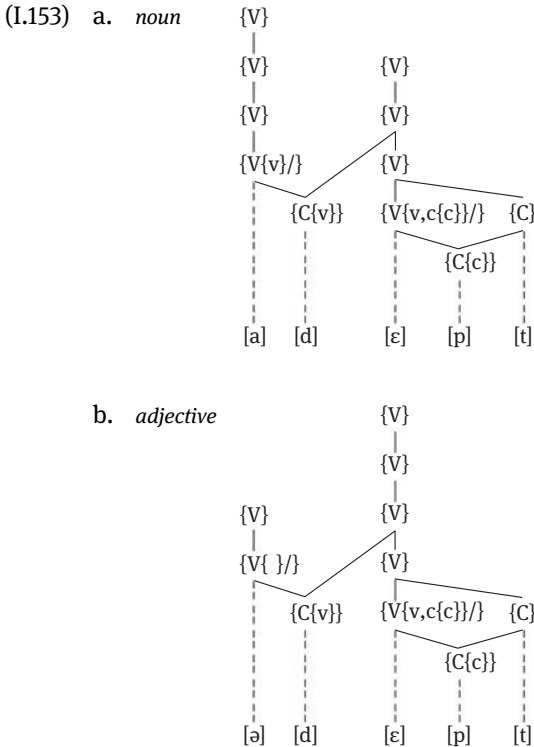
From lowest upwards, they govern to the right, the rhyme, to the left, the syllable, to the right, the foot, to the left, the tone group. The lexical trees can remain incomplete: in (I.153b), for instance, there is an initial 'stray syllable', with no ictus to attach to.

Phonological utterance structure is associated with the same basic hierarchy. But some lexical tonic may in utterance be demoted to ictus, as well as there being many lexical 'stray syllables' that find an ictus to depend on, as with the first syllable of *impossible* in the utterance represented in (I.155a), whereas for the first syllable in *permit* there is resort to an unvocalized ictus, in (I.155b), indicated there by the symbol '[△]'.

(I.155)   a.

{V}
{V} {V}
{V} {V} {V} {V} {V}
{C;V} {V/} {V/} {C} {V/} {V/} {V/}
{C} {V;C} {V;C} {C;V} {C} {V;C}
{C} {C;V}

[ð] [a] [t] [s] [ɪ] [m] [p] [ɒ] [s] [ɪ] [b] [ə] [l]

b.

{V}
{ } {V} {V}
{V} {V} {V}
{C{u}} {V{ }/} {V;C{c}} {V{i}/} {C{v,u}} {V{i}/}
{V;C} {C} {V;C}

[◌] [p] [ə] [r] [m] [ɪ] [t] [b] [ɪ] [l]
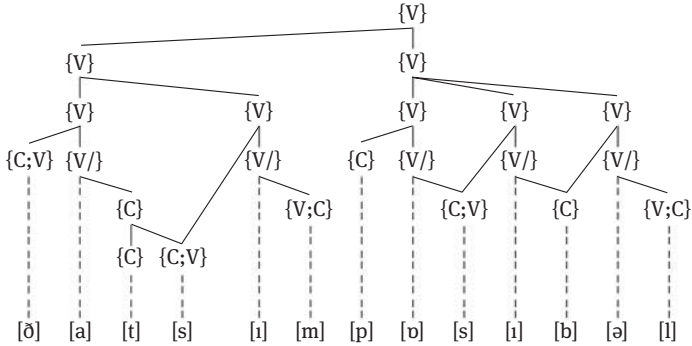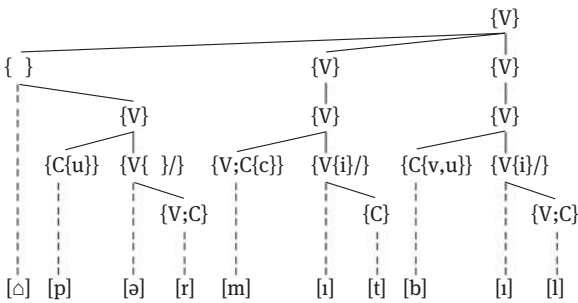
Also in (I.155b) the lexical tonic of the second syllable of *permit* is 'downgraded' in the utterance to ictus status. Metres are imposed on such representation, provided they can be heard to conform to particular patterns of prominence, or rhythm.

Different metres have different patterns to do with **relative local prominence**: a syllabic that is prominent is higher on the accentual hierarchy headed by tonic than immediately adjacent syllabics or than one such and bounded on the other by a line boundary. A prominent syllable I shall refer to as a **lift**; syllabics that are not prominent are **dips**. Normally a lift will be manifested as an utterance tonic or ictus. The iambic metre that is common in English is a succession of dip + lift.

Some examples are given in (124), where I give a possible schematic representation of a phonological utterance, using the tonic = V_4 and ictus = V_3 notation of Chapter 28, associated with its metrical representation formed by a succession of five D(ip) + L(ift) metrical feet, perhaps with a caesura, &.

(124)   a.   D   L   D   L D L D& L   D   L
             V V_3 V V_3 V V_4 V V_3 V V_4
             You call me mis-believer, cut-throat dog
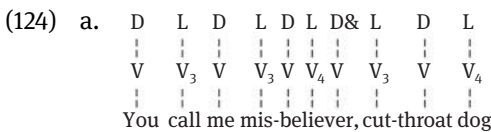
b. D L D L D L D L D L D (E)
    | | | | | | | | | | |
    V V_4 V_3 V_4 V V_3 V V_3 V V_4 V
    | | | | | | | | | | |
    O thou foul thief where hast thou stow'd my daughter

c. D L D L L D D L D L D (E)
    | | | | | | | | | | |
    V V_4 V_3 V_4 V_3 V V V_3 V V_4 V
    | | | | | | | | | | |
    O thou foul thief where hast thou stow'd my daughter

The top two lines of symbols in these representations are to be interpreted as being associated; we have figurative phonology-internal exponencies, and the middle row of utterance structure is associated with a top row of metrical values, here amounting to an iambic pentameter line. As elsewhere, the transcription of the lowest row – here orthographic rather than phonetic – clearly has no phonological status.

(124b) includes an extra final syllable, an E(xtrametrical) dip. This is not surprising, given the prominence of trochees {L + D} in various types of word structure in English, particularly those associated with nouns. (This was described earlier in this Part, and will be recalled below.) Also in (124b) the second dip is an ictus adjacent to two tonics. The difference between (124b) and (124c), associated with the same sequence of lexical items, acknowledges the possibility, indeed commonness, of variant phonological utterance structures. In (124c), placement of the V_3 on *where* rather than *hast* creates what one metrical tradition calls an 'aberration', elsewhere a 'substitution'. Substitution in the present case involves a trochee, L + D, rather than an iamb, thus violating the relative local prominence requirement. Sometimes there is substitution of a trisyllabic metrical foot (say anapaest, D + D + L) for the corresponding disyllabic (in this case iambic), or vice versa; this is sometimes called an 'equivalence'.

This cursory examination of basic metrical structure leaves much out of account. (It is far less comprehensive than was the treatment of this topic in the secondary school grammar of my childhood, for instance.) And the representations of phonological structure would benefit from the recognition that V_4 is recursive, for instance. But perhaps it gives some indication of how metrical structure might be accommodated within the present substance-based framework, and particularly within the notion of figurativeness being advanced in the present chapter. Metrical structure too involves structural elaboration, in order to convey something extra, something that informs, gives insight, or gives pleasure.

Let me conclude our brief look at metrical structure with the observation, anticipated above, that the commonness of iambic and anapaestic metres in

English is in marked contrast with the formulation of lexical accent placement in Chapter 28, where I suggested a basic trochaic/dactylic pattern, L + (+ D) + D. Does this perhaps relate to the observation that the latter is formulated in relation to the end of the word, assigned 'right-to-left', timelessly, whereas utterance-based metrical lines are time-bound, experienced 'left-to-right', with possibly a final rhyming L or L + D?

We have just been concerned with schemes applied to utterance phonology. There have also been recognized 'schemes of the word'. These **word schemes** involve departures from the phonology (and spelling) of words. Many of them, at least, are associated with the need to conform in verse to the above metrical patterns associated with utterance phonology: this is accommodated by adding or subtracting of syllables. Thus, we find *even* instead of *evening* (a re-shortening) and *neath* for *beneath*. Conventionalization of such instances of lexical schemes leads to them being adopted as part of the diction of verse, and sometimes more widely.

Lexical tropes, as we have observed, are associated with signs as a whole, while the immediately preceding lexical schemes of the word affect phonological structure only, though they may refer to morphological form; and the above phonological schemes, such as rhyme, affect the phonological structure of the utterance only, though rhymes can also be bathetic, for instance – as we related to the lines from 'The Rape of the Lock'. More exceptional are such as the onomatopoeically-based morphological formation we find in the last line of the following stanza (Charles Mordaunt 'Chloe's Triumph', stanza 1).

> I said to my heart, between sleeping and waking,
> 'Thou wild thing, that ever art leaping or aching,
> What black, brown, or fair, in what clime, in what nation,
> By turns has not taught thee a pit-a-pat-ation?

This amusing morphological derivation accommodates the metre and rhyme of the line; it is a lexical scheme on those grounds. But the base itself, *pitapat*, further illustrates the result of the most strikingly tropic lexical scheme of all, **onomatopoeia** ('name creation'), which encompasses the whole sign: the sounds are intended to mimic the sense. The arbitrariness of the sign-relation is qualified by an iconic component. The stanza also provides another example of personification, of course.

As we have noted, there are various established lexical items that have an onomatopoeic origin, particularly as a result of attempts to mirror natural sounds with the phonological resources of the particular language. Thus, in English chickens *cluck*, and, as observed in Chapter 33, in Greek dogs *γαυγίζουν* – make

the noise *γαβγαβ* rather than *bow-wow* or *woof-woof*. And we have seen that iconicity is much more pervasive in syntax, which it would be (iconically!) repetitive to further exemplify here. But we should acknowledge at this point that some instances of syntactic 'schemes' attempt to replicate 'mismanagements' of syntactic structure, in pursuit of figurativeness, indeed of a figure of speech.

Often included with syntactic schemes is **parenthesis** ('putting in beside'), which certainly involves structural complication compared with situations where it is absent.

> 'Tis a strange place this Limbo! – not a Place,
> Yet name it so; – where Time and weary Space
> Fettered from flight, with night-mare sense of fleeing,
> Strive for their last crepuscular half-being; ...
>   (Samuel Taylor Coleridge 'Limbo', ll.11–14.)

But the phrase 'addition of structure' as a description of (syntactic) schemes doesn't sufficiently capture what we find here – insertion of one utterance within another, which in this case comments on the other. There are representations of two different speech acts here, one realized within the other. Such complication of the speech situation suggests that parenthesis is also, or can be, a **figure of speech**.

These introduce complication in the relation between utterance and the context of the act of speech, again enhancing expression. In parenthesis, the utterance associated with one act of speech interrupts that associated with another, signalling a special relationship between them, as in (125).

(125)   Joan thinks – Bill doesn't agree – that we're wrong

Here we have two independent, but both contextually relevant, sentences each with its own mood {P}.

In this regard, parenthesis is distinct from (paratactic) **apposition**, where there is introduced simply a further specification of a referent.

(126)   Her uncle, the one who lives in California, is getting married again

More compact examples were given in (I.94a–b) and the latter is represented in (I.94c).

(I.94)   a.   Bertha has gone to see her lawyer, Mr. Scott
         b.   I met Ferguson, the butcher

c.   {N}
      ╱ ╲
{Nᵢ{def}} {Nᵢ{def}\{Nᵢ}}
   | |
 { ⱼ}   {N/{src}}
   ⋮   ⋮   ╲
   ⋮   ⋮   { {src}}
   ⋮   ⋮ |
   ⋮   ⋮   {N}
   ⋮   ⋮ |
   ⋮   ⋮   {N;P}
   ⋮   ⋮   ⋮
 Ferguson   *the* *butcher*
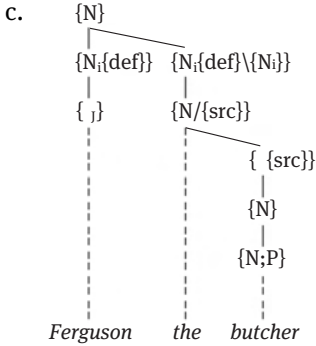
In (I.94c) *the butcher* is coreferential with the {N} it modifies. And in all the examples in the paragraph in Part I referred to we have simply a scheme, a complicating structural property – apposition – much employed in written prose.

Compare (I.94c) with the attempt to represent (125), in rather abbreviated form, given in (127) – showing an 'excursion' as well as recursion.

(127)

{P{decl}}   {P{decl}}
    | |
{P/{loc/{int,e}}}   {P/{loc{src}/{int,e}}}
   ╱   ╱
{ {abs}} {P;N/{src{loc}}{abs}}   { {abs}}   {P;N/{src{abs}}...}
   | | | ╲ ╱ |
{ {src{loc}}} ⋮   { {src}} ╳   { {abs}}
   | ⋮ | ╱ ╲ |
  {N}   ⋮   {N}   {N/{P}}
   ⋮   ⋮   ⋮   ⋮   ⋮   ⋮
 Joan   *thinks –*   *Bill* *doesn't agree – that we...*
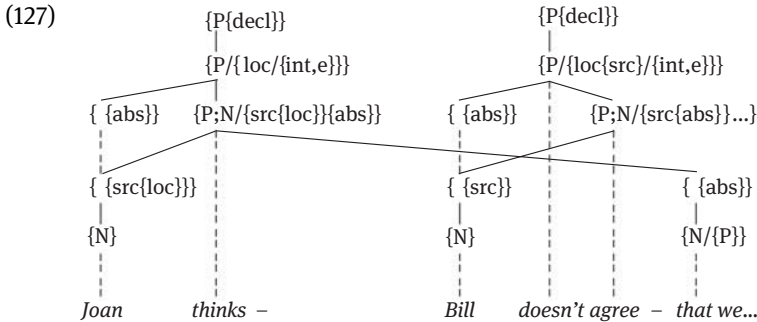
In this instance, the subordinate clause could complete either the beginning main clause or the parenthesis, or both, though this isn't always the case (and isn't indicated in (127)). Appositions, wherever they occur, are not an interruption of predicational structure, but an often immediate amplification to referentially relevant information. But both these traditional figures again show the extent to which consciously figurative expression uses the potentialities of 'ordinary language'. Rhetorical or literary usage merely deploys more concentratedly and more consistently what have traditionally been distinguished as what I have been classifying into tropes, schemes, and figures of speech. But let us proceed with looking at further figures of speech.

Prominent and widespread among these is the **rhetorical question**, as illustrated by Milton's famous 'Who would not sing for *Lycidas*?'. This follows ten

lines extolling Lycidas' virtues. The writer thereby presents the assumption that there is only one possible answer, which it is unnecessary for anyone to mouth. This is an obvious complication of the normal relation between this sort of utterance and the act of speech that is being made. The interrogative form is prototypically associated with a request for information or action; in the case of rhetorical questions, the construction invites the addressee(s) to agree with the speaker's implied answer, the context having made it plausible to do so. This dislocation of utterance type and speech act is characteristic of the ordinary use of language, which, for various reasons, including politeness or lack of it, often relies on such indirectness, as when a request may be made by a statement such as that in (128a), via an assumption that there will be a realization by the addressee of the relevance of the statement.

(128)   a.   We've run out of milk

        b.   {P{q}}
             |
             {P{decl}}

The mood is derived – so something abbreviated as in (128b) is involved. Derived mood is pragmatic in origin but, as with such as (128a), it may become routinized.

Irony, an oft-attempted, and often mis-identified, figure, invites the addressee(s) to be aware of the intentional use of a description that the context shows to be, in the speaker's view, markedly inappropriate. An expression in the utterance is enclosed in scare quotes, as it were. Such occurs in Marc Antony's well-known speech to the populace in Act III, scene ii of Shakespeare's *Julius Caesar* that follows the murder of Caesar by a group including Caesar's friend Brutus. In the speech Antony gives a catalogue of Caesar's behaviour that contradicts the first of the two repeated lines that start this extract (ll.92–100), and undermines the second.

> But Brutus says he was ambitious;
> And Brutus is an honourable man.
> He hath brought many captives back to Rome,
> Whose ransoms did the general coffers fill:
> Did this in Caesar seem ambitious?
> When that the poor have cried, Caesar hath wept;
> Ambition should be made of sterner stuff:
> Yet Brutus says he was ambitious;
> And, sure, he is an honourable man.

This irony is supported here by a rhetorical question that is intended to engage the audience's sympathy. Of course, this passage exemplifies only one variety

of irony, an affective figure based on the conveying of incongruousness between utterance and its context or its cotext.

A further pragmatic figure is **apostrophe** ('turning-away'), a specialization of the trope personification. This involves the speaker addressing an addressee or addressees that, for various reasons (inanimacy, death, absence from the scene, etc.), cannot participate in a speech interaction, but which is addressed as if it could. The following are two familiar literary examples from poems by, respectively, Donne and Wordsworth, to add to Keats' 'Ode' and the Mordaunt cited above in connection with onomatopoeia.

> Death be not proud, though some have called thee
> Mighty and dreadfull, for, thou art not so, ...

> Milton! thou should'st be living at this hour:
> England hath need of thee ...

Again, there is a complication in the relationship between the utterance and the context of speech: specifically, there is an act of address directed to an anomalous other participant in the act. Strictly, the act of addressing should be an interruption, a turning-away from the current scene (hence the source of the Greek term), a scene that nevertheless provoked the apostrophe. The status of 'death' and 'Milton' are incompatible with the pronouns and relevant verb forms in both examples. Trivially, the pronoun of address represented in (129) (mentioned as (I.117a) in the discussion of vocatives in Chapter 9) prototypically must be used of a living human who is in a position to receive the address in such a vocative speech act.

(129)   {P/{src}}

{P/{loc{src}}{loc{gol}}{abs}} ......{ {abs}}

{ {loc{gol}}} ......{ {loc{src}}}......{ {abs}}

{N}   {N}   {N{address}}

{ {tu}}   { {ego}}

you!
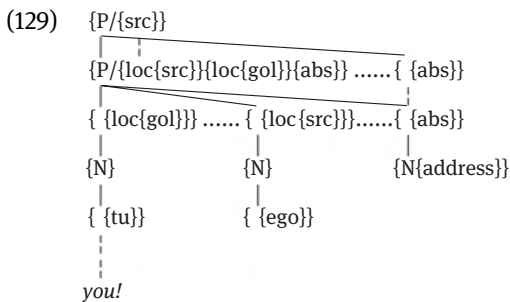
The lexical structure (129) anticipates the treatment of mood suggested in Part IV, which deconstructs the simple mood features suggest in e.g. Chapter 15. More directly relevant here is the observation that this figure of apostrophe is also tropic, in so far as it embodies a (re-)manifestation or (re-)vivification. This is

another figure not uncommon in everyday speech. And apostrophes invoking a deity or otherwise sacred person are a common source of oaths, formal or vernacular: *I swear by Almighty God; Jesus Christ!*; *Mamma mia!*

Hyperbole ('overshooting') and **litotes** ('plainness, simplicity') or **meiosis** ('lessening") are often grouped with the tropes. But their complexity is pragmatic. If, for instance, a person describes their offspring as *a genius* on the basis of some humdrum achievement, then there is a mismatch in extraordinariness between the conventional lexical structure of the word *genius* and, on the evidence provided, the referent that it is attributed to: we have hyperbole. The referent falls short of the necessary attribute. This is often intended to have an intensifying effect, but often provokes scorn. The replication of such mismatches can lead, of course, to a change in the lexical semantics of the word concerned, as with conventionalized tropes – and as indeed in the case of *genius*. The 'hype' that is so characteristic of contemporary culture provides many examples, from *celebs* to *stars* to *icons* to *heroes*.

What might be regarded as often a perennial favourite type of hyperbole, **antonomasia** ('calling by a new name'), is associated with some noun-from-name derivations, based on encyclopaedic information concerning an owner of the name. *S/he is a Scrooge* need not be hyperbolic. But an example that would also count as 'hype', in my view, is *S/he is a Heifetz/Szigeti* said in reviews of the work of many young violinists; this is typical of the 'hype' associated with new(ish) performers in almost any sphere.

Litotes is also intensifying, but by means of obvious understatement. The deliberateness of the understatement may be emphasized by negation, whether of a morphologically-expressed negation – *not unimportant* – or of a lexically-expressed one – *not ugly/not few*. A companion for the *genius* hyperbole might be the comment *She's done quite well* as a description of some outstanding achievement. A literary example is Othello's 'I have done the state some service' (Shakespeare *Othello*, V, ii, l.338), given his achievements on behalf of Venice. But even litotes may be a manifestation of 'false modesty'.

I have divided figures according to the aspects of language that they elaborate on; by introducing novel structure they enhance expressiveness. And they all exploit properties of 'ordinary language'. I have distinguished tropes, such as metaphor, which prototypically exploit lexical derivationality, and schemes, of the word and of the utterance. The latter may involve elaboration of syntactic structure, as in chiasmus, or phonological structure, as with alliteration or metre. Highly schematic figures are more likely to be used in literature and in formal advocacy than colloquially; but the selection of figures favoured in literary traditions, and indeed linguistic communities as a whole, is culturally variable, both synchronically and diachronically. Finally, we have looked at figures of speech,

which play upon, and thus complicate, the relationship between utterance and the act of speech, as in rhetorical questions.

I have also recognized that a particular figure can belong to more than one of these classes; I have just suggested that that is the case with apostrophe. The reader might enjoy unravelling the figurative complex built up to by the end of Wharton's beginning paragraph to Chapter VIII of Book II of *The House of Mirth* (p. 274, Library of America edn.).

> The autumn days declined to winter. Once more, the leisure world was in transition between country and town, and Fifth Avenue, still deserted at the weekend, showed from Monday to Friday a broadening stream of carriages between house-fronts gradually restored to consciousness.

And, in the context of such an original, not necessarily suppletive, literary example, we should recall that the necessity for suppletive metaphors in particular illustrates rather starkly the fundamental status of figurativeness in language in general, ranging from such domain-structuring suppletive metaphors to the mixed web of figures that adhere to individual forms like *cock*.

I regard all of the figures we have looked at as, redundantly, figures of thought, as they all concern attempts to represent in language cognitive insights of various kinds and their structures, as well as serving a range of functions including persuasion and aesthetic insight and gratification and humour. In these terms, tropic figures, schematic figures and figures of speech are sub-types of figures (of thought). More specifically, they are linguistically expressed figures, rather than plastically or musically, or transmodurally. And all of them introduce a change in linguistic structure – a change, particularly with tropes, that may not be generally adopted. On these terms, **similes**, comment on which some readers may have been missing from this short survey, are problematic: in the present context, they are not obviously tropes, as traditionally they have often been classified.

Similes such as that in the first line of Byron's 'The Destruction of Sennacherib' do not involve lexical re-categorization, or indeed any linguistic restructuring, lexical or analytic, syntactic or phonological: 'The Assyrian came down like a wolf on the fold'. Similes are not obviously linguistic figures, but rather simply comparisons. But they are usually considered to be comparisons that are unusual, especially when they associate, as do metaphors, diverse cognitive domains, as in this persistent line from a villanelle of Auden's ('Miranda's Song', ll.1, 6, 12, 18): 'My Dear One is mine as mirrors are lonely', with its metrical balancing of the compared entities. Here the schematic 'refrain' of the ambiguous comparison includes a personification that 'reflects' only the self of the looker, which resolves the loneliness of the mirror or 'me'. Similes share with tropes the effect of attrib-

uting new, unexpected properties to a referent or event – but via comparison, not lexical change as in troping. Are they, then, at least (non-linguistic) figures of thought? We might even see them as figures of speech, in so far as there is a mismatch between the situation being compared and the denotation of the expression that is invoked as comparable.

Certainly, as Meredith affirms, 'Similes are very well in their way' (*Beauchamp's Career*, Chapter 1), and the comparisons made by similes can inspire subsequent tropes based on the comparison. But there remains the question: how unusual does a comparison have to be to be considered a similitude (on the assumption that there are comparisons that are not such)? – though, of course, boundaries are not clearcut elsewhere in linguistic structure, including other figures of thought. Also, just as with morphologically-expressed metonymy (mentioned above), the overtness in expression of the association is, in my experience, less obviously striking than in the case of trope by conversion. Consider the weakening force of the successive *They're in clover/They're cows in clover/They're like cows in clover*.

The difficulties in classifying figures and evaluating the role of comparisons receive frequent exemplification in the works of Henry James. Consider even the following apparently simple example, whose subjects are a recently-divorced couple – or rather a couple still in the final throws, Ida and her ex-husband (from *What Maisie Knew* (Library of America edn. of *Novels 1896–1899*), p. 400).

> Like her husband, she carried clothes, carried them as a train carries passengers: people had been known to compare their taste and dispute about the accommodation they gave these articles, though inclining on the whole to the commendation of Ida as less over-crowded, especially with jewellery and flowers.

Here the initial comparison *as a train* slips into the figures based on it that are instantiated by *accommodation* and *less over-crowded*.

Conclusion to Part III

figurativeness and iconicity – the lexicon and syntactic and phonological structure – lexical structure – lexical derivation – covert lexical structure – survey of Part III – fidelity in derived items – antonymy and hyponymy – polarity – quantification – converses – polarity and directionality – relational nominals? – lexical complexity and variability – degrees of expressional explicitness

The chapters of Part III concluded with the short survey in Chapter 34 of **figurativeness** in language and an attempt at classification of figures in terms of the type of linguistic structures extended by particular figures. This led to a distinction among **tropes**, associated with lexical structure, **schemes**, associated with phonological, morphological, and syntactic structure, and **figures of speech**, associated with the relation between utterance and context. This exercise expands on the thread of manifestation of the trope metaphor that has gone through the preceding discussion, particularly in the shape of the suppletive space-based hypermetaphor embodied in the **localist** hypothesis.

That final chapter and the one preceding, on **iconicity**, occupy their position in acknowledgement that it is time to sum up where we have got to in the study of lexical structure from a substantive point of view, but also time to compare its properties with those of the strata of expression, involving phonology and particularly syntax. Iconicity and figurativeness move us in this direction by their manifestation in many areas of linguistic structure. Moreover, linguistic iconicity, as well as pervasive can also be active: language not merely provides a diagram of a conceptual domain, but the diagram can help in shaping our conception of the domain, especially if the latter is abstract.

The link between these two chapters was the observation that the familiar trope metaphor involved the creation and identification of an iconicity. But metaphor, as we have seen, is not the only figure based on iconicity. Schemes too are often iconic. **Repetition** of structure, for instance, iconizes the parallels between scenes and their juxtaposition is intensifying, and, moreover, the content of repetitions can be arranged so as to bring the intensification along some dimension(s) to a **climax**, as latterly in the citation from Shakespeare, *Henry VI,* Part III, II.v, ll.21–30.

> O God! methinks it were a happy life,
> To be no better than a homely swain;
> To sit upon a hill, as I do now,
> To carve out dials, quaintly, point by point,
> Thereby to see the minutes how they run:
> How many makes the hour full complete;

> How many hours brings about the day;
> How many days will finish up the year;
> How many years a mortal man may live.

Etymologically, as noted, the term climax is itself a metaphor, and iconic ('ladder').

'Iconicity' and 'Figurativeness' also form an appropriate end to Part III in view of the common undervaluing of their role, systematic or incidental, in the lexicon, particularly that of the tropes metaphor and metonymy. I hope that it is already clear that this is not to undervalue the role of 'iconicity' and 'figurativeness' in the syntactic structures that are the concern of Part IV: figures exploit what is made possible by all levels of linguistic structure. And they provide a link between lexical structure and phonology and syntax. In Part IV our concern, among the components of pre-utterance structure, will mostly be with syntax. But already, on the basis of Parts I-III, we are in a position to compare the structures of both poles of the minimal lexical item with the syntactic and phonological structures that are expressed in the minimum utterance. Aspects of both of these strata of eventual utterances have been anticipated in illustrating the consequences of categorization, and valency, including their role in figurativeness.

The presentations in the present Part have suggested a need in the lexicon for a combination of the same categories as in phonology and syntax. In the first place, this is embodied in the shared phonological hierarchy that is defined in particular by the immediately recursive {V}s whose placement in the hierarchy characterizes the nucleus (rhyme-head), the syllabic, the ictus, the tonic. Compare yet again the pre-utterance phonological structure exemplified in (155b) from Part I with the lexical representation in (I.153a), both reproduced in Chapter 33.

(I.155)   b.

(I.153) a. *noun* {V}
|
{V}   {V}
| |
{V}   {V}
| |
{V{v}/}   {V}
| |
{C{v}}   {V{v,c{c}}/}   {C}
| |
{C{c}}
| | | | |
[a]   [d]   [ε]   [p]   [t]
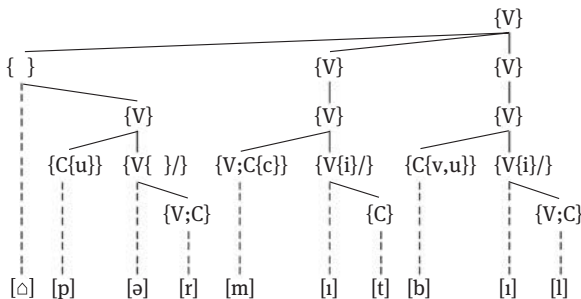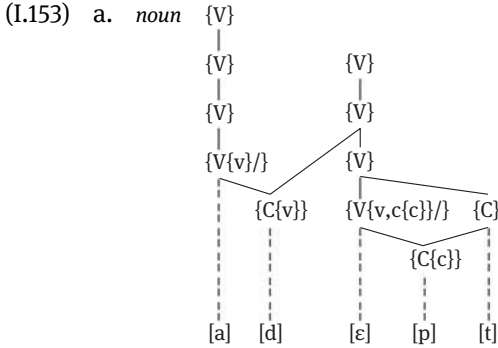
Moreover, sequencing of segments in a minimal lexical item is determined in the lexicon, either by storage or by sonority-based redundancy, or rather both, and these sequences and much of the hierarchy of the expression pole are largely preserved in pre-utterance phonology – though, as with formatives in morphophonology, there may be 'collisions' between words in utterance resulting in e.g. the diachronic creation of 'weak forms', such as that in *He'll come*, as well as the synchronic 'weakening' of many lexical tonics in conformity with the more extensive demands of readying for utterance, as illustrated in relation to the verb *permit* in (I.155b).

Of course, the sequence of words is generally not specified in the lexicon, but the lexicon contains the information, particularly valencies, that, together with pragmatic and stylistic requirements, will ultimately determine in the syntax the sequencing of words. Sub-word formatives, including some components of compounds (e.g. those in *outburst*) are sequenced within the lexicon, and may be so stored, in accord with morphological redundancies; but most compounds have the sequence associated with the syntactic structure on which they are based (*apple-cake* with attributive head, *pick-pocket* with verb head), as do most idioms.

Part II started with a Prelude that anticipated in its conclusion the concepts that would prove basic to a survey of the English lexicon: the distinction between morphosyntax and morphophonology; the complexes of lexicosyntactic categories of the former, expounded by morphological structure; the units of morphology that are expounded phonologically; the modes of signifying that characterize the parts of speech and the changes in mode associated with derivation, or cumulative recategorization. The latter typically involves different tropes, different modes of troping.

Part III has focused on the structures provided by the lexicon for the expression of derivational and inflectional relations. Morphosyntax provides a range of modes of lexical expression, typically including different affixes, and Chapter 27 suggests the possibility of a **morphologicon** of such modes of derivation. One of these modes is internal alternation between base and its (synchronic) lexical

source, particularly in word-accent. The latter phenomenon is also a major contributor to morphophonology, the topic of the chapter that immediately follows 27.

This chapter, Chapter 28, introduces a morphophonology that consists essentially of non-mutative redundancies (mutation being a feature of diachrony only) and it consists centrally of alternations. This is illustrated there by the alternations that are the residue of the historical 'vowel-shift', in particular. But morphophonology also allows for the 'frotting' between formatives associated with the expounding of morphology by phonology, frotting such as is exemplified by the morphophonological consequences differentiating *optician* vs. *optic* or *optical*.

Chapter 29 concerns itself with the role of functional categories in the inflectional morphology that allows for forms of the same word. Inflections expound subjoined functional categories or the subjunction to them of other categories. The former are said to be incorporated. Recall that 'incorporation' involves 'internal' and often covert satisfaction of valency requirements. And incorporation in English, and very commonly in other languages, is principally to verbs among the contentives, though the pervasive functional category in inflection is {N}, though valency-changes and de-finitization, giving dedicated non-finite verbs, are also of significance, as are the inflectional periphrases they interact with. In this chapter, too, the inflectional categories of English and the paradigms associated with them are identified. A paradigm is a (possibly unary) set of dimensions each associated with the contrasting features of a functional category. Its morphological expression may involve affixation, internal variation, or, in default, grammatical periphrasis. In (inflectionally-impoverished) English, only this last contribution to paradigmaticity merits much more attention.

And so we return in Chapter 30 to the more remote area, as far as inflectionality is concerned, that deals with the analysis of compounds as the lexicalization and morphologization of particular instances of phrase types to be found in the syntax. It is followed by a chapter on issues on the periphery of concerns with: (typically synchronically sourceless) 'neo-classical compound components', together with the status and structure of lexically stored, or lexicalized phrases, including idioms.

In Chapter 28 and elsewhere in Part III there have been noted examples of opacity in morphologically related forms. This is perhaps an appropriate point to say something about the forces at work in the development of opacity. Phonological opacity is more straightforward to characterize. Such opacity is restrained by the desire to preserve **fidelity** to sources and thus transparency of the derivation. **Infidelities** typically occur as a result of frotting and other modification made by the morphophonology, especially to ensure conformity to the regularities of the phonological structures of typical simplex forms, natural or not. Phonologies change, however, and this can lead to serial infidelities that may result in

estrangement from derivational sources: ultimately derivational divorce. The written language is more conservative, and spelling pronunciation may offer guidance resulting in a morphological reconciliation. This often occurs with place names, where speakers foreign to but settling in, or simply visiting, an area may re-introduce a derivationally transparent pronunciation completely obscured by the local pronunciation of the name.

Opacity in compounds is also vulnerable to the possible loss of the source of a component, and the resultant opacity may lead to a reinterpretation of the component as an affix, if it occurs in other combinations in the same position. *Doom* is not a plausible 'source' for the second element in *kingdom*, etc., which now manifests the reduction that is typical of affixes, whatever the diachronic relation between the loss of semantic and phonological transparency, However, the recurrence in either compound position of unreduced and semantically consistent components of the 'neo-classical' compounds of Chapter 32 motivates (for some speakers, at least) their status as such, despite the typical absence of sources.

Semantic transparency in derived forms also depends on maintenance of fidelity between source and formative, but the meaning of lexical items is susceptible to a greater range of temptations to infidelity, indeed promiscuity. And an explicit characterization of these would be a formidable task that I have not tried to embark on here. Indeed, a comparison of the area covered by the various chapters of Parts II-III with the coverage of lexical matters in some traditional grammars reveals a number of omissions from these Parts. Notably they – and the work as a whole – lack an account of the history of the language, and particularly, as just anticipated, the commonly offered classification of changes in the notional content of lexical items, in terms such as 'extension' vs. 'limitation' and 'amelioration' vs. 'deterioration'. Such changes in notional scope and evaluation, knowledge of which can be pedagogically useful, are, as diachronic phenomena, not as such part of our concern with grammar.

But a synchronic gap in our coverage is the absence of characterization of semantic relations such as **hyponymy** and **antonymy**, which are worthy of a little attention, given cross-linguistic variation in the role of antonyms, in particular, as well as the controversial variety of antonymic types in a single language. What follows is not so much part of a conclusion as an admission of an omission whose acknowledgement will help us to bring together various aspects of the previous chapters, and hopefully illuminate some of the basic assumptions made.

Many instances of lexical-semantic relations, however, interact only marginally with the syntax and even the morphology, and often then only negatively. One reason for this was illustrated in Chapter 24 by the usual tautology resulting from the attribution of a hyponym to another, hyperonymous noun (thus with a wider but inclusive denotation): *a pig animal* (as opposed to being accompanied

by a grammaticalized classifier). Moreover, many co-hyponyms are simply different in sense, and exclusive of each other, rather than bipolar. We have simple (though often multivalued) oppositions, offering alternative grouping possibilities. Thus, there are multiple hyponyms of *tool*, and these may be grouped into subsets subordinate to intermediate, possibly overlapping hyperonymous terms, such as *knife* or *saw*. And *knife* may be opposed in another respect with *fork*. There are, moreover, more serious difficulties with simple hierarchical models of hyponymous relations. For instance, if we represent hyponymic relations as a directed graph, then the arcs will not necessarily form a tree: depending on the internal structure of the hyponym, the sense of a lexical form may bear a hyponymic relation to more than one more inclusive sign, all of which are mutually exclusive, depending on the internal structure of the hyponym. We found this to be the case with derived forms, and we found that complex internal structures could be motivated for a number of 'simple' forms. A simple example is *walk*, which by conversion may involve directionality as well as 'means of locomotion'. As soon as one admits that what is involved is not a simple hierarchy of features, the complexity of semantic relations becomes difficult to reconcile with a simple tree-like hierarchy of hyponymies. Such a simple structure may be revealing in a few obvious cases, particularly with concrete nouns, but the relational complexities of syntax are the prime model for lexical semantics. Further investigation of lexical semantics takes us beyond the scope of the primary focus of this grammar, however.

But a consideration of **antonyms** will lead us to inquire into the nature of **dimensionality** and its varied manifestations in English. There are opposed pairs of lexical items that constitute antonyms, pairs of words that have opposed values for some crucial category, as with, say, *beautiful* vs. *ugly* – if we ignore the problem of the presence of *pretty* and *plain*. Representation of substance is mostly fuzzy. In phonology, for instance, according to an Aristotelian binary, ± feature system, a phonological segment may be either voiced (+) or voiceless (-). We have already found difficulties in that simple binarism in an account of English plosives. Such binarism turns out often to be difficult to maintain, whatever the domain. Where does the adjective *plain* fit into such a framework and such a dimension? As neither positive nor negative? Or predominantly negative? And debates about whether something can be said to be present or absent can dissolve into disagreements about what it takes to be present. Not all features are opposed only to their absence, or to a negative/positive. Individual features may also be opposed to their combination, as in representations suggested here, where also combinations may be asymmetric. And so on.

No less potentially controversial, and perhaps even more relevant to lexicon and/or syntax, are antonyms denoting opposed but not necessarily terminal

positions on a bi-polar dimension. These are **gradient** antonyms, that is, such adjectives as *good* and *bad*, compared with the normally non-gradient *black* and *white* (though there may be grey areas! – and think of what happened to *male* and *female*). What it takes to be described as *good* in some respect is open to debate, though what such an adjective is being applied to is at least considered by the speaker to lie on the positive part of the *good/bad* dimension. And there is scope for attempts to be even more precise: how *good* is X, compared with Y, for instance? This is one respect in which dimensionality may be relevant to morphology and syntax, as we have already encountered.

Each member of a putative pair of gradient antonyms participates in comparative constructions, such as those in (II.68h–i) from Chapter 21 (expanded in (97g–h) in Chapter 23), and also in what I have called 'equative' comparison (*as … as*).

(II.68)   h.
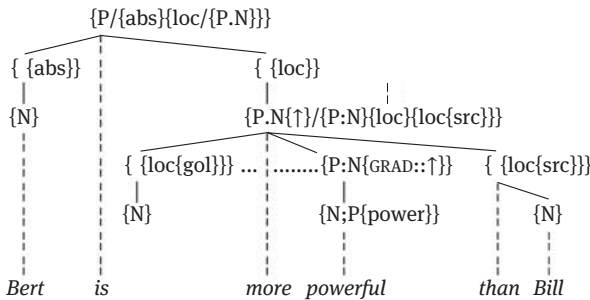
i.
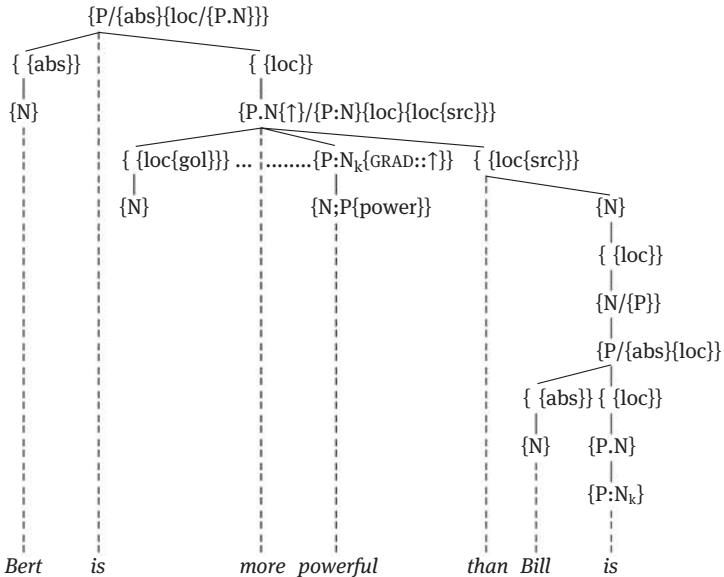
These involve the overt comparator known as the comparative, which introduces a construction where Bert's power is located at a point on the relative power dimension that is higher than that of Bill. Recall that *Bert is powerful* also involves a comparator, but with this 'positive' comparator, the comparison is with some implicit norm. We should note too that gradient nouns and nominalized adjectives can complement derived contentive comparators, such as the verb *exceed*, as in *His power/height exceeds yours*.

Gradient adjectives are associated with a dimension terminated by poles that are instantiated by superlatives, with *least powerful* as the negative pole vs. *most powerful* as the positive, and *least powerless* and *most powerless*, which extend the dimension in either direction. The members of simple as well as expressed gradient antonymic pairs also differ themselves in **polarity**: in the case of *good* and *bad*, the latter normally has negative polarity. One syntactic indication of this is that when the antonyms are conjoined the negative typically constitutes the second conjunct: *good* and *bad,* not usually *bad* and *good* (even in *The Good, the Bad and the Ugly*). And positives are usually predicated of other positives, and negatives of negatives: *How good is the recovery?* vs. *How bad is the damage?* Taken together, gradient antonyms form a composite dimension, with poles, in the present case, the superlatives *best* vs. *worst*. The above orientation is more and less established with different pairs; but there may be social or circumstantial variation, as with *young* and *old*. Thus we usually coordinate as *young and old*, but the unmarked question is *How old are you?*, and there is room for variation. Compare too *mature* and *immature*, where the overtly negative form follows.

Thus, some positive and negative antonyms are marked morphologically, as with *powerful* and *powerless* or the negative of the adjectives *well* vs. *unwell*. In the latter instance, for example, there is also a lexical negative, *ill*, which, as usual, in my experience, is stronger than the morphological negative. But the relation between the quantitative *powerless* and, say, *weak* is different; it involves different dimensions. Non-gradient antonyms (such as *married* and *unmarried*), are more compatible with the Aristotelian notation, but even they may be associated with a temporal dimension, manifested overtly by presence of *currently or then*.

The negative of gradient antonymic pairs can be viewed as relatively close to the minimal limit (absence) of the dimension(s), whereas the positive is not so easily circumscribed: cf. *narrow* vs. *wide*, *shallow* vs. *deep*. But in such cases too the polarity direction may be neutralized or vary with the circumstances, as when 'narrowing the gap' or even its removal is desirable, perceived as positive.

We find a particularly interesting polarity with the quantitative-adjective system that includes the attributive in (92f) from Chapter 8, which was interpreted there as adjectivally based – hence, on the traditional view, the optional specifier in *very many violins*.

(I.92) f. {N/{src}/{N{pl}}}

{P:N}   { {src}}

{N{pl}}

{N;P}

many violins
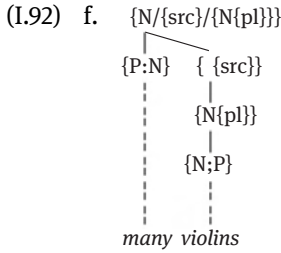
In the Conclusion to Part I, however, 'adjectival specifier' was reinterpreted as specifier of the comparator {P.N}, as in (I.240b). Another look at these forms will again tie up various loose ends, again involving dimensionality.

Thus, we might offer the preliminary representation of the specification of *many* and *much* in (130a–b) and, where QUANT(itativeness) is a gradient dimensional category, in this case with a positive feature, and the quantifiers are adjectival, as they would be in the environments in (130c–d), predicative and attributive.

(130) a.   {P.N}

{ {loc}\{P.N/{GRAD}}}   {P.N{pl/MASS}}

{P.N{itf}}   {P.N{QUANT::pos}}

very   *many/much*

b.   {P.N{MASS}/{src}}

{P:N{QUANT::pos}}   { {src}}

{N{sg}}

{N;P{MASS}}

(very) much   *dirt*
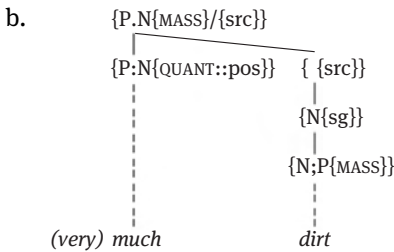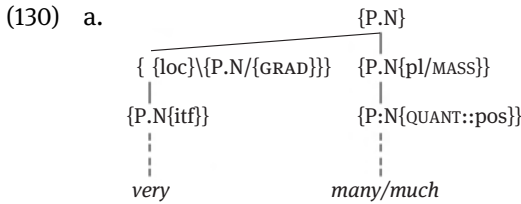
c. The absentees were (very) many
d. the (very) many violins

e.
```
        {N/{src}}
         |
   {P.N{pl}}              { {src}}
      |                       |
 {P:N{QUANT::pos}}        {N{def}}
      :                       |
      :                    {N/{src}}
      :                       |
      :                  { {src}}
      :                    |
      :                 {N{pl}}
      :                    |
      :              {N;P{CNT}}
      :              :   :   :
  (very) many        of the violins
```

f.
```
        {N/{src}}
         |
   {P.N{MASS}}           { {src}}
      |                      |
 {P:N{QUANT::pos}}         {N}
      :                      |
      :                {N;P{MASS}}
      :                      :
  (very) much             dirt
```
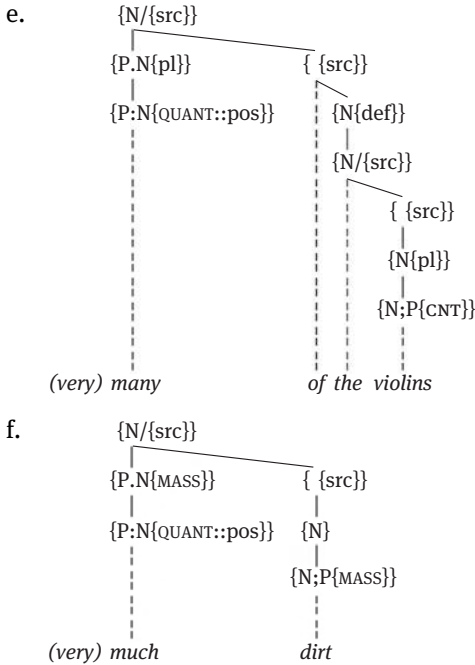
Now let us look at the quantifying subsystem that *many* and *much* belong to.

However, like *a*, they normally precede (other) attributive elements, i.e. are initial (with or without a specifier) in a determiner phrase – unless they are preceded by *the*, as in (130d). I associate this precedence over other attributives with the presence of the secondary quantifying category {QUANT}. So too with *numerous*, but the latter cannot appear in an equivalent to (130e). Here the quantitative adjective has been converted to a determiner. And this suggests the same conversion has occurred in (130c), as represented in (130e). The unconverted adjective occurs, then, as a predicative, e.g. (130b), or an attributive, usually non-restrictive, as in (130d).

Much can also be converted, as we have observed, to a specifier of comparatives (*much lovelier*) and the comparative of *many/much*, i.e. *more*, and the superlative *most* can be converted to periphrasts for adjectives that are non-positively defective, as in *more beautiful*; and both these conversions are present in *much more lovely*. As again observed, *very* is the specifier of the specifier *much*: *very much more beautiful*. The comparative of the negative-polarity *less* is likewise the head of a periphrastic negative-polarity comparative. But this now returns us to our theme of antonymy, which opens up, for the present discussion, a fresh area of complications involving these quantificational adjectives – but one already broached in Chapters 16 & 23.

Many and *much* seem to have simple negative-polarity congeners in *few* and *little* in e.g. (131a).

(131) a.   (very) few violins/little dirt
       b.   a (very) few violins/little dirt
       c.   (very) many a violin
       d.   a (great) lot/deal of violins/dirt
       e.   (great) lots/loads of violins/dirt

But the situation is complicated by the existence of the constructions in (131b). Also, not quite the same as (130a) in e.g. sequencing, is the *many*-construction in (131c), which has no mass equivalent. And in addition, the positive forms have the corresponding, near-synonymous lexicalized constructions in (131d–e). What is to be made of this situation?

(131b) offers a less extreme negative than (131a). *Few/little* are close to *no(ne)*, strongly antonymic to the positive; but in the case of (131b), though 'few/little' are associated with relatively small amounts, there is a not necessarily a strong sense of antonymy. This is signalled by the presence of the article. *A few* is closer to neutral *some*. *A number of* is a consistently more analytic rough equivalent to *a few*, as is the non-analytic *several*. And *not a few* is, in my impression, a much stronger litotes than *not few*. In (131b–c) there is positive 'movement' along this polarity dimension.

There is to some extent a similar weakening of antonymy, compared with (I.92d)/(130), associated with the positives in (131d). The presence of *a* is consistent in this respect. But what of the positively-oriented (131e) which is plural? This form aligns itself notionally with its non-plural equivalent (131d) rather than with (131b). And the presence of both plurality and *a* in this case signals the presence of a quantitative noun.

(131d) thus seems to contain the components in (132a).

(132) a.   {N{spec,sg}}

             {N/{src}}

       {N;P{CNT}}   { {src}}

       {P.N{*pl}}   {N{pl}}

      {P:N{QUANT::pos}}   {N;P{CNT}}

    a   *deal/lot*   *of violins*

b.   {N/{src}}

{N;P{CNT}}   { {src}}

{P.N{pl}}   {N{pl}}

{P:N{QUANT::pos}}   {N;P{CNT}}

lots   *of   violins*
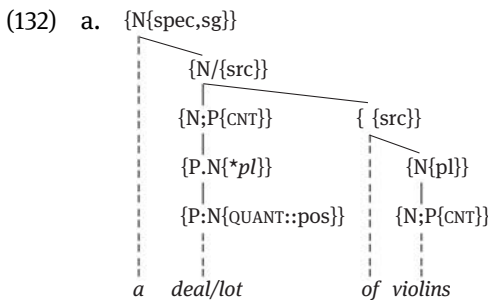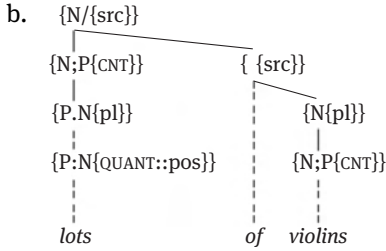
That is, we have a singular indefinite article with adjoined {N/{src}} and sub-joined to the latter a noun based on a quantity {P:N} which is positive in polarity; adjoined to the {N/{src}} is the source that satisfies its valency, which in turn has an overt noun complement. The indefinite article is reduced to signalling a singular subset, and fails to suppress the default plural on the count noun *violins*. Plural is associated with (131e), as is represented in (132b). These number manifestations are under rection from the quantifier noun.

The simple quantifiers in (130a) are apparently less analytical versions without the number-bearing noun, but based on the adjective, and the *few* of (133a) differs from (130f) only in the polarity of {P:N{QUANT}} and in being count.

(133)   a.   {N/{src}}

{P.N{pl}}   { {src}}

{P:N{QUANT::neg}}   {N{pl}}

{N;P{CNT}}

few   *violins*

b.   {N{spec,sg}}

{N/{src}}

{P.N{pl}}   { {src}}

{P:N{QUANT::neg}}   {N{pl}}

{N;P{CNT}}

a   few   *violins*

c.

```
                              {N}
          ┌───────────────────┘
{P.N{itf}\{N{sg}}}     {N{sg}{*spec}/{src}}
      │                  ┌────────┘
{P.N{pl}}              {  {src}}
      │                     │
{P:N{QUANT::pos}}          {N{*pl}}
      ┊                     │
      ┊                   {N;P{CNT}}
      ┊                ┊    ┊
      ┊                ┊    ┊
    many               a   violin
```
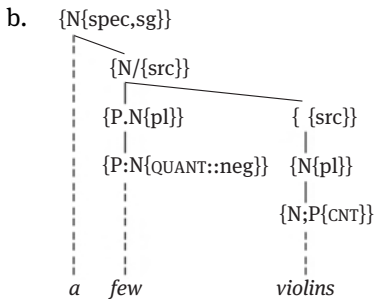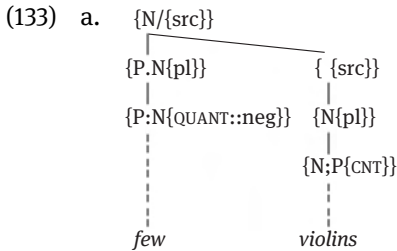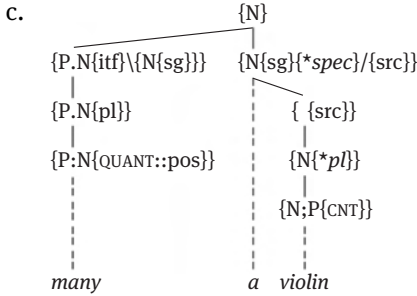
This brings us back to the question of (131b). This is associated with the character of *a*, an indefinite article that takes *few* as a complement – as in (133b) – and gives it a more positive status overall, as reflected in such as *There are a few violins at least*. In (133c), on the other hand, we have positive quantification intensifying again a (non-definite) *a*. The intensifier is plural but the non-specific *a* is associated with a sense of typicality, so that the plurality of the noun is not cancelled. I observe that Sayers (*Strong Poison* [Folio edn.], p. 163) puts the following, with the article in initial position and a conflict in agreement, in the mouth of a waitress at 'Ye Cosye Corner café': '... there's a many artists comes here for that'.

We have encountered these and other kinds of oppositions in a number of preceding chapters, including in sections applying the localist hypothesis, which invokes what I called location, direction, dimensionality, and orientation, including deixis, in relation to different notional domains besides the concrete spatial. However, 'direction' is itself a dimension and what I denoted by 'dimensional' is multidimensionality. The primary application of the localist hypothesis is to the set of functors, of course. And consideration of these in the present context confirms that antonymy is properly to be associated in the first place with features and dimensions, rather than lexical items treated holistically, as well as reminding us of the variety of antonymic types. Antonyms are more easily distinguished in relation to the localist elements of word structure; they are, indeed, the relations that must be invoked in syntax.

The features goal and source, for instance, are opposed in direction, as instantiated in *to* and *from*; they mark poles of the dimension of directions; with respect to the dimension of direction, goal is the positive pole and source the negative. This assignment of polarity is confirmed by the preference of *to and fro* rather than *fro and to*, and it underlies the relation of consequence that holds between the (a) and (b) pairs in and the (c) and (d) pairs in (134).

(134) a. Freddie has (just) gone into the bedroom
      b. Freddie is (now) in the bedroom

    c.   Freddie has (just) gone out of the bedroom
    d.   Freddie is (now) not in the bedroom

The appropriateness of the equivalents of (134a–b) and (134c–d) in domains other than the concrete spatial is part of the evidence for a localist interpretation of such a domain.

    There are directional verbs, however, that can cancel the second of these consequences; we have encountered the criterial verb *extend* in Chapter 4, for instance.

(I.39)   a.   Fog extended from Queensferry to Crail
            {abs}   *{loc{src}}*   *{loc{gol}}*

The perfect-periphrastic equivalent of (I.39a), i.e. (135a), does not entail (135b).

(135)   a.   Fog has (just) extended from Queensferry to Crail
       b.   There is (now) no fog in Queensferry

Extension is inclusive movement or directionality. And use of *towards* rather than *(in)to* in a directional sentence, of course, removes the consequence linking (134a) and (134b); it marks orientation of movement in the direction of the positive pole.

    {gol} and {src} introduce the poles of a dimension. The kind of antonyms we looked at previously – as illustrated by, say, *large* and *small* – were features of adjective comparators that locate an entity on a positive or negative segment of the dimension expressed by the noun *size*, or as illustrated by *many* and *few* as segments of quantity. That is, we might extend (133a) and the like as in (136), to reveal more of the relational structure involved, where {N{QUANT}} is a dimension.

(136)   a.   {N/{src}}

    few   *violins*
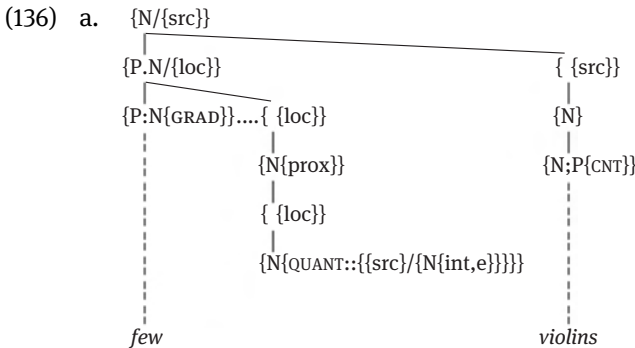
The quantity is close to non-existent. This brings such representations closer to those of the concrete spatial dimensions.

We have seen that the features {abs} and {loc} and {goal} and {source} are the basic features of functors. In combination with {loc}, the last two are the positive and negative of the dimension of direction. Incomplete attainment of the positive pole is indicated by *towards*, whose morphology (*wards* descends from the ancient genitive form) suggests a complexity analogous to that I've attributed to *on(to)* and *in(to)* Their multidimensionality is introduced by nominals, most commonly by the dimensional {N}s that that are subjoined to functors to form complex functors. This is illustrated by (I.81c) from Chapter 7.

(I.81) c. { {loc{gol}}}
                |
            {N{int}/{loc}}
                ⌐‾‾‾‾‾⌐
              ┆   { {loc}}
              ┆ |
              ┆   {N}
              ┆   ⌐‾‾‾‾⌐
              ┆   ┆   {N;P}
              ┆   ┆   ┆
            into the yard
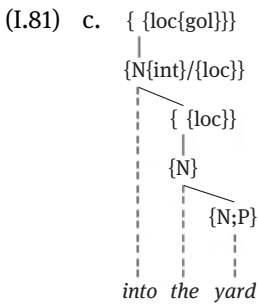
This representation specifies a location that is a goal, and the location is an entity that is an interior, the interior of 'the yard'. With *on(to)* the upper {N} would be a surface rather than an interior.

In the light of our short look at antonymy, we now might deconstruct the directional pole in (I.81c) as in (137), where {2/3} in the diagram indicates that either two or three dimensions are involved.

(137)   { {loc{DIR::pos}}}
              |
           {N{int{2/3}}/{loc}}
              ⌐‾‾‾‾‾⌐
            ┆   { {loc}}
            ┆ |
            ┆   {N}
            ┆   ⌐‾‾‾⌐
            ┆   ┆ {N;P}
            ┆   ┆   ┆
          into the house
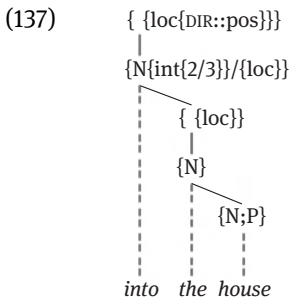
The negative equivalent is *out (of)*, and the corresponding adverbs are usually coordinated as *in and out*. Compare these with *on and off*. Similar complexity

to these multidimensionals is spelled out syntactically in *away from*. If *towards* involves 'in the direction of the positive pole', *away from* involves 'in a direction from the negative pole'. These are perhaps most transparently expressed by comparatives involving relative closeness to a pole: movement *closer to* or *further from*.

A further obvious basic dimensional category is location itself, which may be positive or negative. The following brief dialogue illustrates the antonymy.

(138)   Is Billy at home? No, I'm afraid he's out

The head of the prepositional phrase in the question is locationally positive, and the answering adverb is negative. What would be represented in the notation I have been appealing to as { {loc}} (*at*) and { {loc{src}}} (*out*) could then instead be represented as { {LOCATIVE::pos(itive)}} vs. { {LOCATIVE::neg(ative)}}. These are both, in terms of a hyperonymous dimension, { {LOCATIONAL::pos}}, whereas *Billy* and *he*, as absolutes, are { {LOCATIONAL::neg}}.

On and *in* are the primary multi-dimensional functors in English. But, as is not uncommon in language, they don't simply match the number of dimensions, so that how many dimensions each involves depends on the complement of the complex functor and they can also involve orientation. Thus, *in* can be either two- or three-dimensional (*in the circle* vs. *in the box* – when not applied to theatres): in (137) it is probably 3-dimensional, but probably not in (I.81c). And, though *on* is normally two-dimensional and superior in orientation, as in *on the table*, from the usual point of view in which we perceive the world, *on* can also involve location with respect to a vertically-oriented surface – again as we typically perceive the world; so that we have *on the wall* as well as *on the table*. *In* manifests different ways of interpreting interiority, including a point on a line, as perhaps in one sense of *in August*. *On* is related to surfaces of different orientations, and it can also be applied to a point on a line. Metaphorical applications, as we observed in relation to temporals, for instance, introduce further factors.

As observed above, (simplex or complex) functors can be made gradient by being specified by the converted distance adjectives *far* or *close* or their corresponding comparatives, *further* and *closer*. We might represent (139a) tentatively as in (139b).

(139) a. further down

b.
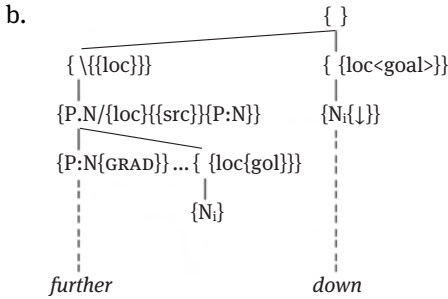
Here, as elsewhere, the specifically comparative comparator is identified by its valency. The secondary feature {↓} on {N} indicates negative orientation on a non-horizontal dimension, though the direction of the functor itself is positive, and its complement that is coreferential with the goal of the comparative is nearer to the pole of the dimension. The locative source of the comparative may, of course, be expressed by an overt source phrase headed by *than*.

Other aspects of orientation involve relative location, as in (I.81b), where there is locating along horizontal dimension that is relative to both the referent of *the house* and the viewpoint, possibly the position of the speaker or hearer.

(I.81) b.
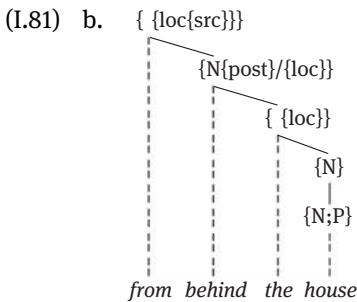
In this instance the upper functor and the {N} dependent on it are given separate expression. *Up* and *down*, on the other hand, invoke a dimension that is at an angle to the horizon, possibly, but not necessarily, orthogonal to it; and they coordinate as *up and down*. *North*, *South*, *East*, and *West* are non-prototypical names that are inherently orientational with respect to an idealized horizontal surface, and involve unidimensional and orthogonal relationships.

Left and *right* are deictic, they are prototypically differentiated with respect to a speech act participant or a narrative substitute thereof. The *before/in front* vs. *behind/in back* dimension is again deictic (recall (I.81b), cited above), and is

roughly orthogonal to *left/right*. More strictly orthogonal are the names *North/ South* vs. *East/West*, which are not in themselves deictic. Polarity is a complex part of the meanings of the pair *beside* and *opposite*: the former involves proximity along some horizontal dimension, while *opposite* lies on the other side of a dimension.

Polarity and antonymy itself may be deconstructed localistically, however. I have associated negativity with {loc{src}}, and in Chapter 15 I interpreted predicational negation as involving a {loc{src}} that is existential. A true proposition is 'in existence', and the negative is 'out of' it, as represented in (I.170a). Similarly, we can associate adjectives of negative polarity with the lack, the being without, of a quality, as roughly shown in (140a–b) representing *big* and *small*, respectively.

(140) a. {P.N/{loc}}

{P:N{GRAD}}... { {loc}}

{N{BULK::↑}}

b. {P.N/{loc}}

{P:N{GRAD}} ... { {loc{src}}}

{N{BULK::↑}}

c. {N/{src}}

{P.N/{loc{src}/{N}}}   { {src}}

{P:N{GRAD}}   { {loc{src}}}   {N}

{N{QUANT::↑}}   {N;P{CNT}}

few   *violins*

d. {N/{src}}

{N}

{ {loc{src}}\{P.N/{loc/{N}}}}   {P.N/{loc/{N}}}   { {src}}

{N{int,e}}   {P:N{GRAD}}....{ {loc}}   {N}

{N{QUANT::↑}}   {N;P{CNT}}

not   *many*   *violins*
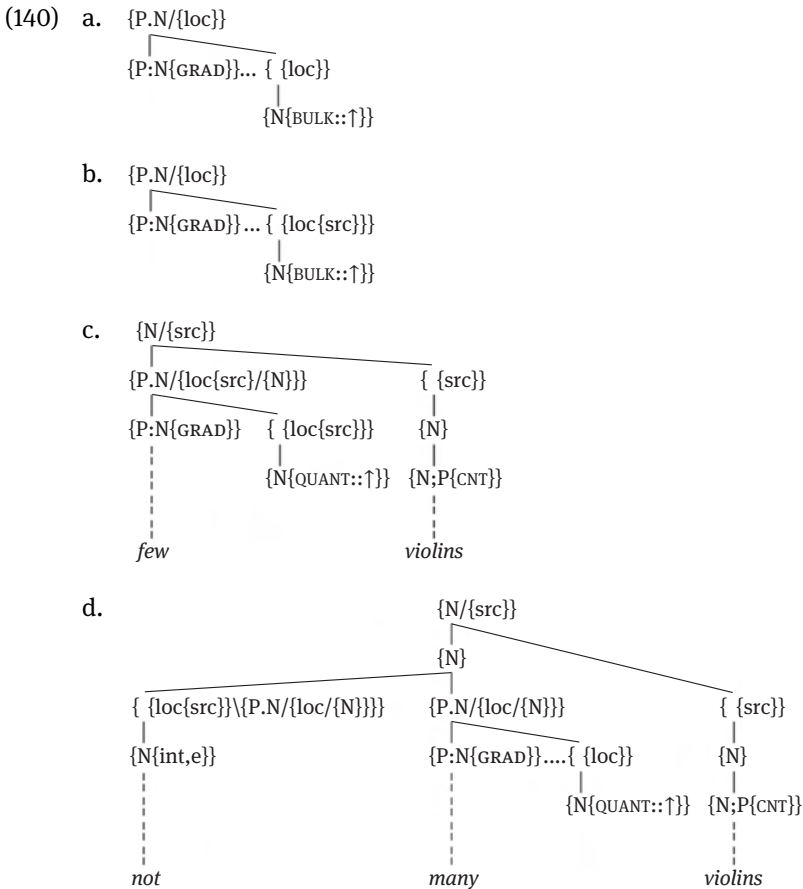
Similarly, quantitative representations such as (133) will be structured as in (140c), where '{QUANT}' is a category like bulk. Compare the syntactic negative in (140d).

This, then, deconstructs the suggested secondary features {pos} and {neg} in these instances, following from the discussion in Chapter 15. *Few* and *many* are matched by the temporal-quantifying adverbs *seldom* and *often*, just as the simple and universal quantifiers can be paired, rather more transparently, with *sometimes* and *always*. However, the present representations are a very tentative suggestion in an area that is not well understood, despite attracting much attention. One aspect of the difficulties in studying antonymy lies in the relation between form and sense. There are, for instance, forms like *cleave* that expounds antonymic senses.

Rather different from such polar relations are apparently also relational entities that are parts of other entities, as illustrated in (II.67) from Chapter 21.

(II.67)   b.   the leg of the table

d.   {N/{def}}

{N/{src}}

{ {src}}

{N$_j$/{loc}}

{N;P{part}} { {loc}}

{N{def}}

{N/{src}}

{ {src}}

{N$_i$}

{N;P}

the   leg   of   the   table

where j ⊂ i
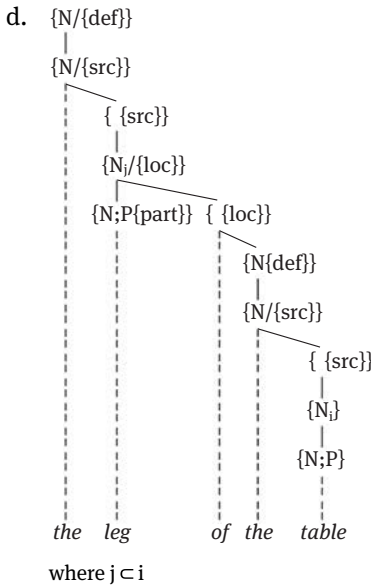
(II.67c) was introduced as an illustration that relationality, even in this case, is not a property of nouns, but, as elsewhere, of functional categories. This is perhaps more obvious in the case of container measures, exemplified by (II.66c), which can be condensed as *two teas*, or *one tea* where the noun has been converted to count.

(II.66) c.   {N{sg}/{src}}

$$
\begin{array}{l}
\{ \text{ \{src\}}\} \\
| \\
\{N/\{src\}\} \\
\end{array}
$$

```
(II.66)  c.   {N{sg}/{src}}
                 ⌐‾‾‾‾⌐
              ┊   { {src}}
              ┊      |
              ┊   {N/{src}}
              ┊    ⌐‾‾‾‾‾‾‾‾‾‾⌐
              ┊ {N;P{metric}}    { {src}}
              ┊      |           ⌐‾‾‾‾‾⌐
              ┊ {N;P{container}} ┊  {N*{sg}}
              ┊      ┊       ┊   ┊     |
              ┊      ┊       ┊   ┊  {N;P{MASS}}
              ┊      ┊       ┊   ┊     ┊
              a     cup         of   tea
```
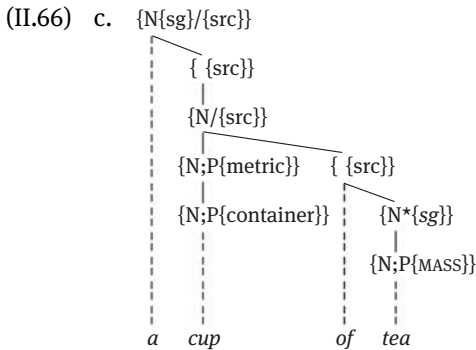
I shall remind us of only one further instance of an allegedly relational noun, of a rather different structure from the above.

This takes us back to the antonymic type illustrated by the core kinship terms in (II.64).

```
(II.64)  a.          {Nᵢ}
                      |
                    {N;P}
                      |
                 {P;N/{src}{abs}}
                  ⌐‾‾‾‾‾‾‾‾‾‾⌐
                { {src}}.... { {abs}}
                    |           |
                  {Nᵢ}         {N}
                   ┊
           father/mother/parent(s)
```

```
         b.          {Nᵢ}
                      |
                    {N;P}
                      |
                 {P;N/{src}{abs}}
                  ⌐‾‾‾‾‾‾‾‾⌐
                { {abs}}....{ {src}}
                   |           |
                 {Nᵢ}         {N}
                   ┊
            son/daughter/child
```
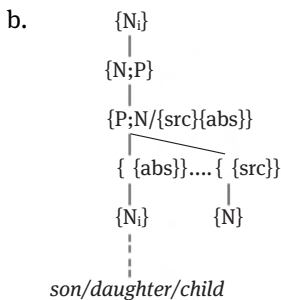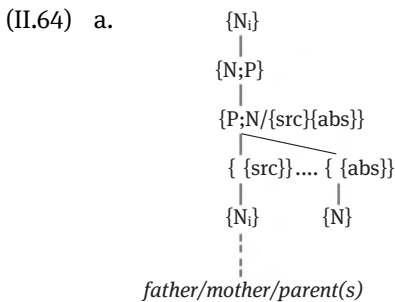
These are complex, verb-based and articulated by functors; and the antonymy *father*/*mother* vs. *son*/*daughter*/*child* again involves directionality, with the locative metaphor applied to genetic relations. Other, more complex genealogical relations presuppose these, but of course introduce further dimensions involving social relations. The important conclusion of Chapter 21 was that, on the basis of

the common types considered there, alleged participants of non-verbal contentives are rather complements of relational categories.

Throughout this and the previous Part the multidimensionally variable content of mental lexicons has been a constant theme; even more than elsewhere in the grammar, the content of the lexicon is uncertain, and it is unstable. Any attempt at idealizing the lexicon misrepresents this fundamental characteristic, its uncertainty. At the same time, it has emerged from both this and the preceding Parts that the lexicon is the core of the grammar.

Lexical entries include the contrastive phonological structures of words and sometimes more detailed and redundant phonological information; and the lexicon contains the redundancies that govern well-formed words in English. There may also be, as part of the entry for an item, morphological structure and reference to the morphophonological redundancies that reconcile morphological and phonological representations, including frotting of formatives. The lexicon also contains tables of alternations that characterize certain classes of derivationally related items, as well as the morphosyntactic redundancies that relate derived complex lexicosyntactic categorial structures and their morphological exponence.

The complex inflectional morphology that motivates paradigmatic formulation of a set of inflectional redundancies, however, is only marginally present in English, restricted to the copula. Recall especially Table XIV from Chapter 29.

Table XIV: The Finite Indicative Paradigm of BE

		CATEGORY: tense			
FEATURES → ↓		non-past	past	← FEATURES ↓	
number	sg	am	was	i	**person**
	pl	are	were		
	sg	are	were	ii	
	pl	are	were		
	sg	is	was	iii	
	pl	are	were		

The morphology also contributes to the accentuation of words, alongside general phonological regularities based on location of syllables in the word and the rhyme-type. Idiosyncrasy, redundancy, and regularity all have a role to play in the use and the evolution of the lexicon.

Lexical items also contain valencies for lexicosyntactic categories in the wide sense that includes the selection of type(s) of head to modify. As well as being manifest in many lexicosyntactic structures, the selection of these valencies are, leaving aside contextual factors, the major determinants of syntactic structures, the dependency relations that relate words and, in conjunction with dependency, the sequential orders in which words combine. These categories and structures also drive the linguistic aspects of intonation and pre-utterance structure in general. There are, of course, routinizations of syntactic structure, such as subject-selection in English and its consequences: as observed, these are fossilizations of, in the present case, apparently a notionally-based topicalization structure which has found new expressional functions. The structural properties of the categories are otherwise notionally based, just as the structural properties of phonological categories are based on the perception of sound. And the distribution of these too may show routinization, so that the set of contrasts at particular positions may not be 'natural'. Recall the sets of segments that in varieties of English follow the two initial fricatives in (I.146) from Chapter 12.

(I.146) *SPECIFIER/ONSET*   *ONSET*   *POST ONSET*
      #s-   <π τ κ>   j w <r> l
                  f (θ) (v) ≈ m n
                #ʃ-   (w) r (l) (m) (n) (τ)

This polysystemicity makes it difficult to establish on the basis of such local contrasts a determinate set of traditional global 'phonemes' for a language. Recall, for instance, 'π τ κ', which are neutral with respect to the initial contrasts between voiced and aspirated plosives.

The Part that follows this one will provide further illustration of the crucial syntactic role of the lexicon. Attention to what the lexicon must contain, particularly syntactic categories and valencies, allows for the simplification of syntax. The result is a 'static' syntax, a level of representation whose dependencies and sequencings are determined, once and for all, on the basis of lexical and pragmatic information, in the interface between lexicon and syntax. I shall elaborate on this in the Prelude to Part IV.

One cannot leave focus on the lexicon itself without re-affirming the immensity of the task of charting just one of the variable lexicons exhibited by a particular variety of language or even of one person at one time. The complexity of lexical structure, overt or not, in spite of analogies with syntactic structure, in particular, is intimidating, even without taking into account the diversity of individual lexicons within any specific speech community and any lifetime and of the encyclopaedic knowledge that attaches to their entries. My impression is

that, presented with this, and despite the efforts of many industrious scholars, we are just at the beginning of mapping the structure of lexical items. Little is understood, let alone agreed, about lexical structure. A trivial illustration of this is the obviously stopgap character of the secondary features that have been invoked in Parts II-III.

The degree of overt recognition of structure by distinctive expression types correlates with their capacity for recursion. Thus, a derivational chain of transparent lexical conversions is limited in length compared with the syntactic structures at the other end of the cline of overtness in (141).

(141) *DEGREE OF EXPRESSIONAL EXPLICITNESS*
        conversion < internal change < affixation < compounding < syntax

Moving to the right in (141) there is progressive extension of the limits of recursion.

The verb *walk* of (II.149b) from Chapter 26 is a conversion from (II.149a) that involves direct recursion of {P;N}, as shown in (II.149d), compared with (II.149c).

(II.149) a. Bobbie walks (a lot)
           b. Bobbie walks to the club

           c.

           d.
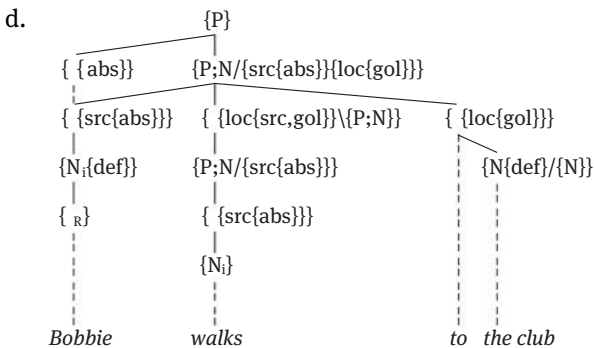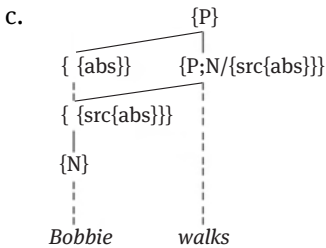
And there is further direct recursion in the causative *She walked the horse round the field*. The verb-categorial structure of the verb *walk* can be further extended by conversion to different kinds of noun. There is the 'manner' noun of *He has a funny walk* as well as the simple process noun of (2) of Chapter 1.

(I.2)   I am tired after my walk

This noun may be converted from a perfective or habitual verb. But further conversions with *walk* as a source are less and less likely. And it is exceptionally productive.

Our concern in Part IV, however, is primarily with the other end of the dimension in (141), but this does not mean that we shall leave the lexicon behind. The study of the lexicon in particular reminds us that language use is fundamentally supported by memory rather than by computation, unless the computation is an innovation such as contributes to the creation of a lexical item. Similarly, the lexicosyntactic interface is supported by the stored categorizations and valencies provided by the lexicon – though, of course, many fewer sentences than words and phrases are stored in the lexicon, and sentences are more commonly created on the basis of the lexical support. Creative use of languages depends on imagination not computation.

The prevalence of subjunction differentiates the lexicon, but there are other prominent characteristics. Functional categories are much less prominent in lexical items, especially {P}, which is absent except in a few idioms – and, of course in the entries for simple {P}s, operatives and of course the lexical structures that embody the complexities of mood that will be deconstructed in Part IV. The paucity in the lexicon of functional categories contrasts with the central role of finiteness and the other functional categories in syntax, already evident but more fully illustrated in Part IV. This contrast would correlate with the dominance of nouns in the lexicon, particularly in terms of their participation, along with adjectives, in lexical relations such as hyponymy and antonymy. This in turn correlates with the dominance of storage in the lexicon, in contrast with syntax. However, the valencies I have suggested are the bare bones of the body of linguistic and encyclopaedic information that may be called on in the construction of syntax.

The vital role of valency in the construction of syntactic structure may be illustrated on a small scale by lexical periphrases. In the case of the *take a walk* lexical periphrasis, the head, the periphrast, imposes at least the structure shown in the valency in (142a), where *take* is interpreted as a self-benefitting agentive (causative), as represented by the lexical linking between the upper source and the affected argument of the lower {P;N}, and the noun to the far right of the valency is converted from a verb, with *walk* again as a source.

(142) a. {P;N/{src}
              | ┆
         {P;N/{abs{loc{gol}}}{abs/{N<{sg}>/{src}/{N}/{N;P}}}}
                                          |
                                       {P;N}

       b. {P;N/{src}
              | ┆
          {P;N/{loc{gol}}{abs}}{loc{src}}}

Compare the lexical structure in (142b) for the like of the *take* of *take shoes/milk/a banana/suitcase/teacake* ..., instances where the agent can also be taken to be the goal (unlike in *He took milk to the party*). In both the cases in (140), then, the agent of the upper {P;N} is linked lexically to the goal locative of the lower. The periphrasis differs in the specificity of the absolute argument of the lower {P;N}, as well as the rejection of a locative source: cf. *He took a teacake from his sister*.

The singular version of the possessed activity in the *take a walk* of (142a) is perhaps the most familiar, but we must also allow for plurals and non-counts. Thus in (142a) {sg} is marked as optional. Such periphrases may also be extended syntactically by attributives, as in *We had/took a long walk*, and some instances are much more markedly figurative, as with *have a heart* or *take heart*. And this is merely nibbling at a familiar subset of valency-types at the edge of the variety of lexical representations.

One general conclusion that can be drawn from these tentative suggestions about lexical structure is that an autonomous treatment of lexical semantics is likely to be misleading. The skeleton of the semantic structure of lexical items is provided by configurations of the notionally-based syntactic categories that are shared by lexicon and syntax. The lexicon is too much the basis of the grammar and is itself pressingly to be understood in these terms that extraction of it from this matrix is, indeed, fundamentally misguided.

On the other hand, the importance of syntactic categories in lexical as well as syntactic structures and their role in morphosyntax, which expounds such lexical categorization as a set of morphological formatives does not mean that morphology should be thought of as a simple continuation of syntax. Thus, the fact that we can tell the syntactic category of some derived words by the presence of certain affixes in their exponence does not justify assigning headhood to these affixes. *-Ness* in *goodness* is not a head of anything: it is not a syntactic head, since it is only part of the exponence of a word, the minimal unit of the syntax; and it is not a morphological head, because, except for in its phonological content, morphological structure is apparently category-free.

The labels 'root', 'base', 'stem', 'prefix', 'suffix', etc. are distinguished, where appropriate, in terms of their relation to the syntacticolexical representations

they expound and their own relative sequence in a word form. Among formatives, the root/base/stem, if anything, may be said to have a special status, since affixes are sequenced in relation to it; but this status scarcely conforms to the full sense of headhood. What tells us the category of both simple and derived words is primarily their sense and syntax; they are what tell us in the first place that *-ness* is an affix that expounds noun-formation, not vice versa.

Perhaps the diagram in (6b) from Chapter 27 will remind the reader of some of the components of lexical, including morphological, structure that have been appealed to in Parts II-III in particular – though the phonology is absent, and substituted for by orthographic and 'phonetic' transcriptions.

(6) b.   {N{sg}/{src}}
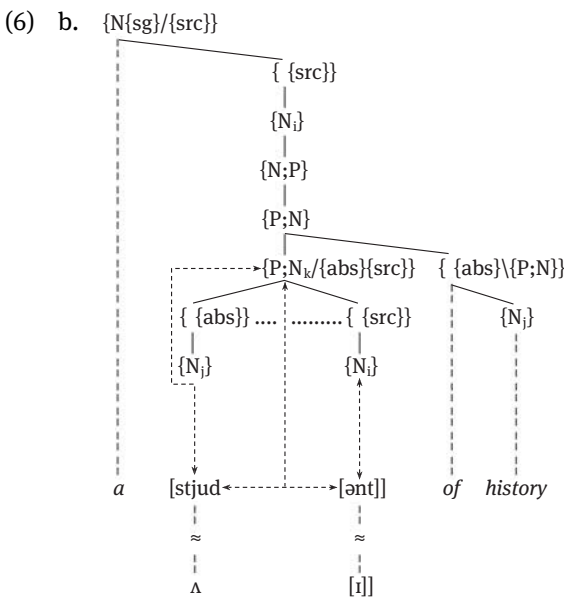
Nevertheless, (6b) illustrates something of the role of the lexicon in uniting syntactic categories, linked by subjunction within the lexicon, our main interest here, but also via valency, to phonological representations that in the lexicon reflect the mediating role of morphological structure and morphophonology, including alternation, signalled in (6b) by '≈'.

The present Conclusion has paid only passing attention to compounding. It is a complex area, but saying a little more about it here will perhaps serve as a link to Part IV, on syntax. Native compounds are based in word-formation on syntactic phrases, particularly attributive + noun and verb + argument; and the compounds are distinguished by accentuation, sequencing, or other evidence of morphologization, as with *blackbird*, *outlook*, *and passer-by*, as discussed

in Chapter 30. A familiar example is repeated here, to remind us of the familiar double-mother configuration I have suggested is typical of compounds, including 'neo-classical' formations.

(II.125)   b.   {N}

$$\{N\}$$
$$\vert$$
$$\{N;P\}$$

$$\{P.N_i/\{src\}\}$$

$$\{P:N\} \qquad\qquad\qquad \{\ \{src\}\}$$

$$\{N_j\}$$

$$\{N;P\}$$

$$\{V_4\}$$

long   *boat*

where i ⊂ j
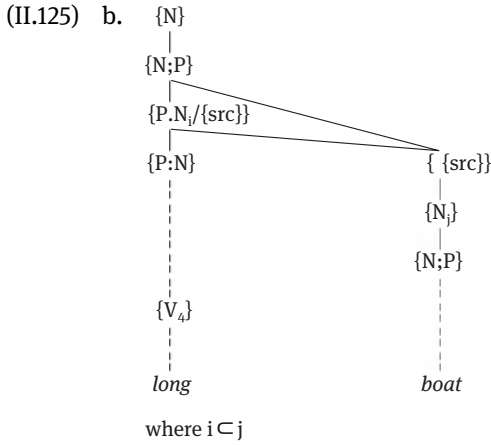
In this case syntactic headhood and sequence are phrasal, but the $\{V_4\}$ accent on the first component indicates compound status. The subscripts are associated with the attributive structure, whereby *long boat* denotes a (conventional) subset of *boat*.

Part IV: **Syntax**

Prelude

the limited domain of syntax – the lexicosyntactic interface – pragmatic input to the interface – answers and topics – the input of lexical structure to the interface – covert lexical structure – the localized character of nominal structure – hierarchies of syntactic categories – reflexives and mood – the lexical structure of declaratives and imperatives – deixis

Modern linguists are often struck by the brevity of the treatment of syntax in 'traditional' grammars. With respect to grammars of the classical languages there is some obvious accounting for this. Much of what might more recently be treated as 'syntax' is contained in such grammars in the description of the parts of speech and the grammatical role of their inflections, particularly those associated with morphological case and its combination with prepositions. As we have seen in the preceding, inflections – testified to even by the vestiges in English, notably tense – expound functional categories, which are fundamental to the articulation of the syntax. But it is the prepositions, the functionally-equivalent analytic alternatives to case, in particular, that are structurally very significant in English. And we have already registered and explored how they and non-overt functors hold the syntax together, particularly by their role in valency. This structure-building role is supplemented by determiners and particularly their capacity to express coreference. Much of 'syntax' has been anticipated above too in exploring the valencies of parts of speech and of lexical structure. Thus, partly for such mainly 'classical' reasons, the treatment of syntax in Part IV of the present work shall not overshadow the preceding Parts and their concern with, respectively, parts of speech and the lexicon, including the derivational modes of expression that build complex structures based on syntactic categories. As I have insisted, the lexicon is the core of the grammar. The placement in this work of Parts II and III is iconic of the centrality of lexicon in grammar.

This is not to deny the greater structural complexity of syntax, as a mode of expression, in relation to phonology and even content poles in the lexicon, despite the richness and evident extensibility of the latter. However, the situation described in the previous paragraph means not only that some fundamental properties of syntax have already been investigated here, but also it has the consequence that the illustration of how representational grammar accommodates major syntactic phenomena can be more compact than otherwise. Moreover, the division into chapters in the discussion of syntactic phenomena that follows continues to be overwhelmingly based on the syntactical categories of words.

The present work does not aim at 'comprehensiveness' (whatever might be constituted by that). Its goal, as in the previous Parts, is to illustrate how such a grammar as I have adopted might characterize what, in my understanding, are

generally considered to be the fundamental properties of a language, specifically English. But even apart from that, the role of valency and other lexical contributions to the construction of syntax suggests that a sentence's syntax itself can be reduced to one simple single tree representation of parts of speech (barring mood interruptions), and this representation is constructed at the interface between lexicon and syntax. The interface transfers information from the lexicon and, in structuring it as a potential syntactic dependency tree, implements the requirements embodied in lexical items, notably in the form of ensuring valency-satisfaction, both as participants and as circumstantials, and including coreferentiality requirements.

Further, the ordering of the various additions of structure to what is supplied from the lexicon that constitute the left-hand column in Figure IV of Chapter 11 (illustrating the exponence hierarchy), is intrinsic: each addition is fed by its predecessors, ultimately by the lexicon.
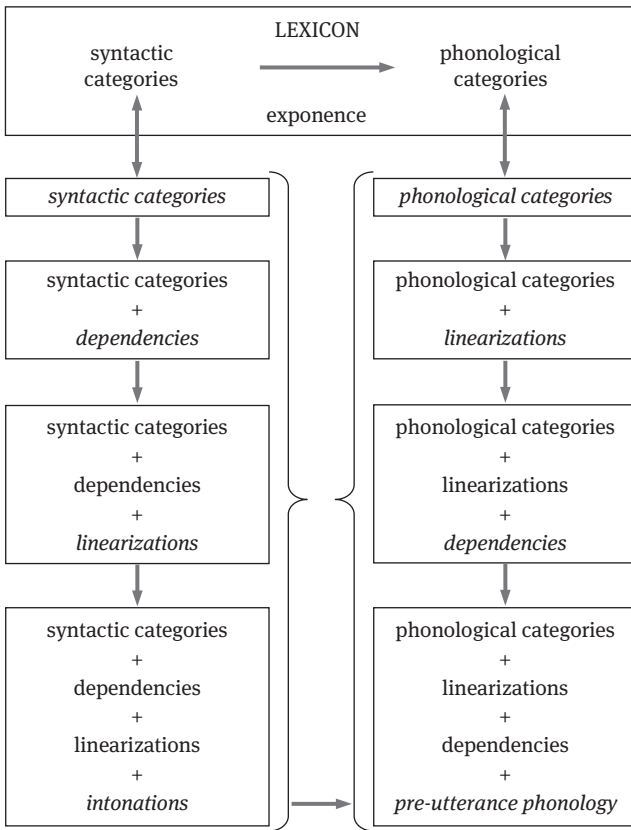
Figure IV: Substance, Modules, and Re-representation

Recall that this figure is oriented from the speakers point of view; but in practice both construction and parsing of different parts of the syntax of a sentence may proceed at different rates. Thus, the lexicon-initiated sequence of structural additions on the left is the idealized spine of the lexicon-syntax interface; syntax is constructed in the interface between lexicon and syntax on the basis of a selection of categories and their valencies from the lexicon, supplemented by awareness of discourse and situational context.

This might be clarified by an abbreviated representation of the connections between the lexicon, the context and the interface between them and the syntax, perhaps along the lines of Figure VI, which again embodies the speaker's orientation.
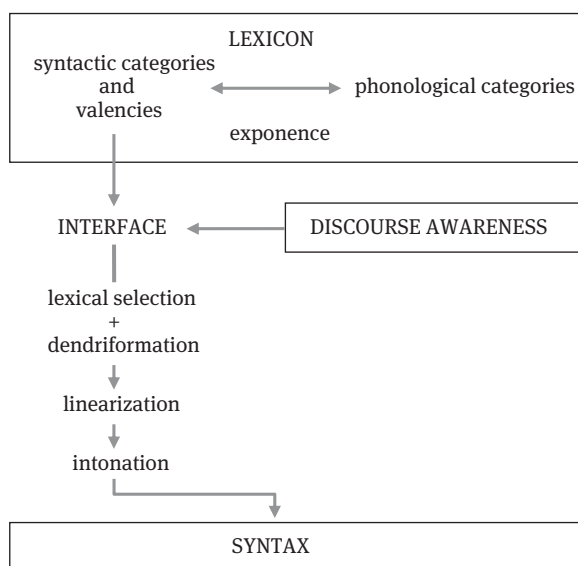
Figure VI: The Lexico-Pragmatic Interface with Syntax

The INTERFACE imposes dependencies in accord with the categories and valencies of lexical entries, and simultaneously checks that a wild (unsequenced) well-formed tree is formed in terms of these valencies and categorizations and indices selected in accordance with discourse awareness (which last obviously is not as such a specifically linguistic component); and it imposes sequence on the basis of the categorized wild tree, some of whose categories are also associated with the presence, placement, and form of a particular phonological tone. The default sequencing in English is head-left, but this is or may be violated by the presence of a particular categorization, such as the free absolute that hosts the partici-

pant that tops the subject-selection hierarchy, and by adverbs, whose placement is sensitive to the category it modifies, to discourse factors, and to subtle variations in importance in the predication. Placement of the tonic and selection of the tone depends on both categories and sequence. The categories taken from the lexicon are the default categorizations in the construction of the tree; those categorizations and structures reflect perception and conception of discourse and context, including encyclopaedic information. These provide specific extra-grammatical motivations for aspects of the structure being constructed. The resulting representation constitutes syntactic structure.

An obvious aspect of the communicative role of syntactic structure has been alluded to in Chapter 34 in relation to the indirect request/question that is one interpretation of (III.128a).

(III.128)   a.   We've run out of milk

b.   {P{q}}
      |
     {P{decl}}

The context and encyclopaedic knowledge guide us to the snippet of interpretation in (III.128b).

We can be a little more explicit, particularly about the place of 'discourse and context awareness', in focusing on what contributes to the interface, as in the bi-directional Figure VII – adapted from (90) in one of Anderson's replies in the interview recently published by Andor (2018: 92):

LEXICON:
lexical entries, including
   categories, valencies, reference to encyclopaedic knowledge
   (+ morphological and phonological representations)

    ↕ ←→ EXTRALINGUISTIC COGNITION:
                      judgement of relevant context, consequence, creativity

INTERFACE:
(dis-)assembly of sentence structure: dependencies, sequence, intonation

    ↕

SYNTAX
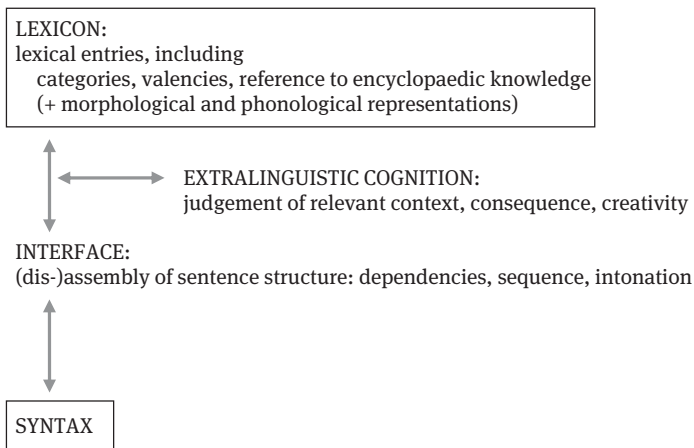
Figure VII: Determination of the Interface

The extralinguistic contribution involves further categorization based on awareness of the place of the sentence in the situation and in any logical structure of the discourse, as well as relevant encyclopaedic knowledge, together with assessment of any need for innovation, including the exercise of imagination, especially figurative. Perhaps among the more striking consequences of contextual awareness is the legitimizing of utterances that are sententially incomplete, 'fragments', but that can be seen, for instance, as **answers** to questions: e.g. *On Tuesday*. What is absent, unsurprisingly, from the account of language offered in the present work is an explicit account of the role of context or of encyclopaedic knowledge or imagination. And, in relation to the various figures given above, nor is there, of course, any account of the selection of lexical items and their assembly into the input to an utterance, with its hesitations, possible anacolutha, interruptions, etc., apart from the requirement of category and valency-satisfaction.

Context also impinges on **topicalization**. Thus far I have introduced in any detail (routinized) topic status only in relation to interrogatives and relatives, where its presence is perhaps most obviously relevant to the syntax, and indeed partially routinized. But indicatives can also contain a topic, unless the whole sentence is a comment. And topicality may be indicated by initial or final position, or by intonation. If the subject is topical this may not be overtly expounded, but be evident from the context. If the topic is initial, it is, unlike interrogatives, but as with relatives, not associated with 'verb-second' sequence.

In the indicative structures we have looked at I have ignored whether or not they involve non-overt topicality. Thus, if (I.169c) involves topicality of *Dolly*, it should be filled out as in (1) – which continues, however, to abbreviate the representation of mood and tense.

(I.169)   c.

(1)

```
                        {P{decl}}
                           |
                   {P/{loc{src}}//{top}}
          ┌────────────────┘
{ {loc{src}}{abs}}    {P{pres}/{P;N{past}}{loc/{N{int,e}}}}
    |              ┌──────────┘
{ {abs}}        { {loc}}        {P:N{past}/{src{abs}}}
    |              |                      ┊
{ {src{abs}}{top}}  {N{int,e}}            ┊
    |              ┊                      ┊
  {N}              ┊                      ┊
    ┊              ┊                      ┊
  *Dolly*        *has*                *arrived*
```
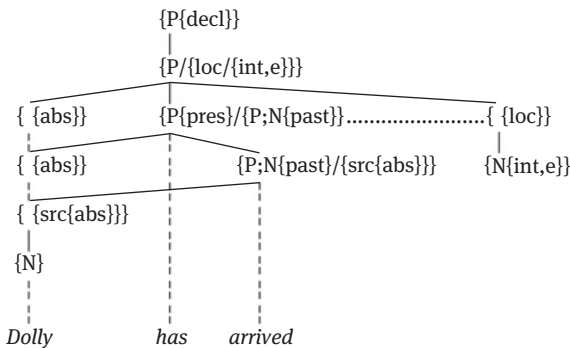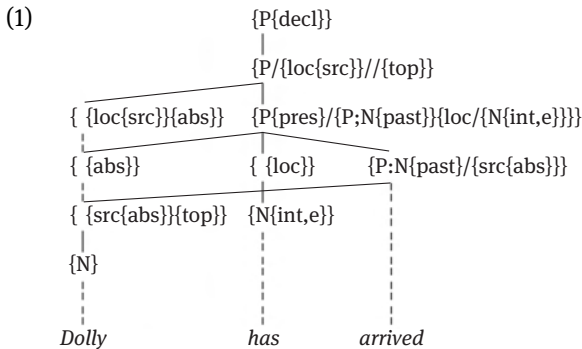
Here I have rendered the topic function as a locational source – marking the starting-point of presentation of the information to be conveyed – a property I ignored (and will ignore) in previous (and later) discussions that concentrate(d) on other aspects of construction. Topicalization, however, involves another application of localism, I'm suggesting. The locational source that is the topic in (1) is combined with the free absolutive of the {P} of topicalization, a status which is possibly identified only with reference to the context.

Considering much of their content, the division between Parts I-III and Part IV may, nevertheless, despite the above outline, seem rather arbitrary to the modern reader. We have been concerned with 'syntax' throughout these earlier Parts, and here we are confronted with it again in Part IV. However, the 'syntax' of Part I was largely limited to illustrating distinctions among the parts of speech, as in Chapters 8–10, including differences in valency, and to describing substantive demands on valency and thus syntactic structure (Chapter 14), in contrast with the restrictions on phonological structure. The satisfaction of these demands include the specified availability of 'tangling' shown already in the representation of (I.61) (and (I.169c) and (1) above), as well as the variety in sequencing of categories exemplified by (I.168).

(I.61) b.

```
                     {P/{P;N{prog}}}
              ┌───────────┘
{ {abs}}      ┊      {P;N{prog}}
    |         ┊    ┌────┴──────────────┐
{ {abs}}      ┊    ┊         { {loc{src}}}    { {loc{gol}}}
    |         ┊    ┊              ┊                ┊
  {N}         ┊    ┊             {N}              {N}
    ┊         ┊    ┊              ┊                ┊
  *fog*     *was* *extending*  *from Queensferry*  *to Crail*
```
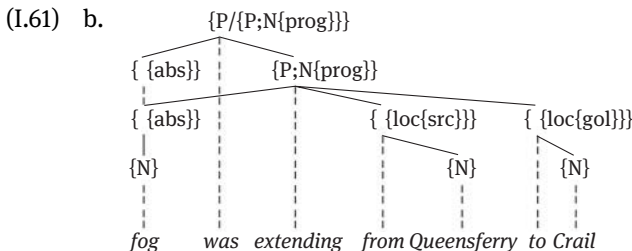
(I.168) a. Jill tends to ramble
         b. Bill intends to leave

c. Will is admired
d. Jill is difficult to satisfy
e. Bill seems to want to leave
f. Will happens to expect to seem to be heartless
g. Whom does Jill admire?
h. Whom does Jill think that Bill doesn't like?

More striking still is the indefinite extensibility of such sequences, but this simply reflects the satisfaction of the valencies drawn from the lexicon. And the implementations interpretable as having been fulfilled in (I.168) of the consequences of these demands is associated with the interface.

The final three chapters in Part I concerned themselves with the role of functional categories in introducing and legitimating main and subordinate predications – allowing for simplex and complex clauses. Part IV will expand on these discussions as a crucial component in specifying the main constructions headed by the different functional categories, some of them exemplified in (I.168). This will permit us to make a comparison between these constructions and the complex lexical structures mainly introduced in Parts II-III.

Some of the complexity of lexical structure and its consequences is illustrated in representations such as, once again, (II.32) from Chapter 19.

(II.32) {N/{src}}

{ {src}}

{N$_i$}

{N/{src}}   { {loc{src}}\{N}}

{ {src}}   {N}

{N}

{N;P}

{P;N}

{P;N}   { {loc}\{P;N}}

{P;N/{abs}{src}}   { {abs}\{P;N}}   {N}

{ {src}} ... { {abs}}   {N$_i$} { {abs}}

{N$_i$}   {N$_i$}   {N$_i$}

a   student   of history   at Oxford   from Italy
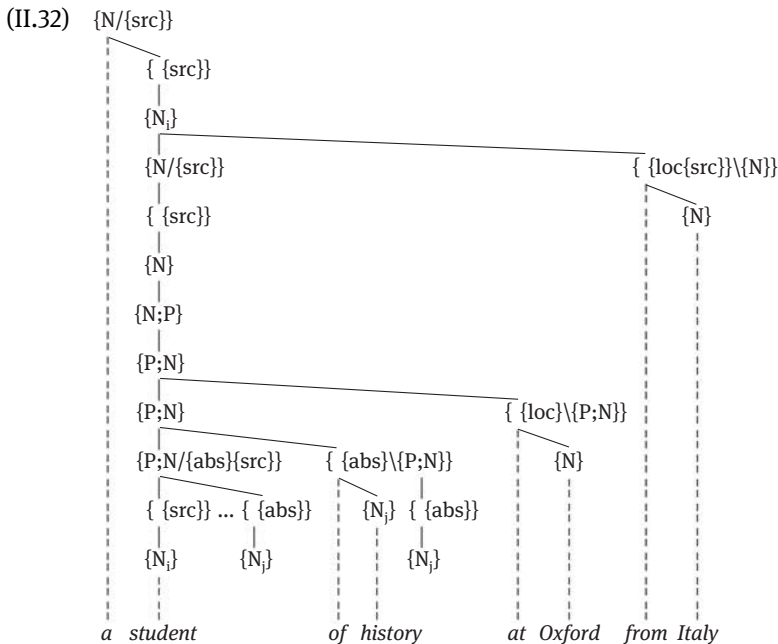
(II.32) illustrates the syntactic consequence of complex lexical structures: the presence of the 'internal' categorial components on which complex categories are based is reflected in the syntax of derived items, including the preferred order of the post-noun elements.

In (II.32) the presence of agentive suffixation signals something of this complexity. But lexical complexity is not necessarily dependent on derivationality, whether morphologically marked or reliant on conversion. Non-overt lexical complexity is typical of causatives such as those in (II.155a) and (II.157) from Chapter 26 – though in other languages (such as Turkish) morphological expression of causativization is widespread.

(II.155)

```
                        {P}
        { {abs}}    {P;N/ {src}}
        { {src}}    {P;N/{{src}}{abs}{src{loc}}}      { {abs}}

        { {loc{src}}}                          { {src{loc{gol}}}}   { {abs}}
        {N}                                    {N}                  {N}

        Sophia      taught                     the children         English
```

(II.157)

```
                        {P}
        { {abs}}    {P;N/ {src}}
        { {src}}    {P;N/{loc}{abs}{{src}}}      { {abs}}

        { {loc{gol}}}                    { {abs}}   { {loc{src}}}
        {N}                              {N}        {N}

        the children  learnt             English   from  Sophia
```
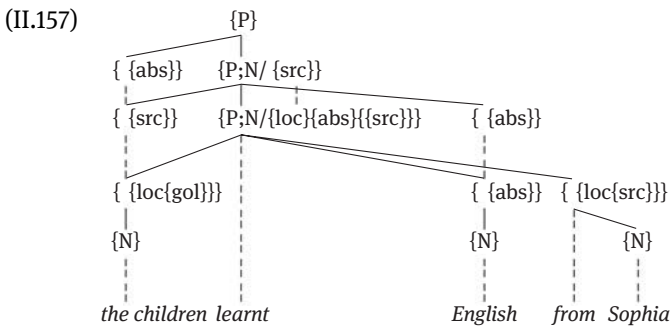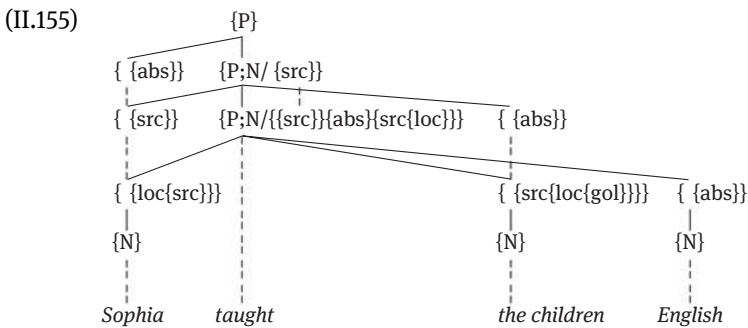
The lexical information, including lexical-linking, is the basis for the construction of the syntax. Neither of these causatives is morphologically marked as including a structure such as that in (II.154), though the verb in (II.157) may be associated by conversion with some sense of the corresponding verb in (II.154).

(II.154) c.

{P}

{ {abs}}   {P;N/{abs}{src{loc}}{{src}}}

{ {src{loc{gol}}}}   { {abs}}   { {loc{src}}}

{N}   {N}   {N}

Fred   *received/learnt/heard that*   *from a neighbour*
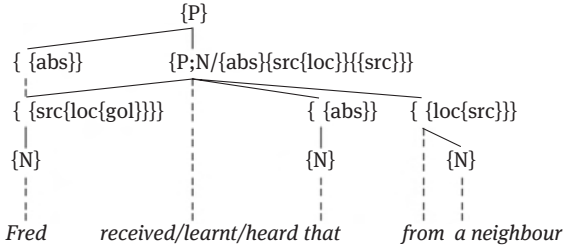
The limitations of these attempts at representation and those of the other phe-
nomena touched on in Part II suggest that we (and certainly I) know much less
about (particularly non-overt) lexical structure than we do of syntactic.

Another simple, monolingual example of variation in expression of lexical
relations is provided by such pairs as *sheep/lamb, pig/piglet, swan/cygnet, bear/
bear-cub, elephant/elephant calf*. Only the more common or domesticated are
favoured with affixes or with distinct lexical items – so no or minimal morpho-
logical expression of the relation between the members of the pair. And *lamb* is
suppletive from the point of view of the *piglet* type. Overall, morphology is only a
marginal guide to lexical structures.

Concerning the central role of lexical structure in syntax, we should recall
that Chapters 23–4 in Part II also aimed to clarify, on the basis of Chapter 8 in
Part I, the valencies of determiner phrases, including those containing adjec-
tive- and adverbial-headed structures, as well as other non-contentives. Some of
these are allowed for by the lexical redundancies in (II.95) of Chapter 23, where
(II.95a) and (II.95c) – including its name-specific component of (I.112) – involve as
dependents the syntactic leaves noun and name.

(II.95) a. *DETERMINERIZATION*

{N}

{N;P} ⇒ {N;P}

b. *PARTIAL DETERMINERIZATION*

{P.N}

{P:N} ⇒ {P:N}

c. *DEFINITE DETERMINERIZATION*

{N{def<{pl}>}}

{<<N>.<<P>>>}   ⇔   {<<N>.<<P>>>}
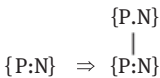
(I.112) *(ACTIVE) NAME DETERMINERIZATION*

$$\{N\{def\}\}$$
$$|$$
$$\{\ _{<X>}\{\text{ GENDER }\}\}\quad\Leftrightarrow\quad\{\ _{<X>}\{\text{ GENDER }\}\}$$
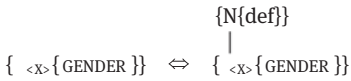
(II.95c) allows for a range of categories, including names and {N/{src}}, to convert to definite determiners. (II.95b) introduces a comparator, which allows for, among other things, adjectives to be attributives, subjoined to {P.N/{src}}.

Given the expansions on noun structures in (II.96) and the formation of attributives in (I.93d–e), the basic syntax of determiner phrases is already provided for.

(II.96) a. *SUPER-DETERMINERIZATION*
        PARTITIVE
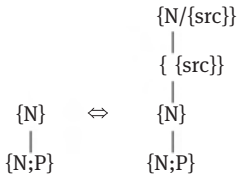
$$\{N/\{src\}\}$$
$$|$$
$$\{\ \{src\}\}$$
$$|$$
$$\{N\}\quad\Leftrightarrow\quad\{N\}$$
$$|\qquad\qquad|$$
$$\{N;P\}\qquad\{N;P\}$$

      b. *GENERIC*

$$\{N\{def\}\}$$
$$|$$
$$\{N\}\quad\Leftrightarrow\quad\{N\}$$
$$|\qquad\qquad|$$
$$\{N;P\}\qquad\{N;P\}$$

(I.93) d. *PRENOMINAL ATTRIBUTIVIZATION*

$$\{N/\{src\}\}$$
$$|$$
$$\{category\}\quad\Leftrightarrow\quad\{category\}$$

      e. *POSTNOMINAL ATTRIBUTIVIZATION*

$$\{category\}\quad\Leftrightarrow\quad\{category\backslash\{N/\{src\}\}\}$$
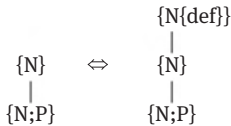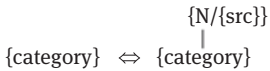
(II.96b) is one expansion of (II.95c).

These redundancies and the valencies they introduce allow for the core of nominal structures, particularly when supplemented by the discussion of adjectival quantifiers (*many* etc.) in the conclusion to Part III. Much of Part IV will thus be concerned with the syntax of various verbal forms, which is more varied and expansive than the structures terminating in noun leaves; the structures associ-

ated with the latter are generally stereotypical and localized, though they may be extended by attribution, apposition, and predicativity.

Given what precedes, Part IV is much more restricted than is commonly the case in modern accounts of a language; and this reflects its parasitic status relative to the core of language structure provided by the lexicon. But this Part does attempt to offer some impression of the range of common syntactic structures themselves, while acknowledging that these are largely projections of the properties, including their valencies, of the categories associated with lexical items, whether the categorization is simple or complex.

Indeed, the Conclusion to Part III, in elaborating a little on the structure of quantifiers, touches on some lexical phenomena that prompt an expansion of our characterization of the finiteness complex, involving its relation to scope, most prominently manifested in the relative inclusivity of quantifiers. This is then one area where nominal categories require more attention, though they are articulated in existential predications. The elaboration of scope relationships will manifest not just the importance of categorization but also something of the role of the context of the act of speech. Scope must thus be given close attention to in Part IV, as a structural relation that has been rather neglected so far, perhaps because of its involving the interaction between lexical properties of the functional categories {P} and {N}, rather than attempting to explicate the structures of these categories individually. Also somewhat neglected has been the precise characterization of deixis, again involving {P}, {N}, and the act of speech or mood. The characterizing of the acts of speech themselves demands some attention too, though it involves a substantial expansion of the lexical structure of finite verbs; and this expansion is again largely powered by {P} and {N}.

In the conclusion to Part I, as part of commenting on the general discrepancy in complexity of the planes, I contrasted the simplicity of the basic sonority hierarchy as manifested in English with the complexity of the relations among primary syntactic categories in terms of the diagrams in (I.24) and (I.245), respectively.

(I.24)   {V}   {V;C}   {C;V}   {C}
        vowels   sonorants   fricatives   plosives
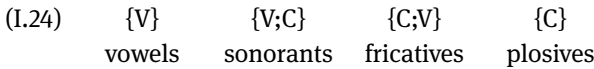
(I.245)   *CURRENT RELEVANCE*   *IDENTIFICATION*
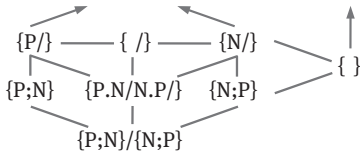
{P} and (N) are the terminals of the two hierarchies described by the non-empty categories extracted from (I.239) as (2).

(2) {P/} —— {P.N/N.P/} —— {N/}
     | | |
   {P;N} —— {P:N}/{N:P} —— {N;P}

There is an outer hierarchy, including everything except the comparator, that shows a rise and fall in the preponderance of **N** as we leave {P/}, and an inner involving only the non-contentives. As such, {P} and {N} are the primary links with the situation of utterance. They reflect the act of speech to varying extents in different utterances and contexts.

Thus far I have invoked deixis in any detail only with reference to those determiners and pronouns that are not merely (co)referential and, particularly, in relation to tense. The characterizing of tense is indicated in a preliminary fashion in (III.220) from Chapter 29, where again it is a {N} that carries deixis, and the tense structure itself is built or stored in the lexicon.

(III.59)

$$\{P\} \qquad\qquad *$$

{P{decl}} ...... { {loc}\ {P}}

{P}   {N_T{TEMP}}

{P/{loc/{N{int,e}}}}//{iii}{sg}_j} ...... { {loc}\{P/{N{int,e}}}}

{ {abs}} { {loc}} ..... {P/{P;N{n.p}}}   {N_i, T ⊆ i}

{ {abs}} {N{int,e}}   {P;N{n.p}/{loc/{N_j}}}

{P;N}

{P;N/{src{abs}}} .... { {loc}\{P}}

{ {src{abs}}}   {N_j, j < i}

{N{iii}{sg}_j}

Dolly   [[*ha*]s]   [[*arrive*]   *d*]

(I.169) {N{int}}
         |
       { E(XISTENCE)}
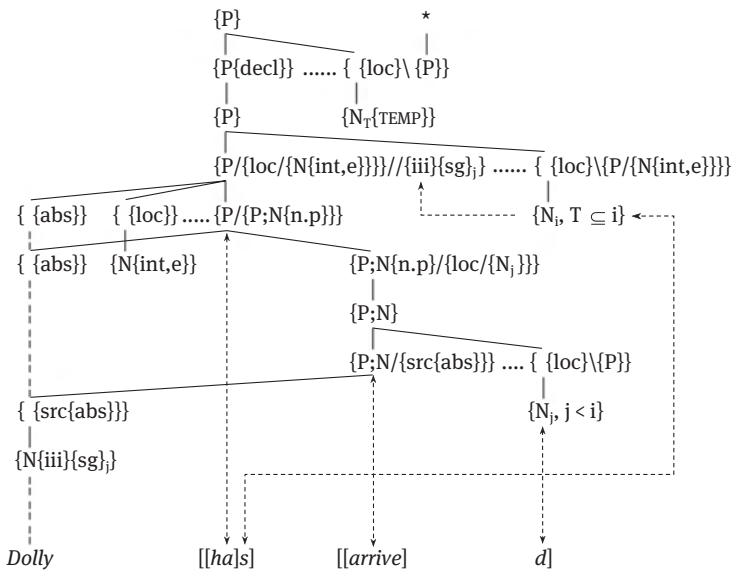
Recall that {N{int,e}} is an abbreviation for the interior named 'existence', i.e. the slightly expanded (I.169d).

In what follows we look at the syntactic expression of other aspects of pragmatic anchoring before looking, in Chapter 35, at other elaborations in the further deconstruction of finiteness. An obvious candidate for deconstruction is {P{decl}}, for instance. This makes an appropriate beginning to the survey of syntax in Part IV, and also underlines the extent to which syntax is determined by the lexicon.

But our starting point for developing an account of mood is another aspect of nominal structure that has been neglected so far, one of the most obvious implementations of coreference, involving the distribution of reflexive pronouns such as *He admires himself*. From one angle, reflexivization is a voice or diathesis; it involves a departure from the unmarked valency of the unmarked verb concerned: unmarked valencies assume referentially distinct arguments for their different participants. The departure from this situation is signalled by verbal morphology in many languages, often in sharing the expression of reflexivization with that of passives, reciprocals, middles, and other departures from the unmarked valency requirements of the verb. This set of deviations from unmarked valency are often referred to as 'middles' (or 'deponents', when independently lexicalized, i.e. lacking a source for the diathesis, which is not interpreted as a marked diathesis). In such systems these terms are thus used in a wide sense that includes all these marked **diatheses**.

However, just as we have seen that there are some diathetic middles in English, though not marked as such morphologically, as in *The book sold well*, where *the book* is { {abs{src}}, so we do find such non-pronominal reflexives.

(3)

```
                         {P}
                          |
          _____
         |                   |
     { {abs}}        {P;N/{src}{abs}}
         |                   |
     { {src}}           { {abs}}
         |                   |
       {N}ᵢ                {N}ᵢ
         ┊                   ┊
       { ʙ}                  ┊
         ┊                   ┊
         ┊                   ┊
        Bill          washed/dressed
```
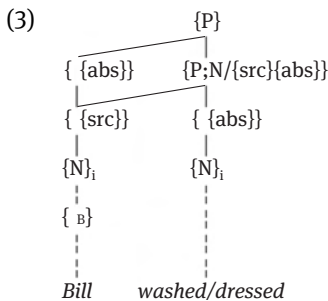
In this diathesis the absolutive of the transitive agentive is satisfied internally and coindexed with the subject.

But in English and other languages expression of reflexivization is primarily nominal; we talk of **pronouns** and their **antecedents**. Sometimes a reflexive

form is intensifying, in which case it can precede as well as follow its 'anteced-ent': *Myself, I don't agree with that*, *I myself don't agree with that*. Non-intensive reflexive forms normally follow their antecedent; the precedence is typically linear (whatever else might be involved). But there is a lot of variation among genres and among speakers (and researchers) in how distant in structure a reflex-ive can be from its antecedent, i.e. variation in the requirements in this respect of the lexicosyntactic interface.

A common prescription for the coreference being expressed by a reflexive is fulfilled by (4a), where, to broaden the prescription a little, the subject is ante-cedent to a subsequent reflexive coargument whose category is vertically further from the root of the predication, as in the examples in (4 a–d), where the reflex-ives are introduced by part of a range of functor-types, the latter two overtly.

(4)　a.　Bill loves himself, Bill looked at himself, Bill is immersed in himself
　　　b.　It's himself he's worried about
　　　c.　He found himself introducing Mary to herself
　　　d.　He kept it to himself
　　　e.　When she praised him(self), John was embarrassed

　　　f.
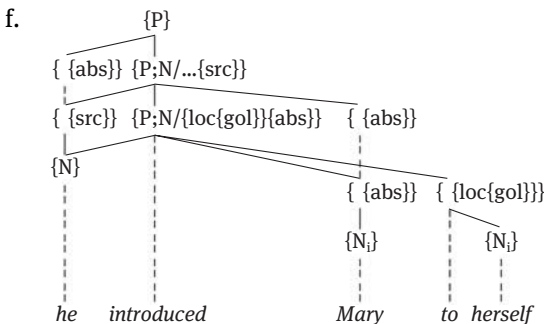
If simple reflexivization is combined with intensification, the reflexive form may precede, as in (4b). And even in (4c) both reflexive relations involve subject-eligible antecedents and a coparticipant, provided that *introduce* has an abbre-viated structure such as is given in (4f). In (4f), the subject of the lower clause is also the 'object' of the upper verb, by 'raising'.

In all of the simple sentences in (4a) the reflexive is the first participant after the verb, though not necessarily an object; but in (4d) an 'object' intervenes. And a sentence from Trollope's *Nina Balatka* (p. 120 in the Folio Society edition) illustrates something of the possible structural distance between antecedent and reflexive, provided the antecedent is unambiguous: 'She did believe that the Jews of Prague would treat him somewhat as the Christians would treat herself'.

Consider too Hugh Walpole's '... she felt for him rather as he felt for herself, ...' (*A Prayer for my Son*, Chapter VII). Or even Hardy's (*A Pair of Blue Eyes* [Folio Edition], p. 249) 'But no sooner had she got rid of her troubled conscience on the matter of faithlessness than a new anxiety confronted her. It was lest Knight should accidentally meet Stephen in the parish, and that herself should be the subject of discourse.' Again, provided there is no ambiguity, a (non-intensive) preceding reflexive in a clause subordinate to that of the antecedent is possible, as in (4e), where use of the reflexive itself may avoid ambiguity, as with the literary examples I have cited.

A final literary example from Dickens' *Pickwick Papers*, Chapter I, viz. '... that illustrious man slowly mounted into the Windsor chair, on which he has been previously seated, and addressed the club himself had founded', further illustrates the difficulties in 'regulating' the distribution of reflexives.

We must also allow for 'double reflexives' such as that manifest in (5a), as well as reflexives, as in (5b), that are very clearly not participants but circumstantials.

(5) a. He kept himself to himself
    b. She loves me for myself (not my money)
    c. She drew it towards her(self)
    d. He said that they preferred me/myself, He said they preferred you(rself)
    e. SPEAKER A: Bill is worried about Jim's interest in Mary
        SPEAKER B: But I know Mary prefers him(self)

And in (5b) only *me* is a (non-subject) participant. For some users a reflexive is possible in (5c), with a slightly different sense from the bare pronoun; and (5d) are similar, except that the antecedents are apparently given in the context. Similarly, in (5e) the antecedent and reflexive are in different sentences, but, as a subject and an object, they do obey the strictest requirement, albeit trans-sententially.

However, (5d) raise some questions concerning speech-act-participant reflexives. The vagueness of my 'given in the context' can be resolved in two different ways: either *I/you* appears overtly in the context or there is only a covert antecedent identifiable from the speech act itself. The latter suggests that identification of the antecedents of such SAP-reflexives requires some further decomposition of the finiteness lexical complex, the obvious locus, in notional terms, for such an antecedent.

In the first place, imperatives can occur either with a covert or overt subject {N}, both with a subjoined { {tu}}, the contingent name of the addressee. Recall (I.177) from Chapter 15, which expresses a command that the leaving of the addressee come about, on the assumption that only a simple directional existential is involved ('the addressee's leaving somewhere should come into existence').

(I.177) a.

```
            {P{imp}}
               |
      {P/{loc{gol}/{N{int,e}}}}
         _____|_____
        |                                |
{P;N/{src{abs}}} .... { {abs}} ........... { {loc{gol}}}
    ____|____                              |
   |         |                             |
   |    { {src{abs}}}     {N{int,e}}
   |         |
   |    {N{def}}
   |         |
   |    { {tu}}
   |
 leave!
```

  b.

```
                    {P{imp}}
                       |
              {P/{loc{gol}/{N{int,e}}}}
         _____|_____
        |                |                         |
   { {abs}}        {P;N/{src{abs}}} ........ { {loc{src}}}
        |                |                         |
 { {src{abs}}}           |                    {N{int,e}}
        |                |
   {N{def}}              |
        |                |
   { {tu}}               |
        |                |
       you             leave!
```
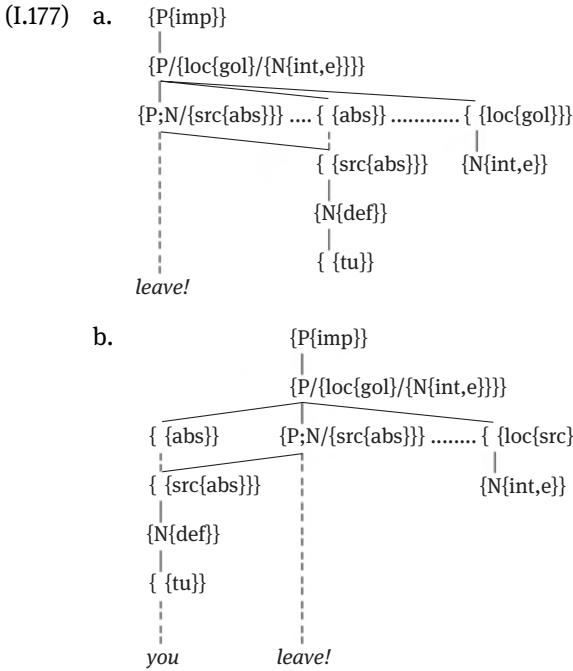
There and in subsequent diagrams I present the speech-act participants as singular, as the unmarked possibility, particularly for {ego}.

The reflexive in (6a) lacks an overt antecedent, and the antecedent is apparently the covert 'subject' included in (I.177a), as is spelled out in (6b).

(6) a. Control yourself!

  b.

```
            {P{imp}}
               |
      {P/{loc{gol}/{N{int,e}}}}
         _____|_____
        |                                     |
{P;N/{src{abs}} ....... { {abs}} .... { {loc{gol}}}
    ____|_____|_____
   |                       |              |
 { {src}}             { {abs}}      {N{int,e}}
   |                       |
 {N_i{def}}            {N_i{def}}
   |                       |
 { {tu}}               { {tu}}
   |                       |
 control               yourself!
```
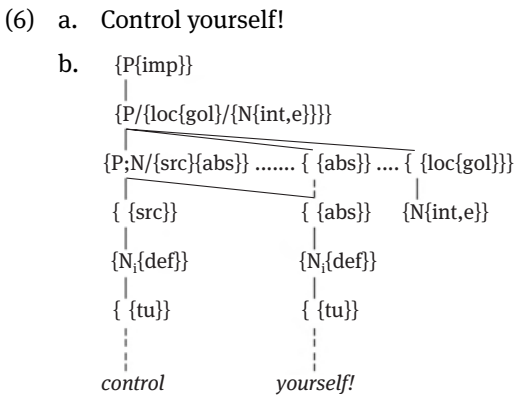
We have coreference with a covert {N} with such reflexives. Indeed, coreference here, with a dependent { {tu}}, is unavoidable. And I suggest such is appropriate

in other situations involving speech-act-participant reflexive pronouns, such as in (5d).

And this is confirmed rather strikingly by the behaviour of so-called 'picture' nouns, such as that in (7a), where the reflexive-expressed variant again has the advantage of potential for disambiguation.

(7) a. Bill says (that) it was a picture of him(self)
     b. It was a picture of me/myself

What is of interest at present, however, is the absence once again of an overt antecedent for the reflexive in (7b). I have already suggested that in such a situation the most obvious locus for an (covert) antecedent is the lexical complex associated with finiteness. That is, the presence in (7b) of the speech act participants is more basic than even the imperative structure of (6b) suggests. Moreover, in (7a) the antecedent is in a higher clause; this suggests, together with the notional appropriacy, that the antecedent of the reflexive in (7b) is also part of an articulated predicational structure, albeit lexical (rather than syntactic) – or rather pragmatico-lexical. The speaker chooses or is invited to adopt the variable-speaker name by making an utterance, usually as well as identifying the addressee(s); the speaker also chooses, however unwillingly, the time and place of utterance, thereby giving a basis for deixis.

As anticipated, we might generally model the structure of the lexical predication for a declarative sentence such as (7b) on the basis of an overt performative like that abbreviated in (8), in this instance with a finite subordinate.

(8) a. I promise you that it will be safe

     b.
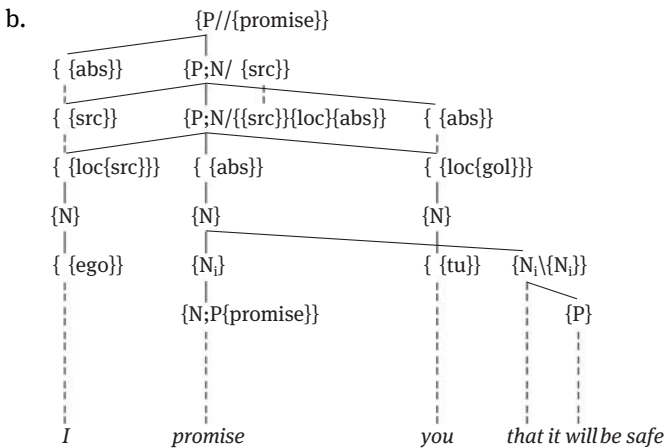
This assumes that the subordinate clause is apposed to the nominal base of the derived verb, as indicated by the co-indexed {N}s. Mood is expanded into a lexical causative above a directional structure realized ultimately as the verb *promise*; and the causer is linked lexically to the locative source of the directional. The subordinate clause signalling the content of the promise is apposed to the absolutive {N} of the directional. The finite subordinate structure is much simplified, in omitting the eventuative governed by the modal.

This resembles (I.182c) in Chapter 15 in assuming that the speech act {P;N} is a causative directional that expresses the act in terms of these two {P;N}s and their participants; the type of mood is carried only by the nominals that are conveyed by the causative directionals.
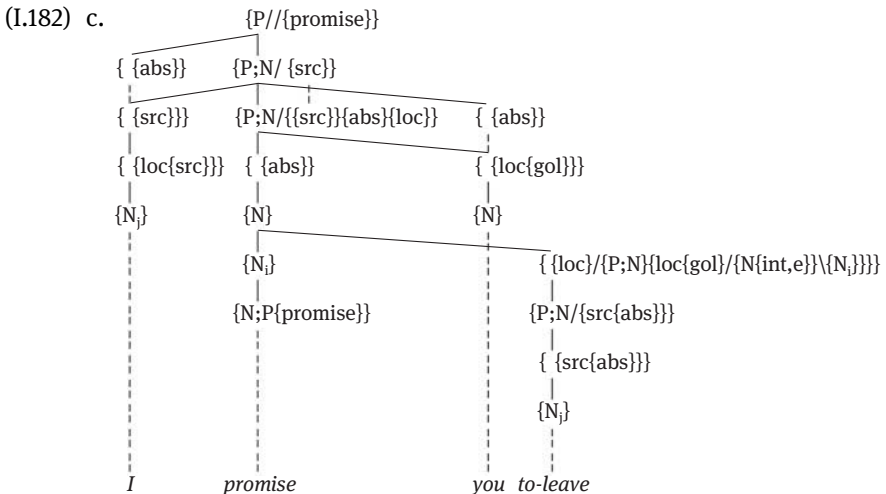
(I.182) c.

Moreover, the subordinate in (I.182c) is, unlike here, non-finite, and with a provisional representation of subordination that we shall therefore have to return to in Fit the 2nd of this Part. (8) therefore makes a better model for the lexical structure of moods like the imperative or declarative. Lexical moods are associated with lexical operatives, however. Notice finally here that *She promised you that it will be safe* does not contain a performative of a promise, of course, but asserts a description of a performance of one.

A similar, but fuller pragmatico-lexical rather than syntactic, structure is added to the finiteness complex by a representation such as (9a) for (7b), which representation in effect deconstructs declarative mood, where the speaker is the antecedent of the reflexive *myself*, and allows for tense – as well as taking up quite a lot of page space.

(9)   a.

```
                              {P}
                         {P/{src}} ............................................. { {loc}\{P/{src}}}
          { {src}}.................{P/{{src}}{loc}{abs}} ........... { {abs}} {N_T{TEMP}}
          { {loc{src}}}        { {abs}}                      { {loc{gol}}}
          {N_i}                {N_k{decl}}                   {N}
          { {ego}}             {N_k/{P}\{N_k}}               { {tu}}
                               {P/{loc/{N{int,e}}}}
                   { {abs}}   {P} ............................................. { {loc}}
                              {P/{abs}{abs}} ..... { {loc}\{P}}   {N{int,e}}
                   { {abs}}   | { {abs}}        {N_j, j < T}
                   {N}        | {N{sg}/{src}}
                              |   { {src}}
                              |   {N}
                              |   {N;P}
                              |   {P;N}
                              |   {P;N/{...}}   { {abs}\{P;N/{abs}}}
                              |   { {abs}}        {N_i}
                              |   {N}            { {ego}}

                    it       was  a  picture     of myself
```

b.

```
                                        {P}
                                         |
                    {P/{src}} .................................................................. { {loc}\{P/{src}}}
                                         |                                                            |
{ {src}}.................[P{{src}}{loc{gol}}{abs}} ................................. { {abs}}   {N_T{TEMP}}
        |                                |                                              |
{ {loc{src}}}               { {abs}}                                         { {loc{gol}}}
        |                        |                                                      |
    {N_i}                    {N_k/{src}}                                              {N}
        |                        |                                                      |
   { {ego}}            {N_k/{P}\{N_k}} ..................................... { {src}}  { {tu}}
                               |                                               |
                    {P/{loc/{N{int,e}}}}                                      {N}
                        |                                                       |
         { {abs}}    {P} ................................. { {loc}}  {N;P}
            |           |                                    |
         { {abs}}  {P/{abs}{abs}} .... { {loc}}  {N{e}}   {P;N{declare}}
            |           |                  |
         { {abs}}    { {abs}}    {N_j, j < T}
            |           |
          {N}         {N}

          it         was    a picture of myself_i
```

Again we have apposition to a nominal, but here in the lexicon, and to a dedicated {N}, {N{decl}}, apposition by the finiteness {N} which introduces a proposition. (9a) abbreviates the equivalent to the subconfiguration in (8) that spells out the verbal base for *promise*; this is included in (9b), but at the expense of further abbreviating the content of *the picture of myself*. To spare the reader, I shall omit the deverbal nominal bases for moods from subsequent such representations.

The topmost {P} in (9) is inserted by the temporal locative circumstantial which introduces the time of speaking, {T}, which is a kind of analogue to phonological prosody that is associated with any temporal item except perhaps timeless generics – though I have not attempted to express this explicitly here – and it misleadingly contrasts only with its non-prosodic role in the enunciation of 'timeless truths'. Below this temporal of speech act, the two {P}s of the lexical 'performative', the lower of which takes the apposed-to {N} as its absolutive argument; the lower {P}s are the already discussed existential and the temporal locative bearing the time at which the proposition is true, and finally the basic {P}, which in other instances would be a {P;N} – as in, say, *They discussed a picture of myself (that Jesse had painted)*. As indicated, I have not included the internal structure of the 'picture' phrase in (9b), involving lexical apposition: sufficient unto the representation is the complexity thereof.

We should likewise expand (6) as (10), where the incorporated agent satisfies the free absolutive of the eventuative existential.

(10)

```
                                    {P}
                     ┌───────────────────────────────┐
                    {P/{src}} ............................... { {loc}\{P/{src}}}
             ┌───────────┴──────────────────────┐              │
    { {src}}............... {P/{{src}}{src{loc}}{abs}}}.........{ {abs}}   {N_T{TEMP}}
        │                      │                        │
  { {src{loc{gol}}}}     { {abs}}               { {loc{src}}}
        │                      │                        │
      {N}                  {N_k{imp}}                  {N_j}
        │                      │                        │
    { {ego}}             {N/{P}\{N_k}}              { {tu}}
                             │
                       {P/{loc{gol}/{N{e}}}}
                     ┌──────────┴──────────┐
               {P;N/{src}{abs}} .......... { {loc{gol}}}
              ┌────────┴────────┐              │
          { {src}}      { {abs}}    {N{int,e}}
              │             │
        {N_j{def}}     {N_j{def}}
              │             │
          { {tu}}       { {tu}}

            control      yourself!
```
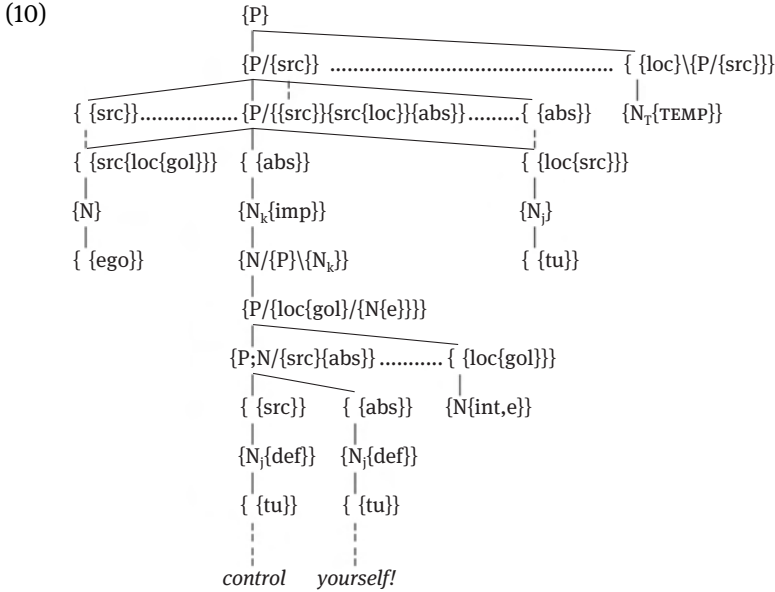
The reflexive is coreferential with the incorporated subject and the addressee. Only the verb and the reflexive are syntactically related; the rest is lexical, and the syntax is built on its basis. We shall look at other moods in the following chapter.

In the chapters following Chapter 5, where finitization was introduced and illustrated with such simple sentences as (I.60), we have found that {P} is notably absent otherwise from complex lexical structures, until our attention turned to the deconstruction of {P} itself, beginning in Chapter 15.

(I.60)   a.

```
                          {P}
                 ┌─────────┴────────┐
          { {abs}}   {P;N/{abs}{loc}{{src}}}
              │        ┌───────┴──────────┐
          { {abs}}         { {loc{src}}}      { {loc{gol}}}

            fog      extended  from Queensferry   to Crail
```
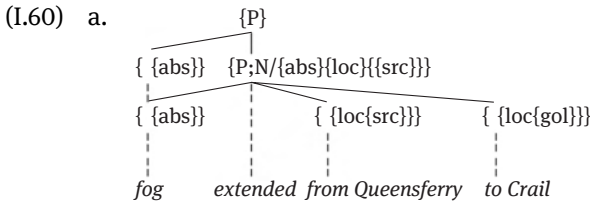
With the representations in (9) and (10), it is clear that the fuller deconstruction relies heavily on {P}, as well as its nominal equivalent, {N}. This is unsurprising on various grounds, but particularly because they are the categories that are crucial in relating utterances to the speech act situation and its setting, and enabling linguistic support for deixis.

The representations in (9) and (10) introduce three of the elements that are the points of reference for deixis, the speaker, the addressee(s) and the time of speaking, which last is the basis for tense as well as the distinction between the adverbs *now* and *then* (the time of speaking, and not) and others. We also have place deixis, which invokes the place of the speaker or some other reference point. This can be signalled by the adverb *here* rather than *there*, and indirectly by the determiner *this* vs. *that*. In all these spatial cases, prototypical representations will involve a dependency ('→') configuration as in (11), where the optional source there allows for the negative forms *there* and *that*, and they all may be accompanied by pointing.

(11)   { {loc<{src}>}}→{N{def}}→{ {ego}}

This is consistent with the basic status of place deixis, though the situation (and that with time) may be complicated by the existence of long-distance communication devices.

The appositive structure in the finiteness complex and the syntactic structure of performatives such as (8b) should remind us that there are apposed finite clauses that form part of nominal structure, specifically the so-called 'noun clauses' exemplified by (12a).

(12)   a.   I deplore (the fact) (that) she has left him
       b.   I imagine (that) she will leave him
       c.   The guy whom/that she abhors lives there
       d.   Bill, whom she abhors, always visits her

Here the finiteness determiner can be apposed to a simple existence-assuming (factual) nominal; and the factivity is maintained even in the absence of *the fact* and the non-overtness of the finiteness marker *that*. The subordinate with non-factual reference in (12b) is also a 'noun clause', headed by the (possibly covert) finiteness determiner. Also a part of nominal structure are the relative structures, 'restrictive' and 'non-restrictive' illustrated by (12c) and (12d) respectively. There are also non-finites that are subordinate to nominals. These are all aspects of 'nominal' structure that we must come back to later in Part IV, though within the context of a survey of finite and non-finite subordinate clauses.

The chapter that follows, however, expands on the deconstruction of mood initiated by (9) and (10), and investigates further how the finiteness complex interacts with phenomena associated with scope. And, as already anticipated, much of what follows on syntax is concerned with the results of the projection of verbal valencies that emerge from the lexicosyntactic interface. This Prelude has

already illustrated something of the dependence of syntax on lexical and pragmatic information and a few interface conventions, such as the free absolutive convention and the variable conventions associated with reflexives – 'conventions' that often have clear functional motivations. The (non-autonomous) construction of syntax is the major theme of this Part IV, though we shall conclude this part with a chapter that focuses on some tentative suggestions amplifying the account of non-lexical or 'utterance' phonology sketched out in Part I and its relation to syntactic expression. More strictly, I talk here of **pre-utterance phonology**, given that usually 'utterance' is taken to refer primarily to implementation; 'uttering' involves motor activity, though it presupposes grammar.

As, again, I have indicated, the basis for the treatment of syntax here is that it is a single level of representation established at the interface between lexicon and syntax modulated by discourse and non-linguistic knowledge. Likewise, pre-utterance phonology is created at the syntacticophonological interface that links it to fully expounded syntactic representations. These representations are based on a distinctive interpretation of the goal of syntax. The goal is not simply the determination of the legitimate sequences of word forms in sentences. Its goal is to use such sequences as clues to the substantively based structure of such sentences, much of which is not overtly signalled. This is why, as evidence for this structure, notional distinctions and relationships are no less important than overt distribution. This requires a suspension of disbelief in the tractability of the meaning of syntax.

Covert elements in syntax allow valency and indexing requirements to be satisfied, particularly when functional categories are involved: functors are often satisfied by covert arguments, arguments typically co-indexed with overt elements. But also, as we have seen and shall see, elements of the extensive covertness of the finiteness complex are invoked by overt elements of the syntax.

Fit the 1st: **Finites**

Chapter 35
Mood, Existence, Negation, and Scope

declaratives – imperatives – interrogatives – exclamatives – requests and interrogation – answers – hortatives – optatives – existentials and negation – double negation – quantifiers and scope

The Prelude to this Part further deconstructed finiteness, specifically in relation to the characterization of mood, and thus extending representation of the dependence of syntax on lexicon. **Declarative** mood was reinterpreted as a lexical predication that integrated representation of the speech act participants into the finiteness complex at the root of a sentence, and related to its canonical syntactic exponent, the indicative structure, which so far had been taken for granted in the previous Parts, starting with (I.60a), which introduced {P} and its contribution to the formation of subjects and their serialization.

(I.60)   a.
```
                    {P}
         { {abs}}   {P;N/{abs}{loc}{{src}}}
         { {abs}}         { {loc{src}}}        { {loc{gol}}}

          fog     extended  from Queensferry   to Crail
```
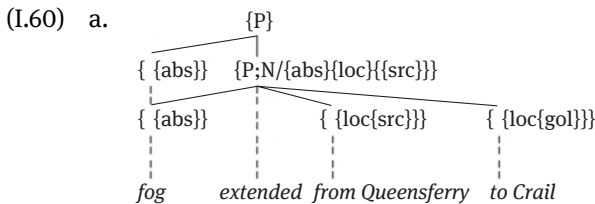
A representation of where we have now got to in terms of deconstructing the role of {P} in the grammar and particularly its role in the expression of mood has been suggested in (9a), expanded in (9b), which will now be supplemented by a look at other moods and their syntactic manifestations, as well as further syntactic consequences of the deconstruction of finiteness in main clauses.

(9) a.

```
                                    {P}
                                     |
                    {P/{src}} ............................................. { {loc}\{P/{src}}}
                                                                            |
{ {src}}................{P/{{src}}{loc}{abs}} ........... { {abs}}  {N_T{TEMP}}
       |                        |                               |
{ {loc{src}}}              { {abs}}                      { {loc{gol}}}
       |                        |                               |
    {N_i}                  {N_k{decl}}                         {N}
       |                        |                               |
   { {ego}}              {N_k/{P}\{N_k}}                     { {tu}}
                         {P/{loc/{N{int,e}}}}
                                  |
              { {abs}}      {P} ............................................. { {loc}}
                  |          |                                              |
                  |      {P/{abs}{abs}} ..... { {loc}\{P}}            {N{int,e}}
                  |          |                        |
              { {abs}}   { {abs}}              {N_j, j < T}
                  |          |
                 {N}    {N{sg}/{src}}
                              |
                          { {src}}
                              |
                             {N}
                              |
                            {N;P}
                              |
                            {P;N}
                              |
                     {P;N/{...}}     { {abs}\{P;N/{abs}}}
                         |                    |
                     { {abs}}               {N_i}
                         |                    |
                        {N}               { {ego}}

         it         was  a  picture      of  myself
```
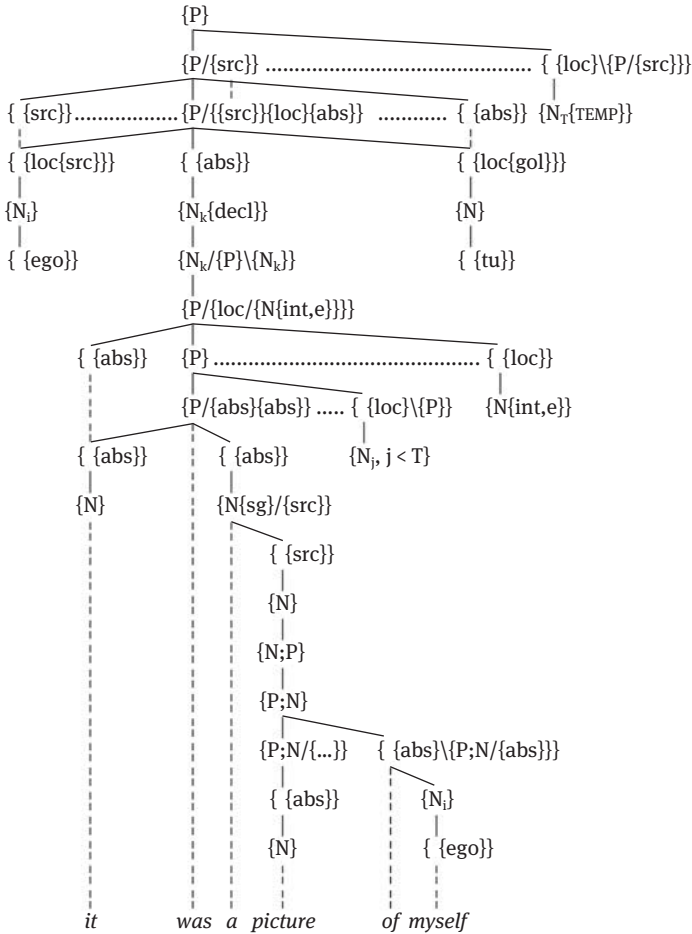
In (9a) the lexical predication introduces and asserts a proposition in which an existential introduces the basic syntactically expressed predication.

(9a) retains the appositional structure within the overt performative sentence in (8), but it also involves a {N{decl}}, which might be necessary in (8) as well, but as a feature of the {N;P} that is the base of the main verb.

(8) a. I promise you that it will be safe

b.

```
                         {P//{promise}}
            ┌──────────────┘
{ {abs}}        {P;N/{src}}
   ┊              └──────────────┐
{ {src}}        {P;N/{{src}}{loc} {abs}}    { {abs}}
   ┊              └──────┐                      ┊
{ {loc{src}}}     { {abs}}              { {loc{gol}}}
   ┊                 ┊                      ┊
  {N}               {N}                    {N}
   ┊                 ┊                └──────────┐
{ {ego}}           {Ni}              { {tu}}    {Ni\{Ni}}
   ┊                 ┊                 ┊          ┊
               {N;P{promise}}                   {P}
   ┊                 ┊                 ┊    ┊     ┊
   ┊                 ┊                 ┊    ┊     ┊
   I              promise             you    that it will be safe
```
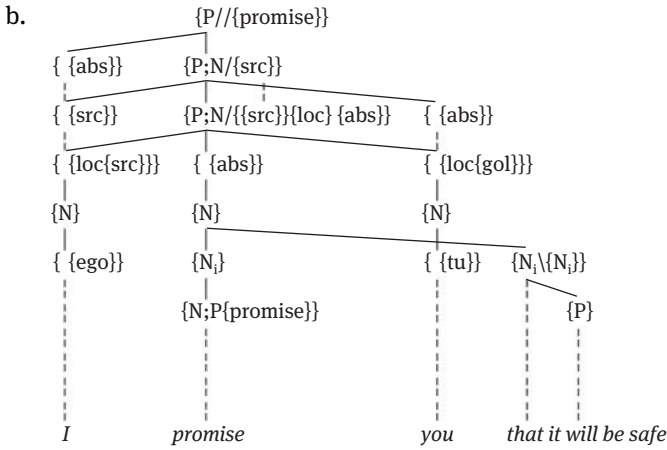
I suggest that its inclusion in (9a) is redundant, however; as the unmarked mood, it needs no distinctive specification. The identity of the mood is given by the character of the structure, particularly that of the existential in the basic clause in (9a); this is introduced by the lexical structure that transfers information, as also in (8b), which expands on (I.182c) in Chapter 15. Moreover, since, in structural terms, the finiteness determiner could attach directly to the absolutive above it, for simplicity in subsequent representations, the upper {N} in (9a) that {N/P} is apposed to will be amalgamated, along with its mood feature in marked instances, with the finiteness determiner. (9b) is contracted even further, to concentrate in what follows on the variables connected with different moods.

I also take it that the transfer of information that is expressed in (9a) by the two {P}s below the tense, the causative and the directional, with linking between the two sources, is the unmarked interpretation of such a structure; the transfer in this case is the declaration of the truth of the overt predication; and the lexicalization of the declarative speech act represents the communicative role of this structure.

The structure, determining the indicative construction that is traditionally associated with declarative mood, is shown in the perfect in (13), which thus also illustrates both finite and non-finite tensing and their morphological expression; but in (13) only the relation between *Dolly*, *has*, and *arrived* is syntactically expressed.

(13)

```
                                    {P}
                                     |
                        {P/{src}} ........................................... {  {loc}\{P/{src}}}
                             
{ {src}} ............... {P/{{src}}{loc}{abs}} ............ { {abs}}   {N_T{TEMP}}

{ {loc{src}}}          { {abs}}                        { {loc{gol}}}
     |                    |                                 |
{N{def}}          {N/{P/{loc/{N{int,e}}}}}              {N{def}}
     |                    |                                 |
{ {ego}}               {P}                              { {tu}}
                         |
              {P/{P;N{p.n}} {loc/{N{int,e}}}} ........... {  {loc}\{P{int,e}}}
                                                              |
   { {abs}}      { {loc}}      {P;N{p.n}}              {N_i, T ⊆ i}

   { {abs}}      {N{int,e}}    {P;N}

                              {P;N/{src{abs}}} ......... { {loc}\{P;N}}
                                                             |
   { {src{abs}}}                                      {N_j, j < i}
        |
      {N}
        |
    { κ}


      Dolly          has          arrived
```
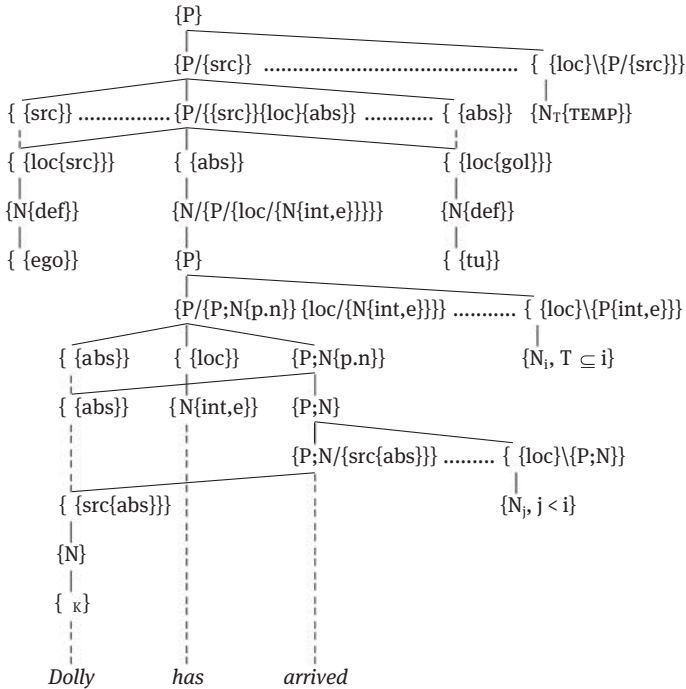
In the path of finiteness we have from the top down: a speech-act time {P}; then a causative {P} with the speaker as agent; then a direction with the speaker as source and hearer as goal, and a message as absolutive; to the latter is subjoined the compressed declarative finiteness {N}; then we have another tense {P}; then the propositional existential {P}, to which is subjoined the existential locative, and adjoined a free absolutive to the left and a past-tense {P;N} to the right to which the verb of the sentence is subjoined.

We also looked in the Prelude at the prototypical representation for **imperatives**, with the same mood structure except for the identity of what is conveyed by the act of speech, a command rather than a declarative proposition, thus specifying an eventuative goal, and not a proposition that is stated to be true. A sentence such as *leave!* is a demand or request for action, and may be interpreted as more or less forcible, ranging from command through request through entreaty to begging, imploring, depending on the context (just add a *please*, for instance, sarcastically or not). I have included in (14) an imperative finiteness determiner and dispensed again, for simplicity, with the appositive structure suggested in the Prelude (in (10), and even more fully in (9b)).

(14)

```
                            {P}
                             |
                    {P/{src}} ............................................ { {loc}\{P/{src}}}
                         |                                                 |
        { {src}} ..........{P/{{src}}{loc}{abs}} ............... { {abs}}  {Nᴛ{TEMP}}
            |                |                                    |
        { {loc{src}}}  { {abs}}                            { {loc{gol}}}
            |                |                                    |
          {N}            {N{imp}/{P/{{gol}/{N{int,e}}}}}   {Nᵢ}
            |                |                                    |
        { {ego}}        {P/{loc{gol}/{N{int,e}}}}           { {tu}}
                             |
                    {P;N/{src{abs}}} ..... { {loc{gol}}}
                         |                   |
                    { {src{abs}}}       {N{int,e}}
                         |
                       {Nᵢ}
                         |
                    { {tu}}
                         ┊
                      *leave!*
```
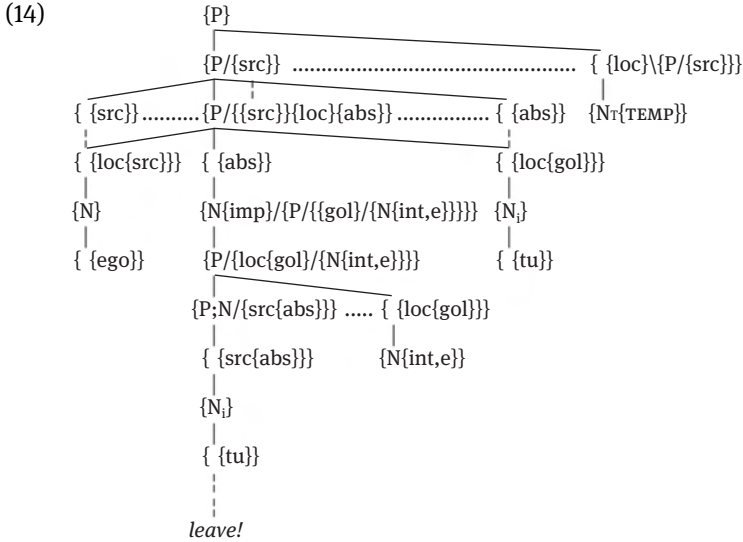
More lexically overt differentiation is allowed for, of course, by use of speech act performatives, such as *demand, request, entreat, beg, implore*, etc.

In (14) everything, including coreference, is lexical, realized as *leave!*. And the eventuative that is conveyed to the addressee identifies the sentence as imperative rather than declarative. I shall, nevertheless, for clarity associate an identificatory mood feature with the finiteness determiner, except with declaratives, particularly since imperatives are indeed marked and other marked moods need to be considered. We must now direct our attention to these, before looking at the interaction of finiteness with negation and scope.

Perhaps most obviously asking for our attention now are the types of **interrogative** sentence, concerning truth or identity, which I suggest we can represent, provisionally, as in (15).

(15) a.

{P}

{P/{src}} .... { {loc}\{P/{src}}}

{ {src}} .... {P/{{src}}{loc}{abs}}} ....{ {abs}}   {N_T{TEMP}}

{ {loc{src}}}   { {abs}}   { {loc{gol}}}

{N}   {N{q}//{0}/{P/{P;N}{loc/{N{int,e}}}}}   {N_i}

{ {ego}}   {P}   { {tu}}

{P{0}/{P;N} {loc/{N{int,e}}}} ....{ {loc}\{P...{N{int,e}}}}

{ {loc{gol}}}   { {abs}}   {P;N/{src{abs}}}   {N_i, T ⊂ i}

{N{int,e}}   { {src{abs}}}

{N}

does   *Dolly*   *swim?*

b.

{P}

{P/{src}} .... { {loc}\{P/{src}}}

{ {src}} ....{P/{{src}}{loc}{abs}}} .....{ {abs}}   {N_T{TEMP}}

{ {loc{src}}}   { {abs}}   { {loc{gol}}}

{N{def}}   {N{q}/{P//{0}}}   {N{def}}

{ {ego}}   {P}   { {tu}}

{P/{P;N}{loc/{N{int,e}}}} ....{ {loc}\{P/{loc/{int,e}}}}

{ {loc}}   { {abs}}   {P;N//{top}}   {N_i, T ⊆ i}

{ {abs}}   {N{int,e}}   {P;N}

{ {loc}{top}\{P;N}}   {P;N/{src{abs}}{loc{gol}}{loc{src}}}

{N{0}}   { {src{abs}}}   { {loc{gol}}}

{N}   {N{def}}

when   *does*   *Dolly*   *fly*   *to*   *Delhi?*

The interrogative {N{q}} is associated with an open subordinate: in (15a), a 'yes/ no' question, the truth value of the immediately subordinate potential proposition

is open (to question), indicated by {0}; and in (15b) it is the identity of a subordinate argument that is open, {0}, specifically here a temporal circumstantial – hence the presence of the upper {P;N} below the routinized {P;N//{top}}. *When* in (15b) is a simple adverb; but an open argument can be marked by an adverb realized as a transitive {N}, a determiner + noun, as in *What/Which day does Dolly fly to Delhi?* The open element in both cases in (15) appears initially, 'displacing' the subject to a position immediately after {P}; and the adverb is hosted by the topical free {abs}. The open argument need not be in the main clause but in the first subordinate to contain one.

If the open element is not placed at the front at the interface, only rising intonation signals its status, as crudely represented in (16a), though the tonic could fall elsewhere, as in (16b), creating an 'echo-question' – or with emphasis in (16c).

(16) a. Dolly has arrived?

  b. Dolly has arrived?

  c. Dolly arrived when

(16a) can be represented syntactically as in (17), which again presents an empty existential, requiring to be filled, expressed intonationally.

(17)

```
                              {P}
                               |
              {P/{src}} .............................. { {loc}\{P/{src}}}
                  |                                          |
{ {src}}.................{P/{{src}}{loc}{abs}} .... { {abs}}  {N_T{TEMP}}
     |                        |                        |
{ {loc{src}}}            { {abs}}               { {loc{gol}}}
     |                        |                        |
{N{def}}               {N{q}/{P//{0}}}            {N{def}}
     |                        |                        |
{ {ego}}                    {P}                    { {tu}}
                              |
        {P{0}_k/{P;N{p.n}}{loc/{N{e}}}} .... { {loc}\{P{int,e}}}
            |            |          |                     |
      { {abs}}      { {loc}}    {P;N{p.n}}           {N_i, T ⊆ i}
         |             |           |
      { {abs}}    {N {int,e}}    {P;N}
         |             |           |
         |             |      {P;N/{src{abs}}} ..... { {loc}\{P;N}}
         |             |           |                       |
    { {src{abs}}}      |           |                  {N_j, j < i}
         |             |           |
        {N}            |           |
         |             |           |
        { κ }          |           |

       Dolly         has        arrived
```
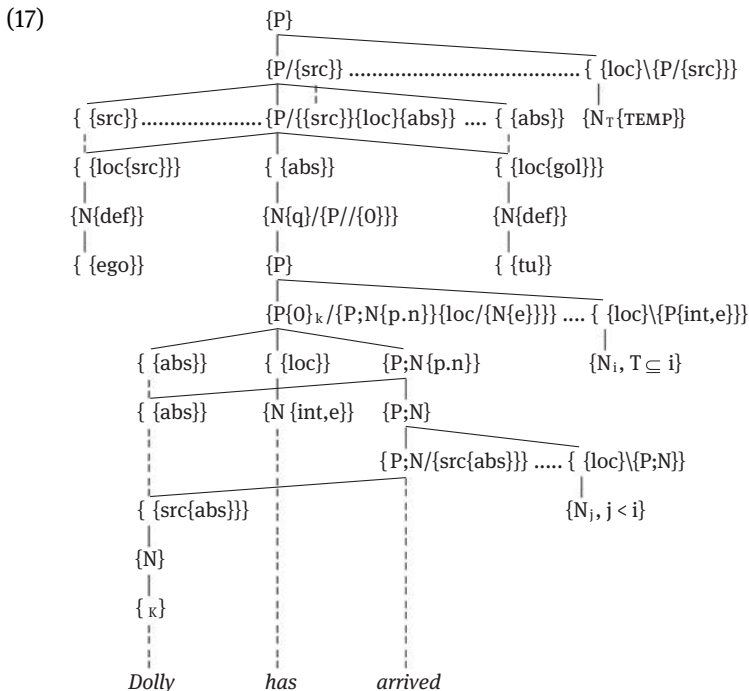
The tone is, of course, part of the pre-utterance phonology, which we return to at the end of this part; but it is triggered by the presence of the feature {open} on the existential {P}.

Some of the forms that realize interrogative adverbs also, as specifiers, indeed intensifiers, initiate types of **exclamatives**, such as those exemplified in (18), where the exclamation is also expressed by the tonic on, prototypically, the dependent adjective, adverb, or determiner phrase.

(18)   a.   How graceful he is!
       b.   How gracefully he dances!
       c.   What a (graceful) dancer he is!

Here we have again fronting of the phrase whose head is the exclamative element, but there is no displacement of the subject, and, as shown by (18b), no need for an independent {P} for the subject to follow. In (15b), in contrast, we have a relic of the 'verb-second' construction that, together with the initial verbal of (15a), occurs more widely in Old English.

These markers of exclamation and their intonation I have taken to be specifiers, specifically intensifiers. That is, *how* belongs to the same category as *very*, as in (I.240b).

(I.240)   b.

$$\{ \{loc\}\}$$
$$|$$
$$\{P.N\}$$

$$\{ \{loc\}\backslash\{P.N/\{\text{GRAD}\}\}\} \qquad \{P.N\{pos\}/\{\text{GRAD}\}\}\}$$
$$| \qquad\qquad\qquad |$$
$$\{P.N\{itf\}\} \qquad\qquad \{P:N\{\text{GRAD}:: size\{\downarrow\}\}\}$$
$$\vdots \qquad\qquad\qquad \vdots$$
$$\textit{very} \qquad\qquad\qquad \textit{small}$$
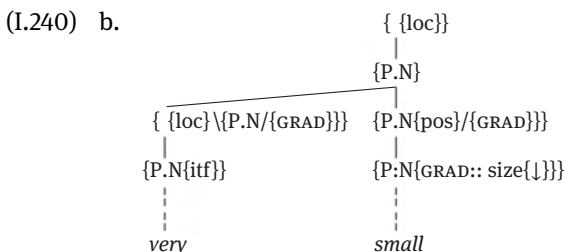
But the intensification is further intensified by the item's status as a manifestation of a distinct speech act, as represented in (19) for (18a), where the unknown ({0}) is transformed into the inexpressible.

(19)

```
                                              {P}
                                  {P/{src}} ..................... { {loc}\{P/{src}}}
                                          ⋮                              ⋮
  { {src}} ......... { {abs}} .................{P/{{src}}{loc}{abs}}    {N_T{TEMP}}
        ⋮                ⋮                       ⋮
  { {loc{src}}}    { {loc{gol}}}              { {abs}}
        ⋮                ⋮                       ⋮
   {N{def}}          {N{def}}              {N{ex}/{P//{P.N{0}}}}
        ⋮                ⋮                       ⋮
   { {ego}}          { {tu}}                    {P}
                                    {P/{P.N}{loc/{N{e}}}} ....... { {loc}\{P{int,e}}}
                                           ⋮                            ⋮
                        {P.N}    { {abs}} { {loc}}                  {N_i, T ⊆ i}
                           ⋮          ⋮        ⋮
          { \{P.N{0}}}  {P.N{0}}    {N}    {N{int,e}}
                ⋮          ⋮         ⋮         ⋮
           {N{itf}}     {P:N}     { }
                ⋮          ⋮         ⋮         ⋮
               how      graceful   he        is
```
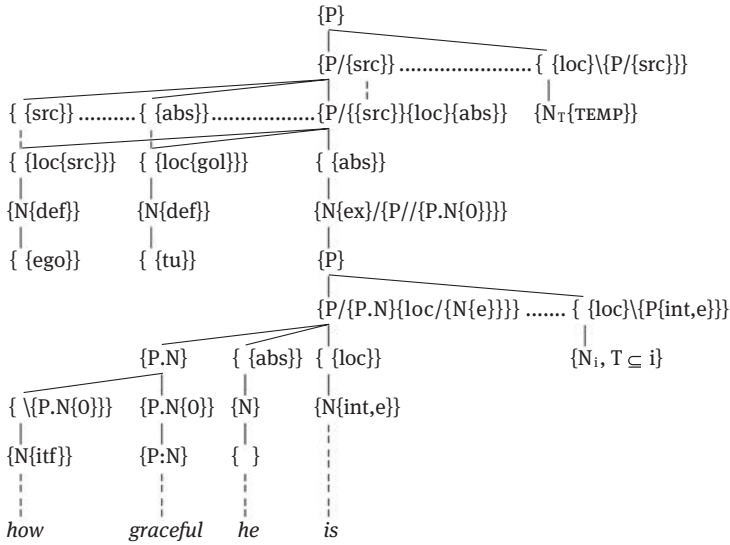
However, the intensifier in (18c) seems to specify the article phrase. The only specifier of the article we have encountered thus far is that associated with definite partitive instances, as in (I.235a), which is obviously not appropriate as the non-exclamative congener of the form in (18c).

(I.239)   a.   {N{def}}
```
                     ⋮
              {N}
              {N/{src}}   { {loc}\{N{src}\{N{def}}}}
                 ⋮              ⋮
                            {N{itf}}    { {src}}
                 ⋮              ⋮           ⋮
                                          {N}
                 ⋮              ⋮           ⋮
                                         {N;P}
                 ⋮              ⋮           ⋮
              the/that        very       man
```
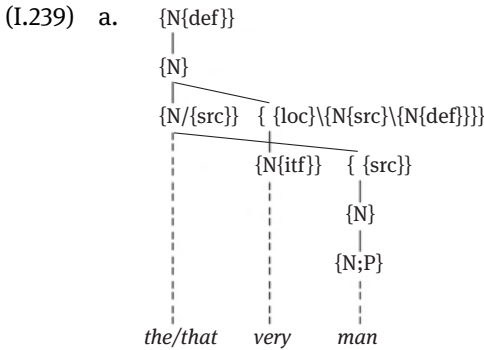
Nevertheless, we can also motivate a specifier/intensifier for the non-referential {N} of (I.88c) from Chapter 8 in the shape of (20a), where the specifier/intensifier precedes the specified category, as usual in English (ignoring later changes in our discussion in the representation of such predicatives).

(I.88) c.
```
                        {P/{N{sg}}}
              { {abs}}        {N{sg}}
                                    {N;P{CNT}/{abs}}
              { {abs}}
              {N{def}}
              { {iii,sg}}

               he          is    a   lawyer
```
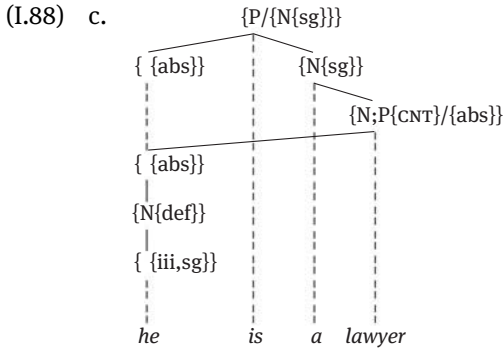
But we should at least also represent the verb concord – as in (20b).

(20) a. He is such/quite a (good) liar

      b.
```
                  {P{pres}/{N{sg}}//{iii,sg}}
              { {abs}}        {N{sg}}
                                    {N;P{CNT}/{abs}}
              { {abs}}
              {N{def}}
              { {iii,sg}}

               he          is    a   lawyer
```
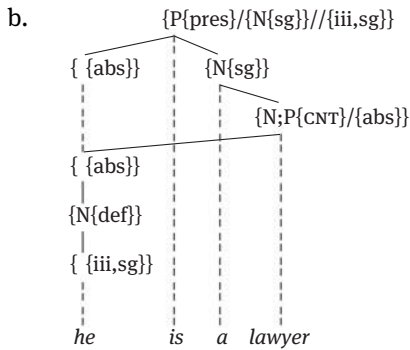
(18c) occupies just such a slot as that in (20a), as illustrated, in compact form, in (21), which ignores concord and much else.

(21)

```
                                              {P}
                                               |
                                        {P/{src}} ...................... { {loc}\{P/{src}}}
                                               |                              |
    { {src}} ........ { {abs}} .......... {P/{{src}}{loc}{abs}}        {N_T{TEMP}}
          |                |                    |
    { {loc{src}}}   { {loc{gol}}}         { {abs}}
          |                |                    |
      {N{def}}         {N{def}}         {N{exc}/{P//{N{0}}}}
          |                |                    |
    { {ego}}          { {tu}}            {P//{top}}
                                               |
                                              {P}
                                               |
               { {abs}}              {P/{N} {loc/{N{e}}} ....... { {loc}\{P{int,e}}}
                    |                      |                           |
                   {N}          { {abs}} { {loc}}               {N_i, T ⊆ i}
                    |              |        |
        { \{N{0}}}  {N{0}}        {N}    {N{int,e}}
             |         |           |        |
        {N{itf}}     {N;P}  { }
             |         |      |        |
          what       a   dancer he     is
```
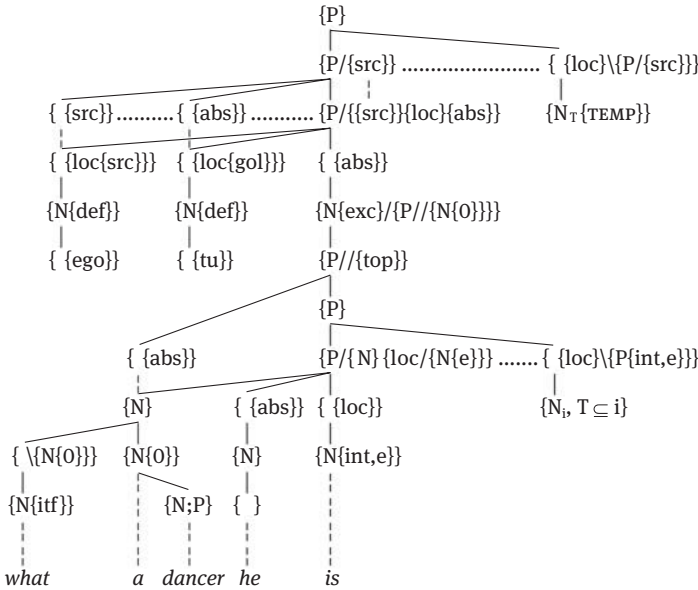
(19) and (21) are full predicational exclamatives, but exclamatives are not required to be such.

As well as exclamation by repetition and appropriate intonation, as in (22a.B), we can also say (22b–c).

(22) a. A: Mary's left him.   B: Mary's left him!
      b. How graceful!
      c. What a man!
      d. How well he dances

The intonationally signalled echo in B of (22a) nevertheless merits a full exclamative structure, as do (22b–c), even though in their case only the predicative adjective or nominal is overt. Intensification here is conveyed via specification of a functional category, overt or not. Similarly the adverb in (22d) is headed by a functor. The utterances in (22b–d) are quite acceptable and complete, provided the context makes clear the reference; their structure is mainly lexical. And there are even more compressed speech acts, of course, in the answer type of declarative, which of course presupposes a preceding question.

Among the most abbreviated answers are *yes* and *no*, but they too are nevertheless well-formed, as **answers** to questions concerning the existence (or truth value) of a proposition. They affirm or deny existence. Responses that are slightly less compressed, if somewhat stilted, are those in (23a), where *it* refers to a questioned proposition and *so* is existential – though, of course, *so* can confirm other aspects of structure.

(23) a.   It is (not) so

b.
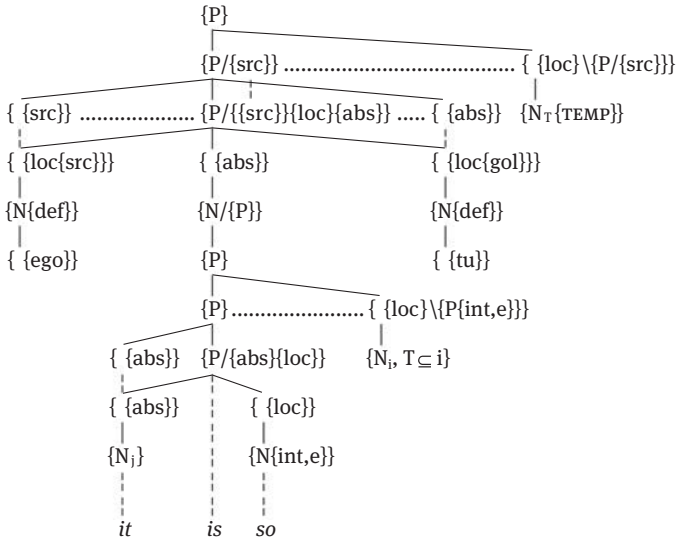
We find an interchange involving this construction on p. 158 of Trollope's *Nina Balatka* (Folio Society edition): 'And it is so – is it?' said the Jew, ... 'Yes, it is so,' said Souchey.' We might represent the latter part of positive answer as in (23b). *It* is co-indexed with the corresponding {N/{P}} in (15a), for instance.

Furthermore, as anticipated, *yes* on its own involves a fully lexical version of such a structure, as shown in (24), where the {N_j} requires a contextual question whose open truth value it corefers with and closes positively.

(24)

```
                              {P}
                              |
                      {P/{src}} ....................................... { {loc}\{P/{src}}}
                              |                                               |
    { {src}} ....................{P/{{src}}{loc}{abs}} ..... { {abs}}   {N_T{TEMP}}
        |                         |                            |
    { {loc{src}}}             { {abs}}                   { {loc{gol}}}
        |                         |                            |
    {N{def}}                  {N/{P}}                      {N{def}}
        |                         |                            |
    { {ego}}                  {P}                          { {tu}}
                                  |
                          {P{int,e}}..............{ {loc}\{P{int,e}}}
                                  |                         |
                          {P/{abs}{loc}}          {N_i, T ⊆ i}
                                  |
                          { {abs}} .... { {loc}}
                                  |            |
                              {N_j}        {N{int,e}}
                                  :
                                  :
                                yes
```
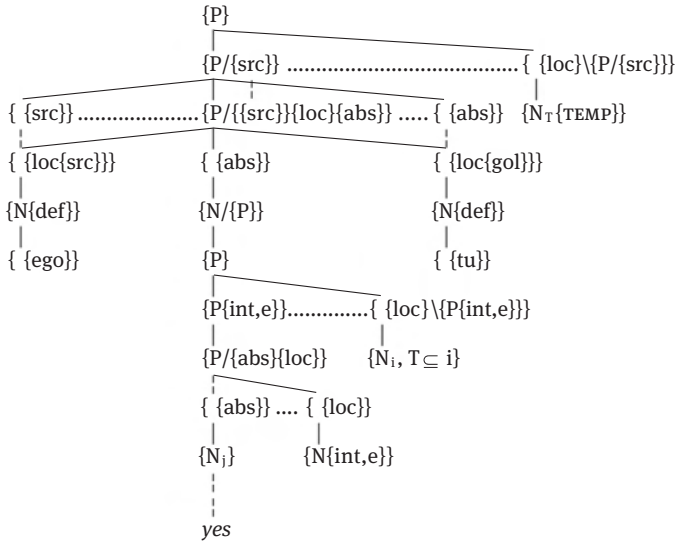
For *no* the existential would be polar negative { {{src}}}, 'out of existence'. (23) is fully predicational syntactically, but (24) involves a complex 'compressed' lexical predication where the truth of the preceding question is affirmed by co-indexing with its {0} element. The tense is obviously variable in accordance with the context, and such an answer may be tenseless (ignoring the time of utterance) if a 'universal truth' is at issue.

Answers to questions like that in (15b), which ask for **identification** rather than truth value, must be slightly different in form. An answer to (15b) – representing *When does Dolly fly to India?* – could be, apart from *Dunno*, the syntactic predications realized as (25a), but it might also be simply (25b), with only a functor phrase syntactically overt.

(25) a   Dolly/She flies (to Delhi) on Tuesday
      b.   On Tuesday

The full structure of (25a) is obvious, including cross-utterance asserted coreference, but what about (25b)? I suggest it too is a declaration that an event will occur 'on Tuesday', as in (26).

(26)

```
                              {P}
                               |
                  {P/{src}} ..................................... { {loc}\{P/{src}}}
                      |                                            |
   { {src}} ...................{P/{{src}}{loc}{abs}} ..... { {abs}}   {N_T{TEMP}}
       |                          |                        |
   { {loc {src}}}             { {abs}}                { {loc{gol}}}
       |                          |                        |
   {N{def}}                   {N/{P}}                  {N{def}}
       |                          |                        |
   { {ego}}                    {P}                     { {tu}}
                                |
                  {P/{loc/{N{int,e}}}} ........................... { {loc}\{P{int,e}}}
                      |                                            |
        { {abs}} .... {P}                                      {N_i, i > T}
                       |
                  {P/{loc{gol}/{N{int,e}}}} ..... { {loc}\{P}}
                      |                              |
       { {abs}}   { {loc{gol}}}                      |      {N}
          |           |                             |       |
       {N_j}       {N{int,e}}                        |      { _D}

                                                    on    Tuesday
```
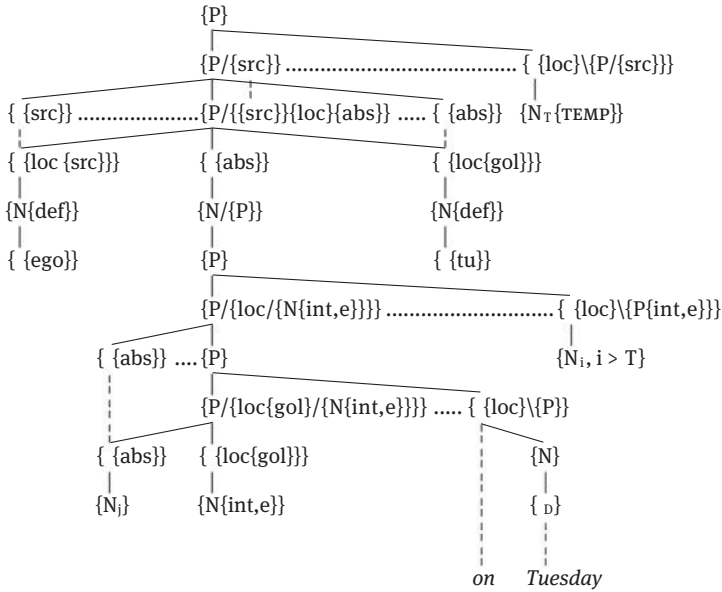
Here the overt functor phrase is categorized as modifier of the upper existential {P}, and the {N} attached to the lowest absolutive is asserted as coreferential with the finiteness determiner in the question. The lower existential is directional, an eventuative. Notice that the spines of these complex lexical structures with minimal expression are again functional.

But let us move on now to another mood-type, the English **optative** exemplified in (27a), which is another eventuative mood, like the imperative, but with a {P} dedicated to a wish for a permission – or, more weakly, possibility – in initial position, as shown in (27b), which omits the circumstantial.

(27)   a.   May she come back (soon)!

       b.


```
                        {P}
                  {P/{src}} ...................................... { {loc}\{P/{src}}}
      { {src}}.................. {P/{{src}} {loc} {abs}}..... { {abs}}    {N_T{TEMP}}
      { {loc{src}}}           { {abs}}              { {loc{gol}}}
      {N{def}}                {N{opt}/{P}}          {N{def}}
      { {ego}}                {P{pos}}              { {tu}}
                              {P/{P;N}{loc{gol}/{N{e}}}}
                              { {loc{gol}}}  { {abs}}   {P;N/{src{abs}}{{gol}}}
                              {N{int,e}}     { {src{abs}}}     { {loc{gol}}}
                                             {N}              {N}

                              may            she       come    back
```

       c.   Would that she were here!

       d.


```
                   {P}
               {P/{src}} ....................................{ {loc}\{P/{src}}}
   { {src}}........ {P/{{src}}{loc}{abs}}.......{ {abs}}   {N_T{TEMP}}
   { {loc{src}}} { {abs}}                  { {loc{gol}}}
   {N_i}         {N{opt}/{P}}              {N}
   { {ego}}      {P{vol}/{src{loc}}{abs}}  { {tu}}
                 { {src{loc}}} { {abs}}
                 {N_i{def}}    {N/{P}}
                 { {ego}}              {P/{loc} {{src/{N{int,e}}}}}
                                   { {abs}} {P/{{src}/{N{int,e}}}} ................{ {loc{src}}}
                                   { {abs}} {P/{abs}{loc}}  .... { {loc{src}}}  {N{int,e}}
                                   { {abs}}      { {loc}}         {N{e}}
                                   {N}          {N}

                 would        that he     were here
```
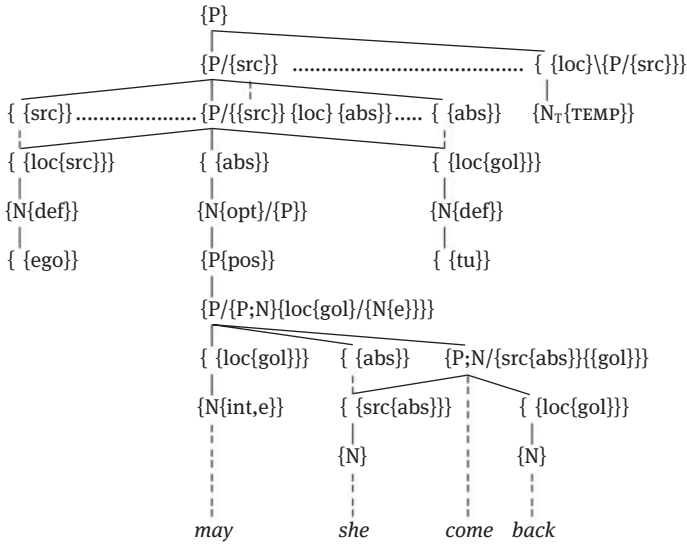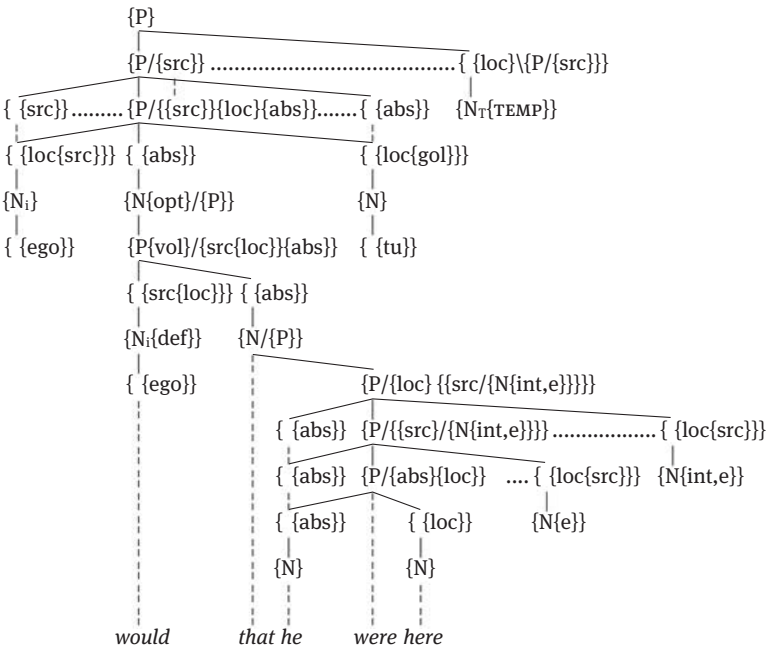
I have not expanded the nominals in this diagram that terminate the basic predi-
cation. The modals, including *may*, and their secondary features will be discussed
in the following chapter. The permission sense of *may* (discussed there) makes it
a suitable stronger expression for such a request to fate (or whatever). Similarly,
we can expand the *would* of (xii) in the commentary on Chapter 15, repeated as
(27c), as in (27d) – rather than the (xiii) suggested in that commentary. There is a
wish that the non-existence of a situation cease to exist; it is an optative **contra-
factive**, as expressed in the complex of existentials in (27d).

A final mood type to be considered here (though we are not being exhaustive)
introduces considerations that affect the representation of moods we've already
looked at. This other common mood is the **hortative** illustrated in (28a).

(28) a. Let's take the shortcut!

b.
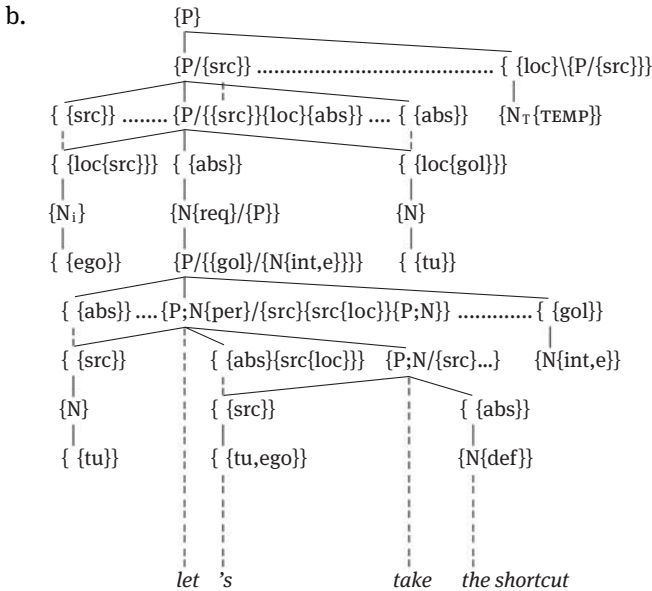
I take such a sentence to be a **req(uest)** for combined participation, rather than a
variety of imperative, as it is sometimes regarded. This gives us a structure along
the lines of (28b), where it is the requested-permission verb ({req}-{per}) that is
expressed overtly: I have abbreviated the structure of *take the shortcut*, as not
strictly relevant here. The second person source of *let* is not syntactically realized,

and the weak form of the participant that is (free-absolute/beneficiary) accusative object of *let* and subject of *take the shortcut* is now routinized as a suffix.

However, as I have commented, some traditional 'imperatives' are also better interpreted as requests. Examples might be those in (29a), with dedicated 'softener', or 'softening' interrogative tag.

(29) a. Please, come (to see me)/Open it, will you
      b. Let us pray

On the other hand, some 'hortatives', such as that in (29b), may be close to imperative, a 'sanctified' inclusive imperative. We might represent the formulaic (29b) as in (28b), but with the source of *let* not independently expressed, and with the solemnity of the locution expressed by the absence of weakening of *us*.

Not only basic hortative and optative and some imperatives can be requests as well as orders etc.; moods can be of different strengths by combining or not combining. This facilitates the development of conventional indirect moods, such as the familiar indicative requests or 'rhetorical questions', such as Antony's 'Did this in Caesar seem ambitious?', cited in Chapter 34. Moreover, interrogatives, in particular, are also commonly requests, typically requests for an answer, and so far our representations of interrogatives do not incorporate this. Further deconstruction of the mood structure seems to be necessary for many interrogatives.

This property of interrogatives is provided for if we expand a structure like that in (15a), for instance, as in (30a), a request to be told something, in this case the truth value of a proposition.

(30) a.

{P}

{P/{src}} ....{ {loc}\{P/{src}}}

{ {src}}...............{P/{{src}{loc}{abs}} .... { {abs}}   {N_T{TEMP}}

{ {loc{src}}}   { {abs}}   { {loc{gol}}}

{N_i}   {N{req}/{P}}   {N}

{ {ego}}   {P/{{gol}/{N{int,e}}}}   { {tu}}

{ {abs}}..............{P/{abs}{loc{{src}}}} .... { {loc{gol}}}

{ {loc{gol}}} ..... { {abs}}.....................{ {loc{src}}}   {N{int,e}}

{N_i}   {N{value://0}/{P}}   {N}

{ {ego}}   {P}   { {tu}}

{P{0}/{P;N}} ....{ {loc}\{P/{loc/{int,e}}}}

{ {abs}}   {P;N/{src{loc}}{abs}}   {N_i, T ⊆ i}

{ {src{loc}}}   { {abs}}

{N}   {N{def}}

does   Dolly   like   Mr Drear?
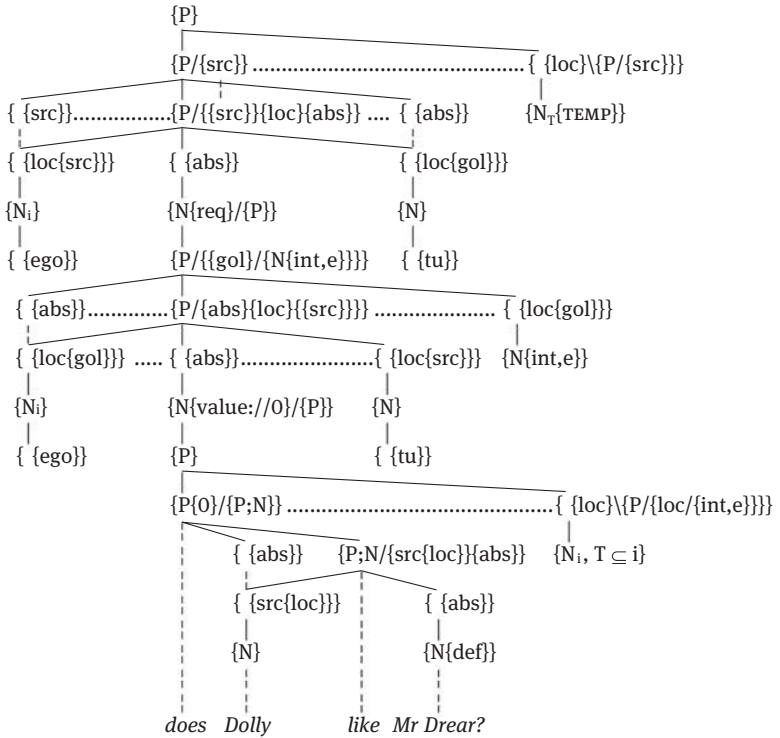
b. She left, didn't she?/She didn't leave, did she?

c. She left, did she?

d.

{P{decl}}

{P}

{P/{loc/{N{int,e}}}}   {P/{P{q}}\{P/{loc/{N{int,e}}}}}

{ {abs}}   {P:N_i/{src{abs}}}   { {abs}}

{ {src{abs}}}   {N{value/{P}0}}

{N_j}   {P{0}/{{src}/{N{int,e}}}}

{P:N_i/{src{abs}}}

{ {src{abs}}}

{N_j}

she   left   didn't   she
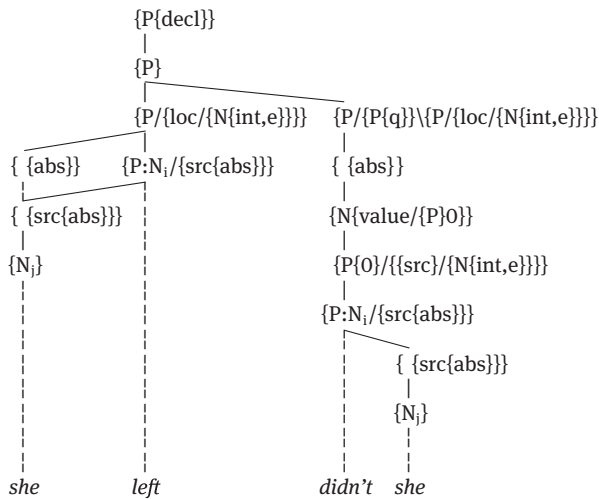
In (30a) the structure of the mood is considerably extended to accommodate the request for an exchange of information.

As with the 'softening' tag of the second imperative in (29a), declaratives can also be tagged, with the apposed operative tag reversing the polarity of the preceding predication, as in (30b). The tagged constructions in (30b) typically seek confirmation, but they may, as (30c) is, be an aggressive response. The first sentence in (30b) is represented, in (30d) in tense-ignoring abbreviated form, with particularly also compression of the moods, as anticipated in (vi) of the commentary on Chapter 17, with the tag-defining property of a polarity-reversing existential and a combination of moods, and two paired indices. Thus, there is an apposed request to provide a value for the {P;N$_i$} feature to be located lower in the structure, both of which are co-indexed with the existential in the indicative.

Even more complex mood structures are obviously involved in the linguistic representation of indirect speech acts, which invoke the non-linguistic context but can be routinized, as with rhetorical questions or requesting declaratives. And the interpretation of the crude labels I have given the moods will also depend on the situation and the linguistic context, and especially the relationship between the speech act participants. But let us now move on from the mood section of the path of finiteness, to the existential segment, which can also display some depth.

In Chapter 15, the representation for 'sentence negation' was given in (I.170c), where the expression of a negatively-oriented existential ('out of existence') involved subjunction to an independent operative, as with constructions showing 'inversion' of the verbal and subject, including 'tag-questions', and the negation is expressed by a suffix to the operative. In what follows, I repeat it and offer other relevant representations, persisting in ignoring the mood section above the existential, as well as reverting to presenting tense as a feature on verbals.

First, then, (I.170b–c), where we can compare the positive and negative representations.

(I.170)   b.

$\{P\{past\}/\{P;N\{past\}\}\{loc/\{N\{int,e\}\}\}\}$

$\{~\{abs\}\}$ $\{P;N/\{src\{abs\}\}\}$ .... $\{~\{loc\}\}$

$\{~\{src\{abs\}\}\}$ $\{N\{int,e\}\}$

$\{N\}$

Dolly   *arrived*

c.
```
                    {P{past}/{P;N}{loc{src}/{N{int,e}}}}
            ┌───────────────────┼───────────────────┐
     { {abs}}            { {loc{src}}}          {P;N/{src{abs}}}
        │                      │                      ┆
   { {src{abs}}}          {N{int,e}}                  ┆
        │                      ┆                      ┆
      {N}                      ┆                      ┆
        ┆                      ┆                      ┆
      Dolly                  didn't                arrive
```
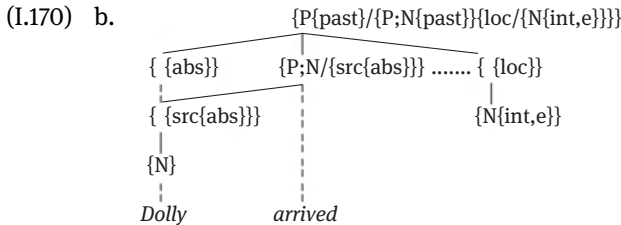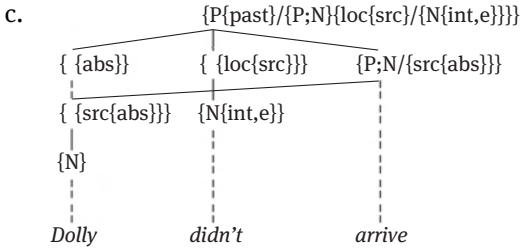
(I.170b) provides the provisional suggested structure for simple indicatives, where the positively-oriented existential requires no operative, but is expressed simultaneously with the verb. The provisional valency of the verb is also not relevant here. In (I.170c) the negative existential incorporated in the {P} is expounded by a suffix.

The expression of emphatic/contrastive/denying in (I.171a) involves two negative existentials, one above the other; the structural bulk of the sub-mood, or propositional, section of the finiteness component (enclosed within the irregular box) thus serves, iconically, to intensify the force of the (re-)affirmation, in this instance by denying of a denial, though, for emphasis, often a positive re-affirmation of an affirmation may be more appropriate with respect to the context.

(I.171) a.
```
                    {P/{P}{loc{src}/{N{int,e}}}}
            ┌───────────────┼──────────────────────────────────┐
     { {abs}}     {P/{P;N}{loc{src}/{N{int,e}}}} ........... { {loc{src}}}
        │         ┌──────────┼──────────────┐                    │
     { {abs}}  { {loc{src}}}       {P;N/{abs}}             {N{int,e}}
        │           │                  ┆
     { {abs}}   {N{int,e}}             ┆
        │           ┆                  ┆
      {N}           ┆                  ┆
        ┆           ┆                  ┆
      John         did               survive
```

b.
```
                    {P/{P}{loc/{N{int,e}}}}
            ┌───────────────┼────────────────────────────┐
     { {abs}}     {P/{P;N}{loc{src}/{N{int,e}}}} ........ { {loc}}
        │         ┌──────────┼──────────────┐                │
     { {abs}}  { {loc}}          {P;N/{abs}}           {N{int,e}}
        │           │                  ┆
     { {abs}}   {N{int,e}}             ┆
        │           ┆                  ┆
      {N}           ┆                  ┆
        ┆           ┆                  ┆
      John        didn't             survive
```
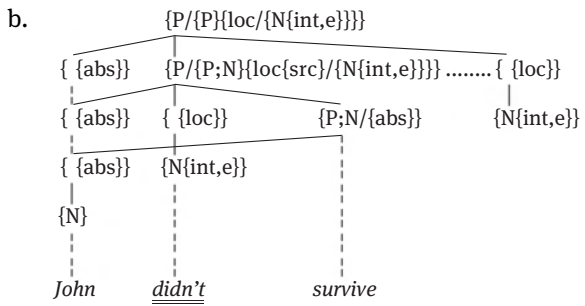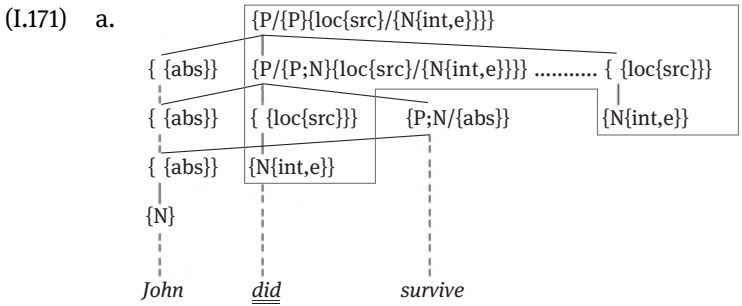
(I.171b) emphasizes or re-affirms a negative proposition, again involving two existentials, but with only the lower one negative.

However, the overt negation that is denied by the morphological negative in (31) contributes an iconic lexico-syntactic force to the contradiction.

(31)
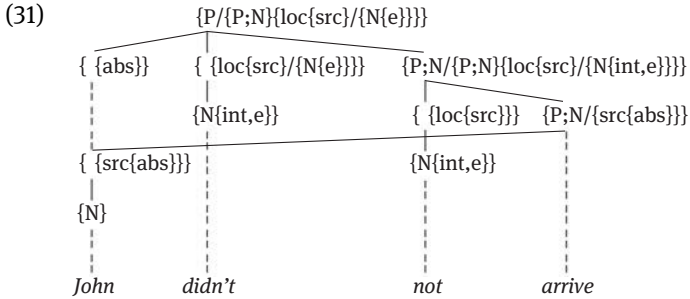
The separate *not* is a non-finite negative-existential {P;N} governing the other {P;N}, in conformity with English serialization. Such a *not* regularly precedes non-finites, as in *His not arriving creates a problem* or *I expect him (not) to (not) arrive*.

(31) also embodies rather obviously an instance of the topic we are next concerned with, **scope** within syntax. Here the overt negative modifying the non-finite is within the scope of the negative subjoined to {P}, expressed by relative height in the tree, just as are the recursive tense representations illustrated most fully in (17). However, before proceeding to this new topic, scope, there is another aspect of the behaviour of negatives that requires our attention.

The non-finite negative is expressed as a word, whereas thus far the finite (sentential) negative has been treated as a suffix on operatives, as in (31). As with other base suffix combinations, there is often frotting between verb base and negative suffix: *don't, won't, mustn't, ain't*. But even when the operative and the negative are adjacent syntactically, we can find a whole-word expression of primary negation, which is usually more formal, as in (32a).

(32) a. Dolly did not arrive

b.

{P{past}/{P;N}}

{ {abs}}   {P;N/{P;N}{loc{src}/{N{int,e}}}}

{ {loc{src}}}   {P;N/{src{abs}}}

{ {src{abs}}}   {N{int,e}}

{N}

Dolly   *did*   *not*   *arrive*

c. Did Dolly not arrive?

d. {P{q}//{0}/{P/{P;N}{loc/{N{int,e}}}}}

{P{0}{past}/{P;N}}

{ {loc}}   { {abs}}   {P;N/{P;N}{loc{src}/{N{int,e}}}}

{N {int,e}}   { {loc{src}}}   {P;N/{src{abs}}}

{ {src{abs}}}   {N{int,e}}

{N}
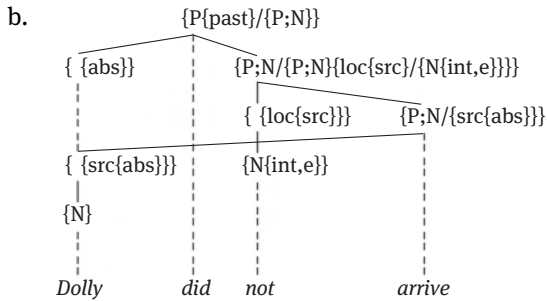
did   *Dolly*   *not*   *arrive*
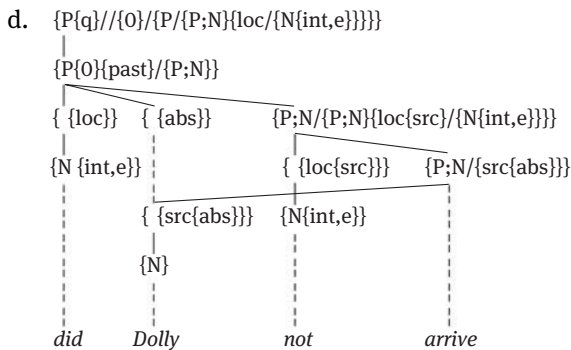
Again *not* is treated as a defective verb in (32b), one that occurs only as a non-finite, just as modal operatives, including the negative ones, are only finite. In certain contexts, the *not* existential in (32b) could be adjoined to and separated from a positive existential associated with *did*. The independent syntax of *not* is illustrated in (32c), which has been given the representation in (32d).

It is well-known that (31) shows two developments of the adverb converted from the negative noun *nought*. *Not* in (31) is the adverb converted to a non-finite verb whose valency it satisfies internally, and this non-finite takes another {P;N} as complement; and *-n't* derives negative from positive operatives, and it is realized as a suffix that is in contrast with its absence. No doubt the latter developed via cliticization, a diachronic process associated with implementation, which subordinates a word, by phonological weakening, with respect to an adjacent, usually preceding, accented form. The subordination seems to be grammaticalized. This development can sometimes be shown to proceed via compounding; and indeed English still has the 'orthographic compound' *cannot*, at least. And *cannot* ('not possible') can be contrasted prosodically with *can not* ('possibly not').

Indeed, *not* can also be adjoined to an adjacent operative, as in (32b), but if it were to be treated as part of a compound that also contains the operative, the compound would have to be a separable one, given the structure in (32d). Such 'inversions' as *Did not Dolly ever arrive?* and even *Cannot Mary be present at the performance?* are now 'old-fashioned', though in not too much earlier English, 'inversion' commonly could involve the whole 'compound', as in Thackeray's 'Has not Mr Brough five hundred thousand pounds' worth of shares …' (*The Hoggarty Diamond*, Chapter IX). Does *not* in present-day English form a separable compound with operatives? We return to negatives in Chapter 41.

Even more striking scope phenomena than those associated with simple negations are associated with quantifiers, including their interaction with negation. Quantified elements such as those in (III.107), from Chapter 33 are indeed (over-?)familiar from discussions of scope.

(III.107) a. Every guest liked some of the dishes
           b. Some of the dishes pleased every guest
           c. Some of the dishes every guest liked

As observed in Chapter 33, the second, and lower, of the quantifiers is hierarchically within the scope of the first, and this correlates with conceptualization of the relative inclusiveness of *every* and *some*; in particular the conveying that in (III.107a) but not (III.107b) it is not necessarily the same set of dishes that each of the guests was pleased with.

It was suggested there that the paraphrases in (III.108a–b) make this scope relation even clearer.

(III.108) a. There is no guest (that) didn't like some of the dishes
           b. There are some of the dishes (that) pleased every guest
           c. There is no guest (that) there weren't some of the dishes (that) he liked
           d. There are some of the dishes that there was no guest they didn't please

And it was suggested further that the clumsy paraphrases in (III.108c–d) make the hierarchy of existentials clearer still. This paraphrase, including the overt deconstruction as a double-negative of *every*, is the starting point for characterizations of the examples in (III.107).

Representations for (III.107a–b) are presented in (34), and I leave it to the reader to have a go at (III.107c), with the marked topic. But before we confront these I provide simpler-to-absorb examples in (33), with one increasingly complex

quantifier, where I have ignored mood and tense, and where the existential predications with entitative absolutives are simplified, as usual.

(33) a.

```
                        {P/{loc/{N{int,e}}}}
        { {abs}}      {P/{{src}/{N{int,e}}}{abs/{Nᵢ}}}
                        {P/{{src}/{N{int,e}}}} ................. { {abs}}
        { {abs}}    {P;N/{src{abs}}} ...... { {loc{src}}}    {Nᵢ}
        { {src{abs}}}                        {N{int,e}}
        {Nᵢ{sg}}
        { {human}}

          everybody      left
```

b.

```
                        {P/{loc/{N{int,e}}}}
        { {abs}}      {P/{loc/{N{int,e}}}{abs/{Nᵢ}}}
                      {P/{abs}{loc}} ..... { {abs}} ..... { {loc}}
        { {abs}}              { {loc}}    {Nᵢ}       {N{int,e}}
        {Nᵢ{pl}/{src}}                     {N{det}}
              { {src}}                      {N{sg}/{src}}
              {N{pl}}                            { {src}}
              {N;P}                               {N}
                                                  {N;P}

        some   cups      are    in     the  cupboard
```

c.

```
                        {P/{loc/{N{int,e}}}}
        { {abs}}      {P/{{src}/{N{int,e}}}{abs/{Nᵢ}}}
                      {P;N/{src{abs}}} ..... { {abs}}...... { {src}}}
        { {src{abs}}}                         {Nᵢ}        {N{int,e}}
        {Nᵢ{sg}}
        { {human}}

          nobody        left
```
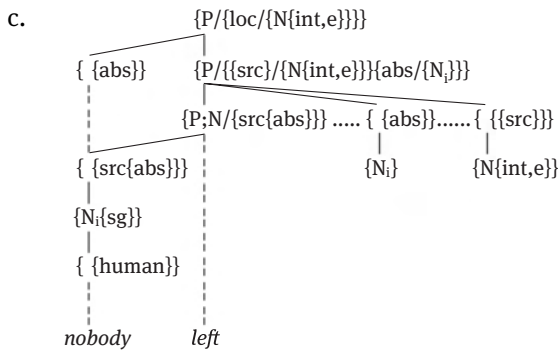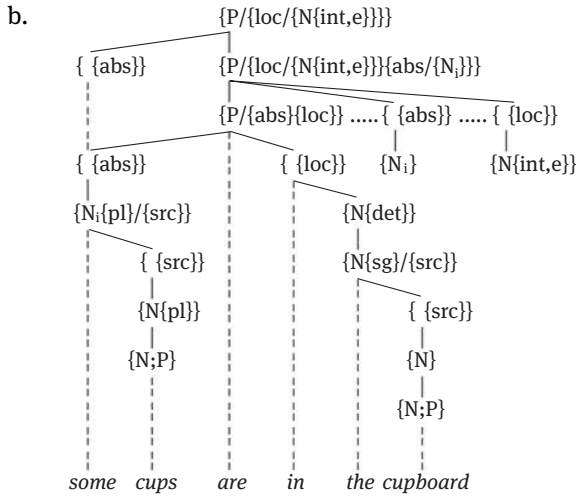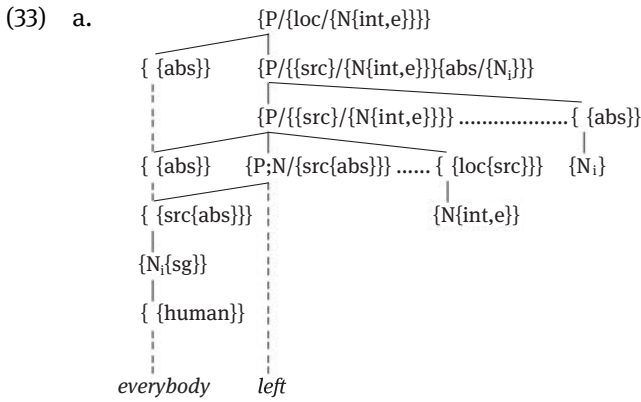
In (33a) the absolute valency of the lower, what I shall refer to as **entitative** or argument existential, is satisfied internally by a {N} coreferential with the subject, and the absolutive of the lowest {P} is hosted by the free absolutive of the basic, propositional existential {P} at the root. In (33b), where the potential directional arguments of the verb are ignored, the entitative existential is negative. In (33c) there is in addition a lower negated proposition. A 'universal' quantifier is one that involves this double negation configuration in (33a), with both a negative entitative existential and a regular existential.

Now for (34), involving two quantifiers, a universal and a simple positive, but ignoring the internally satisfying entitative existential phrases, as at the top of (34a).

(34) a.

$$\{P/\{loc/\{N\{int,e\}\}\}\}$$
$$\{\ \{abs\}\}\quad \{P/\{\{src\}/\{N\{int,e\}\}\}\{abs/\{N_i\}\}\}$$
$$\{P/\{\{src\}/\{N\{int,e\}\}\}\} \dots\dots\dots\{\ \{abs\}\}$$
$$\{\ \{abs\}\}\quad \{P/\{loc/\{N\{int,e\}\}\}\{abs/\{N_j\}\}\}\ \{N_i\}$$
$$\{P;N/\{src\{loc\}\}\{abs\}\} \dots \{\ \{abs\}\}$$
$$\{\ \{src\{loc\}\}\}\qquad \{\ \{abs\}\}\qquad \{N_j\}$$
$$\{N\{def\}\}\qquad \{N_i\{pl\}/\{src\}\}$$
$$\{N_i\{sg\}/\{src\}\}\qquad \{\ \{src\}\}$$
$$\{\ \{src\}\}\qquad\qquad \{N\{def\}\}$$
$$\{N\}\qquad\qquad \{N/\{src\}\}$$
$$\{N;P\}\qquad\qquad \{\ \{src\}\}$$
$$\{N\}$$
$$\{N;P\}$$

every   guest   liked   some   of   the   dishes

b.

$$\{P/\{loc/\{N\{int,e\}\}\}\}$$

$$\{\ \{abs\}\}\qquad \{P/\{loc/\{N\{int,e\}\}\}\{abs/\{N_i\}\}\}$$

$$\{P/\{\{src\}/\{N\{int,e\}\}\}\{abs/\{N_j\}\}\}\ ....\ \{\ \{abs\}\}$$

$$\{P/\{\{src\}/\{N\{int,e\}\}\}\}\ ......\ \{\ \{abs\}\}\qquad \{N_i\}$$

$$\{\ \{abs\}\}\qquad \{P;N/\{src\}\}\qquad\qquad\qquad \{N_j\}$$

$$\{\ \{src\}\}\qquad \{P;N/\{src\{loc\}\}\{abs\}\}\quad \{\ \{abs\}\}$$

$$\{N_i\{pl\}/\{src\}\}\quad \{N\}\qquad\qquad \{\ \{src\{loc\}\}\}$$

$$\{N\{def\}\}$$

$$\{N_j\{sg\}/\{src\}\}$$

some   of ...   pleased   every guest
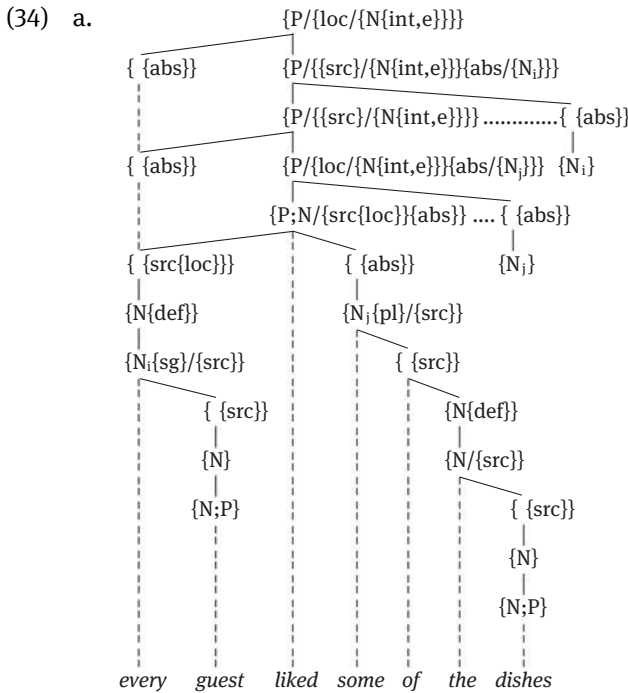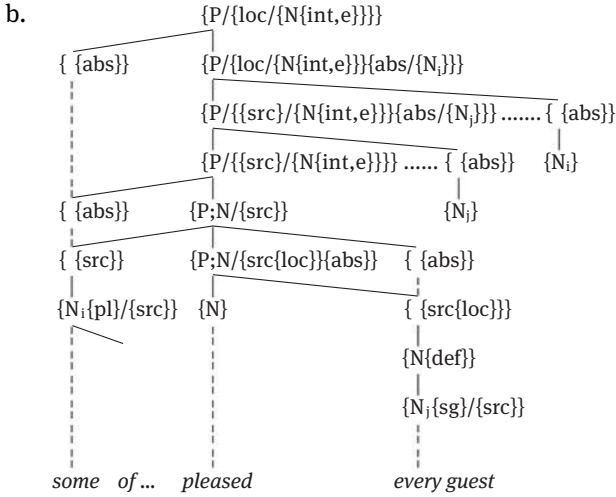
These follow the same pattern as in (33) but involve two entitative existentials. (For simplicity I have abbreviated the nominals, particularly in (34b)). In these representations i < j, i has j in its scope, by virtue of being required by valency of the highest entitative existential. In (34a) the two absolutives of the negative existentials are satisfied in different ways by the 'experiencer' *every guest* (it's not the case that no guests ...), and the free absolutive of the positive entitative existential is satisfied by co-indexing with the absolutive *some of the dishes*. In (34b) the co-indexing of highest entitative existential absolutive is with the subject of *pleased*. The height in the hierarchy of these absolutives iconizes scope lexically, and this is expounded iconically in the syntax in terms of structural and linear precedence.

The construction at the interface of such representations requires that an absolutive of an entitative existential {P} is part of the syntactic requirements of an 'existential' quantifier given in the lexicon, whereas 'universal' quantifiers require two negative existential absolutives, one of which is entitative-linked. We might envisage such lexical entries as the results of redundancy (35), where the downward arrow represents subordination rather than simple dependency.

(35)   a.

$$\{P/\{loc/\{N\{int,e\}\}\}\{abs/\{N_i/\{src\}\}\}\}$$
$$\downarrow$$
$$\{N_i/\{src\}\}\ \Leftrightarrow\ \{N_i/\{src\}\}$$

b.   {P/{{src}/{N{int,e}}}{abs/{N$_i$/{src}}}}
                     |
                     {P/{{src}/{N{int,e}}}}
                     ↓
   {N$_i$/{src}} ⇔ {N$_i$/{src}}
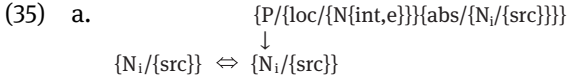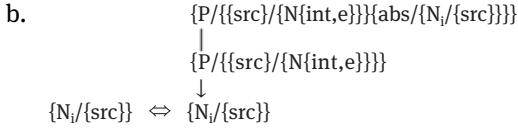
The {N/{src}} may be singular or plural and simple determiner or pronoun. This is another aspect of lexical entries that simplifies the syntax at the same time as having a notional basis. We return below, in Chapter 40, to further motivations for the 'double-negative' analysis of universal quantifiers.

It behoves us too to look more closely at the constructions in (III.108).

(III.108) a. There is no guest (that) didn't like some of the dishes
           b. There are some of the dishes (that) pleased every guest
           c. There is no guest (that) there weren't some of the dishes (that) he liked
           d. There are some of the dishes (that) there was no guest didn't like

We are concerned with the structure in (36a) (often preferred to the semantically related (33a)), for which I suggest (36b).

(36) a. There are some cups in the cupboard

b.
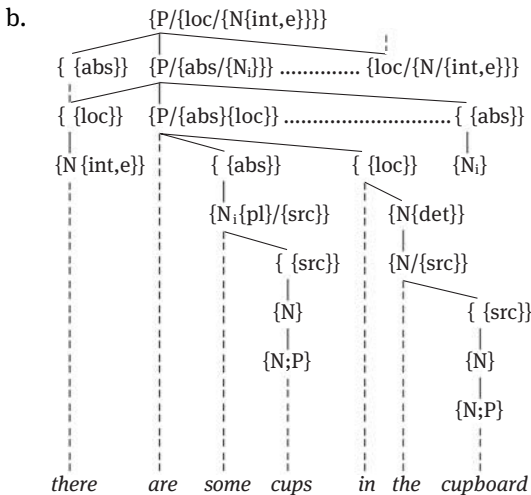
c. There's some cups in the cupboard

d.
```
              {P/{loc/{N{int,e}}}}
              |                        |
{ {abs}}  {P/{abs/{Nᵢ}}} ............. {loc/{N/{int,e}}}
   |          |                              |
{ {loc}}  {P/{abs} {loc}}.......................{ {abs}}
   |          |                                   |
{N {int,e}}  { {abs}}                            {Nᵢ}
              |
             {N}
              |
          {Nᵢ{pl}/{src}}        {N{det}/{P}}
              |                     |
           { {src}}               {P}
              |                     |
             {N}                  {P:N}
                                    |
                             { {src}}  { {src{loc}}}
                                |          |
                               {Nᵢ}       {N}

there    's/are  some  of  the dishes  pleased  John
```
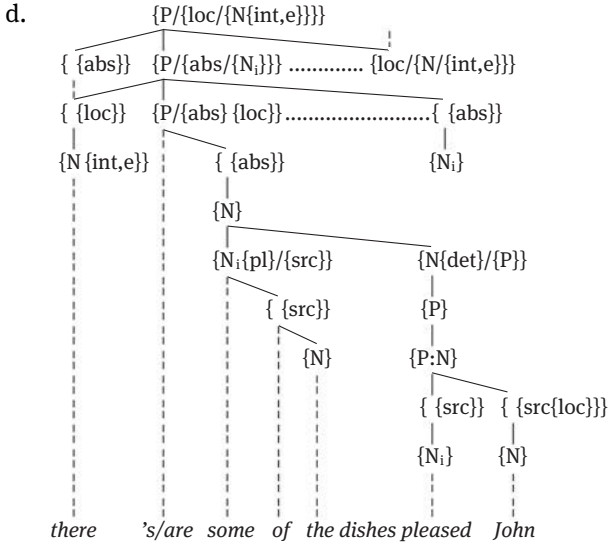
An existential predication is interpolated below the normal propositional existential at the root (we ignore mood). The locative of the interpolated {P} is lexically linked to the absolutive of the existential, as indicated by the association above the {loc} in the valency of the interpolated {P}. This locative thus 'displaces' as subject the absolutive of the interpolated {P}, and this absolutive is expressed post-verbally (as shown in (36b)). Existential structures are often distinctive in their syntax. What we seem to have in (36b) is a routinized topical existential locative, which, though in 'subject position', and 'invertible', doesn't control concord. In (36b) concord is determined by the 'displaced subject', the hierarchical subject; but concord is often lacking, particularly colloquially, but increasingly in general, as exemplified in (36c).

(36d) then offers a representation closer to what would be suitable for the *there*-sentences we have been looking at – though I have simplified the lower lexical structures here. If normal concord fails, then the copula would ultimately be realized as *there's*, with *there* as stem and *'s* an inflection.

A predicational existential occurs in (37a), with a structure as given in (37d), though it may be fortified by overtness of a full existential locative, as in (37b).

(37) a. There are trolls
      b. There are trolls in existence
      c. Trolls exist

d.

```
                        {P/{loc/{N{int,e}}}}
                     ╱              │         ╲
          { {abs}}   {P/{abs}.....................{loc/{N{int,e}}}
              ┊            ╱          ╲
          { {loc}}  ┊  { {abs}}
              ┊     ┊      │
         {N{int,e}} ┊   {N{pl}}
              ┊     ┊      │
              ┊     ┊    {N;P}
              ┊     ┊      ┊
              ┊     ┊      ┊

           there      are   trolls
```
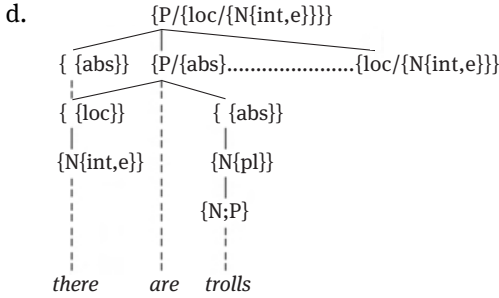
As elsewhere, I take it that existence is an undefined – or undefinable – place.

There is also a verb (rather than a copular) existential, as in (37c), the base of the existential noun in (37b). Like the *there is* … structure, however, it can be associated with worlds that are of varying inclusiveness (or exclusiveness), i.e. more defined than simple existence, as in (38a) – cf. (38b) – and, as we have seen, negative existence can be expressed predicationally or by an argument, as in (38c–d).

(38)   a.   Trolls exist in Norway
       b.   There are trolls in Norway
       c.   There aren't trolls (in existence)
       d.   There are no trolls (in existence)

There are, however, other aspects of the finiteness complex we must now pursue.

But let us note finally here that the second component in *whoever* and the like is a clue to another aspect of the double-negation account of universal quantification.

(39) a.

```
                                                        {P/{loc/{N{int,e}}}}
        { {abs}}                                        {P/{{src}/{N{int,e}}}{abs/{Nᵢ}}}
                                                          {P/{{src}/{N{int,e}}}}.....{ {abs}}
        { {abs}}                                        {P;N/{src{loc}}}              {Nᵢ}
        { {src{loc}}}                                         { {abs}}
        {Nᵢ/{src}}                                            {Nₖ{def}}
        { {src}}................{N/{P}\{N/{src}}}
        {Nᵢ{sg}}              {P/{loc/{N{int,e}}}}
        { {human}}            {P//{top}}
            { {abs}}        {P;N/{src}{abs{loc}}}
            { {src}}              { {abs{loc}}}
            {Nᵢ{top}}             {Nₖ}
            { {human}}            { ₐ}

         whoever           met  Anne            loved  her
```

b. {N{def}
    |
    {N{0}/{src}}
    { {src}}
    |
    {N}
    |
    { {human}}

c. Whoever punched him was very strong

Of course there is an alternative interpretation of the form *whoever* with a non-definite relative antecedent, as in (39b), perhaps clearer if we change lexical items, as in, say, (39c).

In the course of the following chapter we shall encounter a rather similar construction to *there is ...* that has a role in providing further illumination of some apparent problems in subject-selection. Our look in this final part of the present

chapter at the existentials in the lower part of the finiteness path and elsewhere follows on from the brief survey we had of its role in Chapter 15, in particular, as well as from the Prelude to Part IV. And the chapter that follows now complements from a different perspective the discussion of mood, negation, contrast, and scope of tense and quantification that has also occupied us.

Chapter 36
Subject-Selection, Notional Weakening, and Grammatical Periphrases

subject-selection hierarchy – locative subjects – 'weakening' in phonology and syntax – periphrastic *be* and *have* – modals and periphrasis – 'unreal' conditionals – stativity and the sequence of operatives – operatives and 'affective' contexts – subject-operative concord

In Chapters 4 and 5 I gave the formulation of the subject-selection hierarchy repeated as (I.45).

(I.45)   *SUBJECT-SELECTION HIERARCHY*
         src < abs <

But, as acknowledged in Chapter 5, the hierarchy need be extended no further than absolutive, given the predicational universality of the latter.

(40)   *SUBJECT-SELECTION HIERARCHY*
       src < abs

However, there are apparently problematical instances. Holistics like (I.43a) are not such, in that in being derived from the verb in (I.43c), though gaining a holistic (locative dominated) absolutive, the verb loses the simple absolutive in favour of a circumstantial, as was suggested in Chapter 26 in the form of (II.146b).

(I.43)   a.   The basement flooded
         b.   Water flooded into the basement

(II.146)   b.   {P;N/{abs}{loc{gol}}}   ⇔   {P;N/{loc{gol{abs}}}}

But the derivational relation, by conversion, is more transparent if we use the usual format in (41), which also allows for non-directional locatives, and to which I've added the optional absolutive circumstantial.

(41)   {P;N/{loc{abs}}}<{abs\...}>
                                        |
         {P;N/{abs}{loc}}   ⇔   {P;N/{abs}{loc}}

However, there are instances of predications where there are apparently two secondary absolutes in a single predication.

Again, this is not problematical in equatives such as those in (42a–b) (i.e. (iii) and (iv) in the notes to Chapter 4).

(42) a. The tall man is her brother
      b. Her brother is the tall man

Here subject selection is determined pragmatically, as is appropriate to the discourse or preceding assumed knowledge. Thus both (42a) and (42b) are available. But sometimes the less familar or obvious is placed first: we can differentiate marked vs. unmarked subject selection within a context.

However, this does not seem appropriate in other circumstances where there are two equipollent absolutes but subject selection is determinate.

(I.43) d. The water reached the ceiling
       e. The chairs got a lick of paint

Let's look firstly at (I.43d). The final argument is notionally contactive, {abs{loc}}, and the subject with such a verb is usually agentive as well as absolutive (as denoting a self-motivated moving entity); but it's not obvious that this is the case here, rather than the subject being a simple absolutive (unless we appeal to metaphor, perhaps). The situation might become clearer if we address (I.43e) and similar examples.

These examples, which include such as those in (43), apparently have a non-absolutive subject and a non-subject absolutive.

(43) a. The party includes a priest
      b. The box contains nails
      c. The envelope enclosed an anonymous letter

The subject is a pluridimensional locative. In other present-day examples the subjects of these verb forms are all agents; and the structure is predicationally complex. That is, we have the likes of (44).

(44) a. She included a nominal priest (in the party)
      b. The army contained the attack
      c. He always encloses a flower (in the shopping)

All three have agentive subjects, but in (44b) there is not usually a potential distinct locative optionally expressed.

And we might suggest a lexical structure such as that in (45a) for causative *contain*, where the locative is linked to the agent, giving the structure shown in (45c) for the sentence in (44b).

(45) a.   {P;N/{src}}
           | |
           {P;N/{loc/{N{int}}}{abs}}

      b.   {P;N}
           | |
           {P;N/{abs}{loc/{N{int}}}}

      c.   {P}
           { {abs}}   {P;N/{src}}
           { {src}}   {P;N/{loc/{N$_i${int}}}{abs}}
           { {loc}}   { {abs}}
           {N$_i${int}}   {N}

           the army contained   the attack
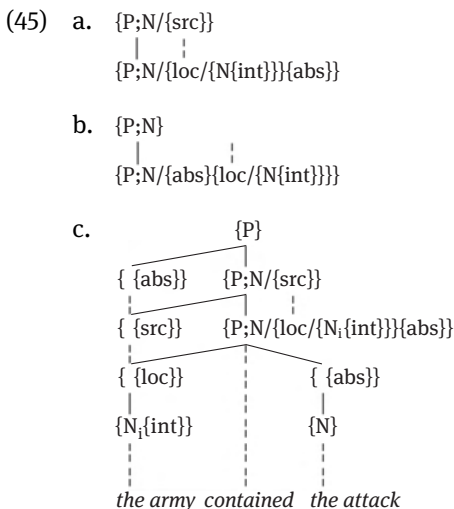
In the other examples in (44) the lower locative is overtly present optionally, but there are interpretations which involve behaviour like that of (44b), as in dynamic examples such as *Russia enclosed Crimea*, or the passive *She was forcibly included by the others*.

I suggest that what has happened, most obviously in the history of (43b), is an analogy to the 'weakening' that we are familiar with in phonology. 'Weakening' in phonology involves loss of distinctions in particular environments, such as among vowel distinctions in the noisy environment of following nasals or under low stress. We have a loss in the categorial complexity of the vowels in the subsystem operative in such environments. With the verb in (43b) there is a simplification of categorial structure via generalization in usage of the scenes in which they can be employed; agency need not be involved. But there is scarcely appeal to a 'noisy environment'.

A similar thing can happen in distributional as well as morphological systems, however, when the marker for agentive topics is generalized to other functor types, specifically, in the absence of {src}, absolutives in general, in the development of subjecthood. The nominative is deprived of categorial specificity.

Generalization of the verbs in (43) involves suppression of the non-locative source in (44b)/(45a), giving (45b). Specifically, the result of the causative in (45a) is a state of interiority, and the weakening creates a formulation of the resultant state in which the interiority retains its prominence, which would be obscured by regular subject-formation. The valency of the upper verb in (45b) has no participant requirements with loss of {src}, and the notionally prominent locative of the lower {P;N} (expressed by the prefixes) is linked upwards in the lexicon (as anticipated in Chapter 32); and so it will be attached to that empty absolutive, which fills the empty link, and compensates for the dearth of participant valency. It will therefore attain subject position, as represented in (46a), a stative with an interior locative subject.

(46)   a.

```
                       {P}
        ┌──────────────┘
   { {abs}}        {P;N}
   { {abs}}        {P;N/{abs}{loc/{N{int}}}}
   { {loc}}                  { {abs}}
   {N{int}}                  {N}

   the party      includes    a priest
   the box        contains    nails
   the envelope   encloses     an anonymous letter
```

   b.

```
                       {P}
        ┌──────────────┘
   { {abs}}        {P;N/{abs} {loc/{N{int}}}}
   { {loc}}                  { {abs}}
   {N{int}}                  {N}

   the party      includes    a priest
   the box        contains    nails
   the envelope   encloses     an anonymous letter
```
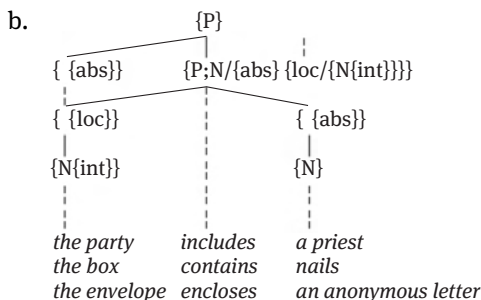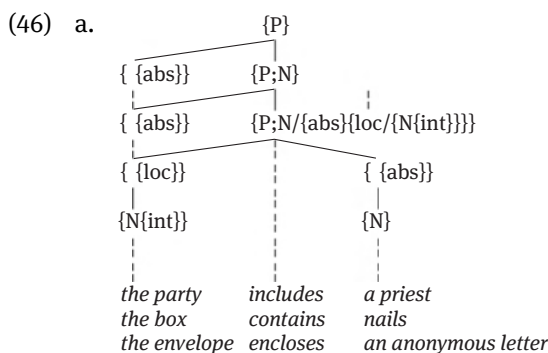
   c.   It was contained/included/enclosed (in the letter)

The linking device opens subjecthood to stative container locatives, whose function is central to the meaning of the predication, even if the agent and the interior locative are not lexically linked, as in (44a,c). It is plausible that (46a) simplifies further, given that the upper {P;N} is contentless. In (46b) the participantless upper {P;N} is lost. Some support for the transitive structure in (46b) comes from

the possibility of a passive diathesis, as exemplified in (46c), with the absolutive of (46b) as subject and the locative corresponding to a circumstantial that can be non-overt in appropriate contexts, and only unusually with *contained*. This is perhaps as a reflection of the link in (45), not normal with (44a,c), where the lower subject of the lower {P;N} of the causative is an absolutive whereas *the army* contains the attack 'in itself' as subject. There is a link between causative agent and locative. The linking in non-causatives would then have spread from *contain* to the other two.

What I've been suggesting is not an attempt to disguise or deny the exceptionality of these structures with respect to subject selection; the empty upward lexical link in the valencies of the verbs is stigmatic of that exceptionality. I have tried to account for their evolution in terms of notional 'weakening' from the basic agentive sense of the Latin(ate) sources and expose the motivations for their maintenance as an established routinization that participates in the syntax as a transitive, though the passive circumstantial of (46c) does not share the *by* of regular transitives. One might even regard the 'weakened' forms as synchronically diathetic alternatives of the causatives.

A similar history of 'weakening' can be associated with the rather different experiencer verbs in (47a–b), where quite appropriately the experiencers have subject status.

(47) a. She suffered from persistent headaches
      b. He got a surprise/He got a kiss from the landlady
      c. {P;N/{src,abs{loc{gol}}}{loc{src}}}
      d. {P;N/{src{loc{gol}}}{abs}{loc{src}}}

We might associate with them the respective valencies in (47c–d) (for the combinations recall Chapter 4), where the locative source is not expressed in the first example in (47b). Any agentive sense of *suffer* is obsolete (except in religious language), but the experiencer/affected subject of this French-derived form is common. *Get* is Germanic, and displays currently a range of different valencies, including that in (47d), as well as agentive (causative and not causative).

Compare with (47a–b) the examples in (48a–b).

(48) a. The building suffered considerable damage
      b. The door got a lick of paint
      c. {P;N/{abs}{abs{loc{gol}}}{loc{src}}}

The verbs in (48) have lost the non-locative source of the experiencer, whose presence is associated with subjecthood. But the remnant of the functor is linked to the free absolutive of {P}, as indicated in (48c).

The ancestor of *have* also had a range of different valencies and other notional differences. As we have observed in Chapter 32, the present *have* form is still variable in valency and other notional distinctions. It may, for instance, be causative, or deontic modal and other kinds of experiencer (including owner), or possessive locative, as well as being both a lexical and a syntactic periphrastic operative, as respectively illustrated in (49).

(49) a. He had her resign/divorce/abducted
      b. He had to resign/a good time/a large estate
      c. He had Bill's recently acquired book for ages
      d. He had a walk/He had departed

The *have* form also may be syntactically {P;N} or {P}: normally the syntactic or inflectional periphrast is a {P}, unless itself the dependent of an operative, but variable with {P;N} elsewhere in my experience; but {P} status is recessive in (49b) and particularly in (49a). In my own usage {P} is associated only with the perfect periphrast of the second example in (49d). What is of interest in the present context is in the first place the usage in (49c), where there is a locative subject.

This seems once more to be a historical weakening of a causative, which would result in (50a), but this is avoided by (50b) where a lexical link retains subject position for the locative.

(50) a. {P;N/{abs}{loc}}

      b. {P<;N>/{abs}{loc}}

However, for many speakers the verbal in (49c) is an operative, as in (51a), alternating with *Has he still got the book*, which latter is routinized, idiomatic.

(51) a. Has he the book (still)?
      b. Will he (still) have the book?
      c. The book is (still) with him

And, like the copula, this *have*, as observed, may be non-finite when required to be so by another operative, as in (51b). Just as the copula is the minimal locative

verbal, as in (51c), so this *have* of (49c) and (51a) is the minimal locative verbal with an empty lexical link that is satisfied by a free absolutive.

This status promotes their development as periphrases, particularly in the case of *have*, in its case with the help of the structure in (52a), as represented in (52b).

(52) a. He has the book prepared

b.

```
                {P/{loc/{N/{int,e}}}}
            ┌───────────┴────────────────────┐
      { {abs}}   {P<;N>{stative}/{abs}{loc}} …. { {loc}}
         │       ┌──────────┴─────┐              │
      { {loc}}   │          { {abs}}         {N{int,e}}
         │       │             │
       {N}       │           {N}
         │       │             │
       { }       │          {Nᵢ}      {P;N{stative}\{Nᵢ}}
         ┆       ┆             │              │
         ┆       ┆           { }       {P;N{past}/{abs}{src}}
         ┆       ┆             ┆        ┌───────┴────┐
         ┆       ┆             ┆     { {abs}} …. { {src}}
         ┆       ┆             ┆         │          │
         ┆       ┆             ┆       {Nᵢ}       {N}
         ┆       ┆             ┆
        he      has      the book   prepared
```
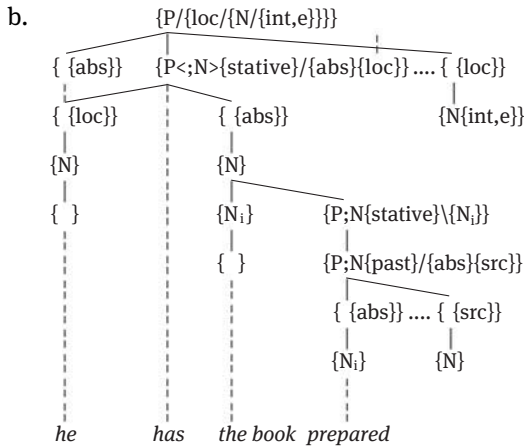
c. He has prepared the book

Here the participle is in apposition to the absolutive {N} of the finite, and the non-overt agent, depending on context, may or may not be regarded as coreferential with the subject. Compare the periphrasis in (52c) that develops from it. (52b) includes the basic existential head of the proposition but not mood, and it also omits the gender of the pronouns. More relevantly, it leaves tense undeconstructed (simply for economy, for the moment), but includes the stativity feature {p.n}, absent from the causative of *He has the book prepared every week/He is having the book prepared now*. Stativity now demands our attention, including the redundant stative on the simple locative *have*, particularly.

Moreover, the perfect periphrast is stative, though this was omitted from Chapter 35, whereas its dependent {P;N} is marked as such by the {n.p} specification.

(13)

```
                              {P}
                              {P/{src}}..........................................{ {loc}\{P/{src}}}
           { {src}} ...............{P/{{src}}{loc}{abs}}...........{ {abs}}   {N_T{TEMP}}
    { {loc{src}}}      { {abs}}                          { {loc{gol}}}
      {N{def}}      {N/{P/{loc/{N{int,e}}}}}           {N{def}}
      { {ego}}          {P}                             { {tu}}
                        {P/{P;N{p.n}}{loc/{N{int,e}}}} ...........{ {loc}\{P{int,e}}}
            { {abs}}   { {loc}}   {P;N{p.n}}                {N_i, T ⊆ i}
            { {abs}}   {N{int,e}}   {P;N}
                                    {P;N/{src{abs}}} ........{ {loc}\{P;N}}
            { {src{abs}}}                              {N_j, j < i}
               {N}
               { κ}

             Dolly       has       arrived
```
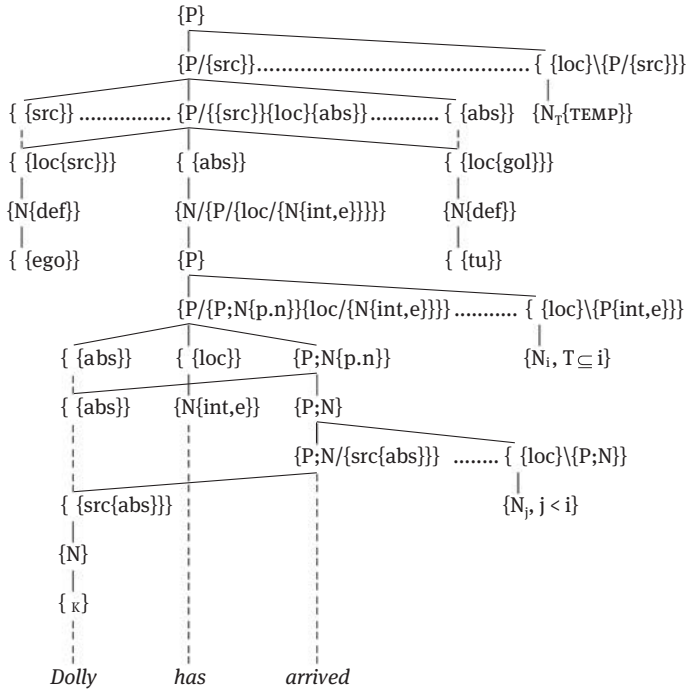
This prompts another look at grammatical periphrases, now in the context of deconstructing finiteness below the mood structure. The rather detailed deconstruction of the *have* periphrasis in (13) is a representation whose main concern was with the mood {P}s, but which also illustrates the tense aspects of the periphrasis and also the lack of a locative subject compared with (52a) (which we shall return to in Chapter 38).

The relevant locative in (13) is the participial tense. In the context of the preceding discussion, (13) illustrates that grammatical periphrases in English permit distinctions shown in non-finite verbs to appear in finite clauses via their specific valency requirements and with a minimum of intrusive semantics of their own.

Periphrastic *have* is, however, a stative verbal, and the referent of the subject is in a state, resulting from the past action. Rather than proliferate idiosyncratic secondary features, let us again adopt the suggestion made in Chapter 29 that {P;N{n.p}}, a verb with adjectival secondary features, characterizes stativity – as in the participle in (13). Prototypical verbs signify events, happenings at a particular time, **perfective**, though these events may be **habitual**, a chain of events recurring through time, thus **imperfective**, which term also includes progressives and pro-

gressive habituals. Indeed, non-habitual is unusual as a (non-progressive) interpretation in present tense, except in specialized utterance types such as titles of news items or commentaries on ongoing activity. Stative verbs like *know*, however, are associated with a period of time, however short (given, for instance, memory limitations), and thus are unexceptional, indeed preferred, as non-perfectives, though they may only exceptionally combine with progressive.

In the simplified representation in (53) focused on the periphrastic construction, presence of *have* is registered by the occurrence of a distinctive {P} below the existential; and the derived {P;N}, realized as *arrived*, and *have* itself are recognized as stative verbs, respectively{P;N{n.p}}, and {P{n.p}/{P;N{n.p}}}, while the non-finite tense is recognized as derived with respect to the basic tensed {P;N}.

(53)
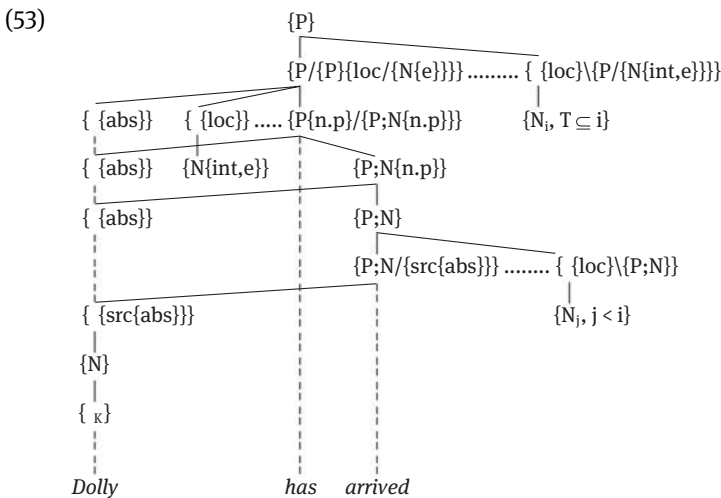
A {P;N} that is inflected for {n.p} I call a **participle**, which is normally associated with stativity, while {P;N{n}} is a **gerund**, with a variety of interpretations. The third morphologically-marked non-finite is the **passive** diathesis, which mostly shares its morphology with the participle. A participial form like *known* is doubly stative in itself, both in the present and in the period initiated in the past also associated with the form. Stativity has a role to play in progressives as well, but a rather different one.

In (I.61b) from Chapter 5, repeated in Chapter 21, the progressive was represented as requiring the presence of the secondary feature {prog(ressive)} on its dependent {P;N}, which was subsequently deconstructed in Chapter 29 as in (III.53b).

(I.61)   b.

```
                    {P/{P;N{prog}}}
          ┌──────────────┴──────────┐
      { {abs}}              {P;N{prog}}
          │               ┌──────┴────────────────┐
      { {abs}}        { {loc{src}}}        { {loc{gol}}}
          │                   │                  │
         {N}                 {N}                {N}
          ┊          ┊        ┊          ┊        ┊
         fog        was   extending  from Queensferry  to Crail
```

(III.53) b.

```
                      {P/{loc/{N/{P;N}}}}
            ┌──────────────┴──────────┐
        { {abs}}                  { {loc}}
            │                         │
            │                   {N{int}/{P;N}}  ◄╴╴╴
            │                         │              ┊
            │                   {P;N/{src{abs}}}     ┊
            │            ┌───────────┘   ▲           ┊
      { {src{abs}}}      ┊               ┊           ┊
            │            ┊               ┊           ┊
           {N}           ┊               ┊           ┊
            ┊            ┊               ▼           ▼
        Frances       [[is]]        [[runn]        ing]
```
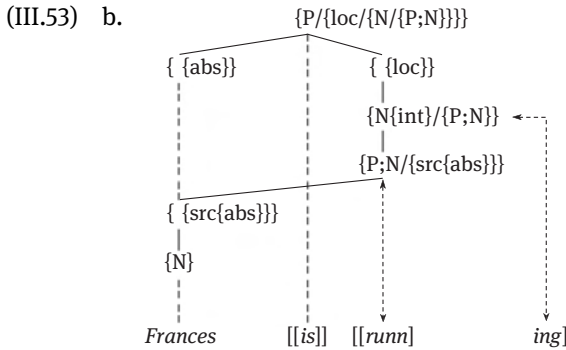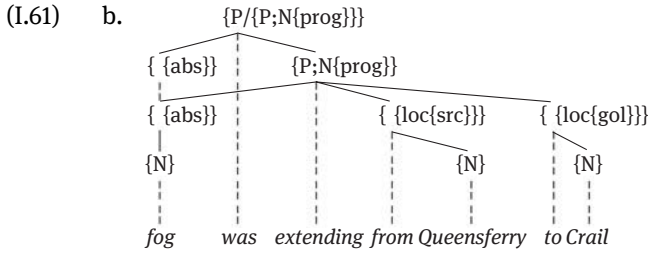
This latter recognizes that the periphrast requires an interior locative construction to which the verb is subjoined. But the verb structure in (III.53 b) is still incomplete, in not indicating that the progressive construction normally rejects stative verbs as the basis for complements of the periphrast.

This is remedied in (54), where the verb required by the periphrast is derived and has a gerundial process secondary specification – thus incompatible with a stative verb like *know*, since its derived *knowing* form cannot be attributed a process rather than a state interpretation, as in *His knowing that surprised me.*

(54)

```
                    {P}
                    {P/{loc/{N{int,e}}}}...................{ {loc}/{Nᵢ, i < T}}
      { {abs}}      {P/{loc/{N/{P;N{n}}}}} ..... { {loc}}
      { {abs}}              { {loc}}            {N{int,e}}
                            {N{int}} ←---------------┐
                         {P;N{n{process}}}
      { {abs}}           {P;N/{src{abs}}}
      { {src{abs}}}
         {N}

       Harry        was      [[work]            ing]
```
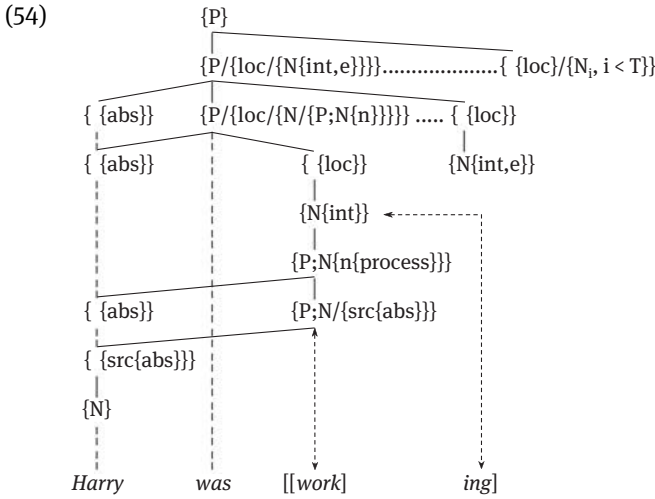
(54) also includes the propositional existential and an indication of its tense, as well as a revised morphology where the suffix expounds a gerund; but it ignores mood. The {P;N} has been converted to a locative gerundive-process verb, then. These verbal subcategorizations reflect historical 'reverbalizations' of verb-based derivations of nouns and adjectives. Unlike in (III.53b), I take the *-ing* to be an exponent of gerunds in general rather than just of locative process gerunds, which are not distinguished in expression from the other gerunds and derived nouns and adjective we shall encounter in Fit the 2nd. The presence of the location in an interior component in the progressive signifies its status as an 'existential' domain, a domain of activity, rather than simply factuality.

Progressive and habitual are both imperfective, but, as observed, they can be combined: progressives can have a habitual interpretation, as in *She is commuting between Perugia and Athens*; this combination gives a temporary character to the 'habit'. The basic verb in the progressive is not normally a stative, which, as we've seen, excludes e.g. *know*; the combination stative and process are incompatible. This plays an important role in the structure of periphrastic sequences. The progressive periphrasis rejects stative verbs and the perfect accepts them. Therefore, the sequence *I have been walking* is fine, given also that both the periphrasts can be {P;N} as well as {P}; but *I am having walked* is not. This is the beginning of a determination of the canonical periphrastic sequence. It is now becoming clearer, too, that aspectual distinctions differentiate modes of scene in terms of their relation to time.

We have already looked at a deconstruction of the {pass(ive)} feature associated with sentences such as (III.52a) in Chapter 29, as shown ultimately in (III.52c), where {pass} is an abbreviation of the deverbal verb structure governed by the operative, but where the uppermost {P;N} is inserted by the optional circumstantial *by*-phrase, absent in the abbreviated (III.52b).

(III.52) a. Fred was rescued (by Rosie)

b.

c.
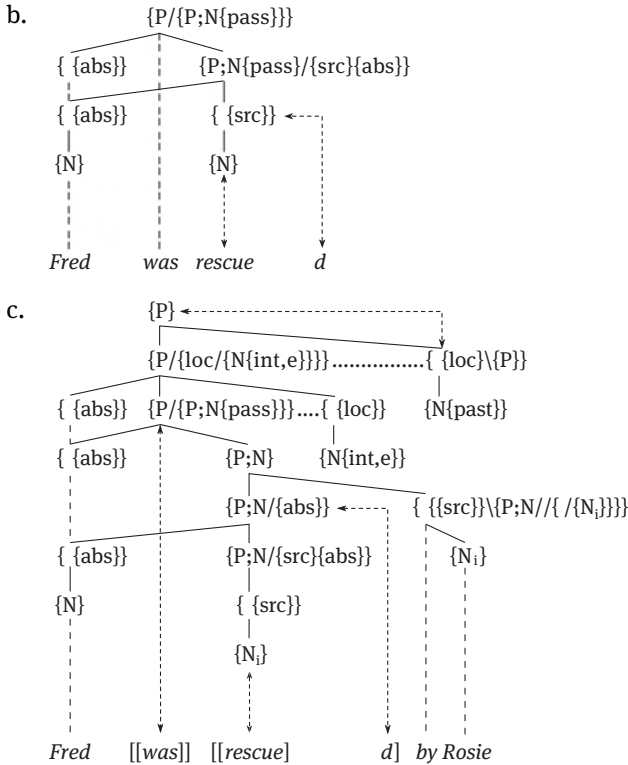
However further deconstruction of the periphrasis is possible, particularly in highlighting the 'change' in valency or diathesis, as in (55), where 'pass' abbreviates now the more extensive path necessarily adjoined to the {P}, and I again omit the irrelevant governing mood, but also the existential {P}, tense etc. – and morphology.

(55)

```
                        {P/{P;N{pass}}}
       { {abs}}              {P;N}
                        {P;N/{abs{gol}}}        { {loc{src}}\ {P;N/{abs}}}
       { {abs{gol}}}     {P;N/{src}{abs{gol}}}        {Nᵢ}     {P;N}
       {Nⱼ}          { {src}} ..... { {abs{gol}}}     { ᵣ}     { {src}}
       { ꜰ}            {N₍ᵢ₎}          {Nⱼ}                    {Nᵢ}


       Fred          was  rescued                    by  Rosie
```
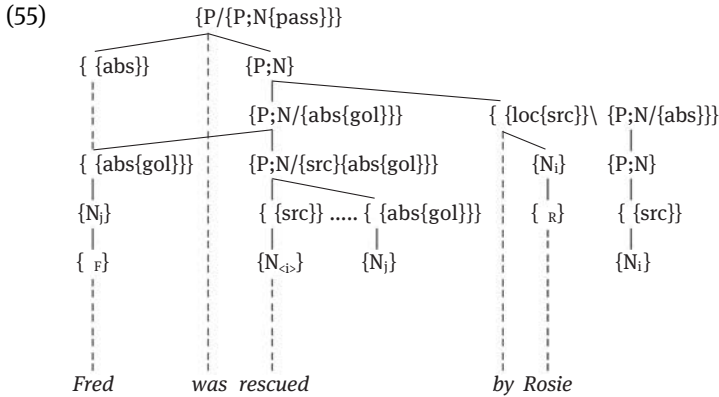
In addition, (55) recognizes the affected status of the derived verb in this instance, with subject {loc} as a residue of the goal absolutive of the transitive lower {P;N}. This traditional 'participle' is not {n.p}; what it has in common with the perfect participle is that they are both derived verb forms that lack simple {n} (as in (54) – and see further Chapter 38); they are not gerunds. They have divided the properties of the perfect passive form that is the historical source of *-ed*-adjectives, to give a perfect participle and a diathetic {P;N}. I have also indicated by the angle brackets around the subscript on the source {N} that there might (not) be a coreferential circumstantial.

Similarly, the middle diathesis was represented as in (II.144b) in Chapter 26, with again conversion of valency (though this representation lacks the {gol} of the absolutives – but this is readily compensated for by the reader).

(II.144)

```
                        {P}
       { {abs}}         {P;N}
                        {P;N/{abs{src}}}    { {loc}\{P;N}}
       { {abs{src}}}    {P;N/{abs{src}}}  {N}    { {abs{src}}}
       {Nᵢ}          { {abs}}....{ {src}}        {Nᵢ}
                        {Nᵢ}       {N}


       the book        reads              well
```
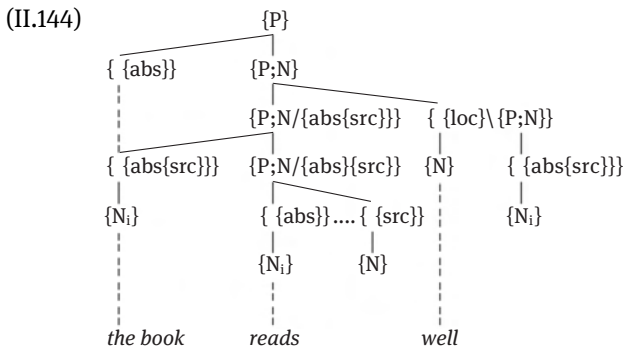
Here the subjoined absolutive of the lowest {P;N} is coreferential with the middle subject, as is the {N} in the valency of the normally present circumstantial, unlike the passive *by*-phrase. Valency change also characterizes the holistic diathesis, with derived {loc{abs}}, as in (II.145d).

The passive operative in English has adjoined to it, ultimately, a transitive verb. This means that neither non-finite *have* nor non-finite *be* can occur in the passive construction. This in turn requires that, when present, the passive must terminate the sequence of such periphrases, as in *He has been being cautioned*. The final set of operatives, apart from the *do* that is a default operative in the absence of any others when one is required and which also serves as an overt pro-verb, in *I think I did* or *I should have done*, is the modals, some of which can be argued to even have a periphrastic role. The modals have, however, no non-finite forms, so, if one is present it must occur initially in any sequence of operatives, and in most varieties of English the modals are mutually exclusive. The sequence in (56a) is the only possibility if all the (optional) operative types are present.

(56)   a.   He may have been being questioned

   b.   MODAL   may: *{P;N}
        PERFECT   have: *'transitive'
        PROGRESSIVE   been   *'transitive', */{P;N{'stative'}}
        PASSIVE   being   /{P;N/{'transitive'}}

   c.

The crucial properties determining the sequence are abbreviated in (56b), giving the skeleton in (56c) (where also the intermediate operatives are simplified). The existential is subjoined to the epistemic modal, and the other operatives, including some deontic modals, come below the existential, even when there is no modal in the sequence. Operative *do* expounds the head of an independent existential in 'affective' contexts. Strictly, the non-finite operatives will each have a dependent free absolute, but I have omitted them here to highlight the hierarchy of operatives. (56c) is what we might venture to call a 'sequential paradigm' of

binary contrasts (present/absent), whose sequencing is the natural consequence of the requirements associated with each operative.

However, as suggested by the label 'epistemic', some of the modals are concerned directly with the status of the knowledge or truth of the proposition it heads. It qualifies the knowledge, adding an estimate of its reliability, insisting on at least the likelihood of its truth (*must*) or untruth (*can't*) or on neither (*may*) and possibly suggesting contingencies (*should*), though all of these may be manipulated by intonation. This suggests overall that these modals realize a qualified existential that governs, as abbreviated in (56c), the basic propositional existential: the positive epistemic expresses that a certain possibility exists of the truth of the predication; the negative denies this. This is abbreviated, for the moment, in (56c).

The analyses of the verbal periphrases proposed here suggest that the verb forms in the top part of (III.43a) (and (III.46a) – those expressing forms of {P;N}, plus the infinitival {P;N} – have a rather different status from the finite inflections in the lower part.

(III.43) a. *MORPHOSYNTAX OF VERB INFLECTIONS*

$$
\begin{array}{l}
\quad\quad\quad\quad *\{P\} \\
\quad\quad\quad\quad\quad | \\
\text{infinitive} = \{P;N\} \Rightarrow
\begin{cases}
\{\text{progressive}\}\ [[\text{stem}.........]\text{ŋ}] \\[4pt]
\{\text{passive}\} \\
\{\text{past}\}
\end{cases}
[[\text{stem}...]\{C\}]\ \text{or}\ [\textit{alternation}\text{<+/-<ə>n]>}] \\[20pt]
\{P\} \Rightarrow \{\text{tense}\} -
\begin{cases}
\{\text{pres}\} \Rightarrow \{\text{num}\} -
\begin{cases}
\{\text{sg}\} \Rightarrow \{\text{per}\} -
\begin{cases}
\{\text{iii}\} ... \ ]\{C;V\}] \\[6pt]
\{\text{sap}\}...
\end{cases} ...] \\[10pt]
\{\text{pl}\} ....
\end{cases}
\end{cases}
\end{array}
$$
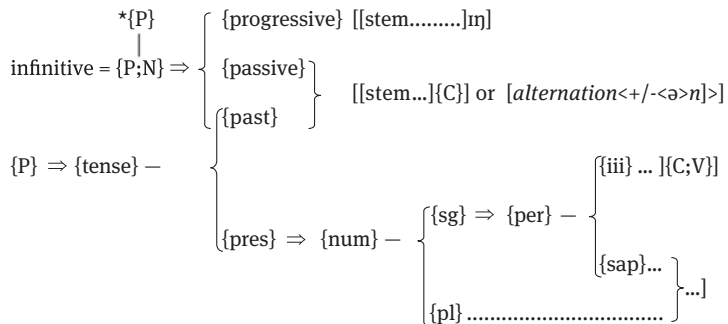
They are closer to derivations in introducing a higher {P;N} that has quite a different distribution from that of finite verbs, though retaining the basic verbal meaning.

Among the operatives the modals obviously require some more attention. The present-day English modals are mostly a variegated residue of the Old English inflectional class of 'preterite-presents'. Two of these residuals are at best marginal as modals, namely *need* and (particularly) *dare*. Commonly, they are both alternatively conjugated (at least partially) as a (main) verb, and this latter status seems to be preferable in the case of the *dare* (outside idioms such as *I dare say*). The possibilities in (57), and in interrogatives, are typical.

(57) a. He needs to leave
    b. He doesn't need to leave ≈ He needn't leave
    c. She dares to disagree
    d. She doesn't dare to disagree ≈ She daren't disagree

Dare is also notionally incongruous with respect to the (other) modals, which qualify finiteness – as I shall try to show more generally. The partially {P}-like behaviour of *dare* is a piece of historical detritus. *Ought*, on the other hand, has a different origin, but despite often showing a *to-* rather than a 'bare' infinitive complement, it competes with *should* in the expression of modalities.

Each of the (other) modal forms is associated with at least two different notional properties of the finiteness hierarchy; the two interpretations involved are traditionally distinguished as 'epistemic' vs. 'deontic'. With an illustrative pair of the modals the former is associated with modulation of the likelihood of the propositional existential, the latter with expression of apparently impersonal 'moods' of requirement or permission.

This is illustrated, on the most obvious interpretations, in (58), with necessity vs. requirement, and (59), with possibility vs. permission.

(58) a. He must be tired
    b. He must leave at once

(59) a. He may be tired
    b. He may leave at once

We might distinguish (simple) modals (a) from 'moodals' (b)!

The subjects of the (b), 'moodal', examples in (58–59) are experiencers acted on from outside: {src{loc{gol}}}, involving 'requirement' (58b) and 'permission' (59b). And *can* and *will* contrast with this: the 'ability' and 'volition' that can be attributed to their experiencer subjects is 'internal' – i.e. simple {src{loc}} – rather than externally imposed, though nowadays *can* is often also to be interpreted as 'permissive'. With these latter two verbs there corresponds to the (a) examples in (58–9) a 'possibility' and a 'predictive' sense. The salient difference between the (a)-type modal sense and the (b)-type is the absence vs. the presence of an experiencer, either a goal experiencer/receiver (*may, must*) or a simple locative (*can, will*).

To the dimensions illustrated by (58) vs. (59) and by (a) and (b) and by the {loc} experiencer of *can/will vs.* the {gol} of *may/must* we can add another option illustrated by *must* vs. *should/ought (to)* or *may* vs. *might*. With these options we

have opposition between a non-factual dependent vs. a counterfactual or **contrafactive** – though this distinction is weakened in the case of *may/might*. We can also associate the distinction with *will* vs. *would*, here simple prediction or contrafactive prediction; non-factivity is presupposed by both but *would* introduces contingency; the achievement of the predicted factivity in the latter case is conditional. Similarly we can oppose *can* with *could*, but, as we have seen, *can/could* introduce another complexity: they can have interpretations like those of *may/might*. In particular, the experiencer sense can involve permission rather than ability. But we can distinguish the non-experiencer *can/could*, though close to *may/might*, as involving a sense of potentiality (interior) rather than possibility (exterior). Also problematical is *shall*, which has largely been replaced by *must* and *have to*, the latter being another unusual modal, normally with a main-verb paradigm and *to*-complement, though the latter is also true of *be to*. *Shall* in my speech varies with *will*, usually to avoid insisting on volition or compulsion. Nevertheless, *should* remains as the equivalent contrafactive of *must/have to*, along with *ought (to)*. The bracketed *to* indicates another variable conjugation, and thus either operative or verb categorization. Finally, all of the contrafactive forms can have a habitual (or stative) past tense interpretation, except (for many users) *should/ought (to)*; and, on the other hand, *had to* is not contrafactive. There is also a dedicated habitual past which shows conjugation alternation somewhat like the peripheral modals, *used (to)*.

I display the basic distinctions associated with the modals, apart from tense and contrafactivity, in Table XV.

Table XV: Core-modal contrasts
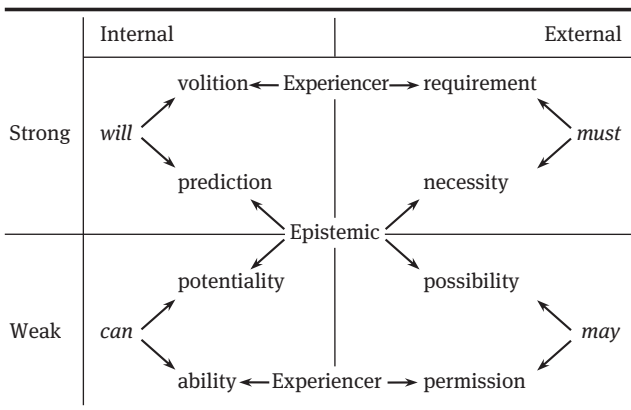
The table is conservative in ignoring the permission sense of *can* (a victory for my more prescriptive teachers at primary school). But then any classification of this type is seldom symmetrical, given the volatility of usage.

We have seen that we can add to the set in Table XV a corresponding contra-factivity set: clockwise from top left we have *would, should/ought, might, could*. This highlights the absence from the table of *shall*, where usage is very variable, including, (near) absence (in many cases) and prominence (in some varieties of religious English). This perhaps correlates with the fact that, of the four contra-factive forms, only *should/ought* lacks an alternative past tense sense. These two inflectionally marked dimensions (contrafactivity, past habitual) are missing from Table XV.

Let's now try to see in more detail how the central distinctions might fit into our deconstruction of finiteness, before proceeding with a description of the periphrastic role of some of the modals. The 'epistemic' sense is perhaps the more easily approached. It introduces a quantification of the likelihood of predictions. This might be represented as in (60a), which ignores the stativity of the modal and *be* here is a **copula**, not a periphrast.

(60) a.

```
                              {P}
                              |
              {P/{src}}...........................{ {loc}\{P/{src}}}
                 |                                      |
{ {src}}..............{P/{{src}}{loc}{abs}} ....{ {abs}}  {N_T{TEMP}}
   |                      |                         |
{ {loc{src}}}          { {abs}}              { {loc{gol}}}
   |                      |                         |
{N{def}}               {N/{P}}                  {N{def}}
   |                      |                         |
{ {ego}}                {P}                     { {tu}}
                         |
              {P/{abs}{loc/{N{int,e}}}} ......{ {loc}\{P{int,e}}}
                 |                                      |
         { {abs}}.............{ {{loc}}}         {N_i, T ⊆ i}
            |                     |
      {N{poss}/{P}}          {N{int,e}}
            |
      {P/{abs}{loc/{N{int,e}}}{P;N}}
         |
  { {abs}}    { {loc}}    {P;N/{abs}{P.N}}
     |           |              |
  { {abs}}    {N{int,e}}      {P.N}
     |                          |
  {N{def}}                    {P:N}
     |
  { {masc}}

     he        may        be   tired
```

b.

```
                                    {P}
                                     |
                     {P/{src}} ......................................... { {loc}\{P/{src}}}
                                     |                                    |
   { {src}}............. {P/{{src}}{loc}{abs}} .... { {abs}}   {Nᴛ{TEMP}}
         |                          |                    |
   { {loc{src}}}              { {abs}}          { {loc{gol}}}
         |                          |                    |
   {N{def}}                  {N/{P}}              {N{def}}
         |                          |                    |
   { {ego}}                   {P}                  { {tu}}
                                     |
                     {P/{abs}{{src}/{N{int,e}}}} ... { {loc}\{P{int,e}}}
                                     |                       |
                     { {abs}} ............{ {{src}}}    {Nᵢ, T ⊆ i}
                           |                 |
                     {N{poss}/{P}}    {N{int,e}}
                           |
                     {P/{{src}/{N{int,e}}}{P;N}}
                           |
         { {abs}}    { {loc{src}}}    {P;N/{abs}{P.N}}
               |           |                 |
         { {abs}}    {N{int,e}}          {P.N}
               |           ¦                 |
         {N{def}}          ¦             {P:N}
               |           ¦                 ¦
         { {masc}}         ¦                 ¦
               ¦           ¦                 ¦
               he        must          be  tired
```

Here the propositional existential path is extended by a possibility existential {P}. It might at first look as if with a necessity modal {nec(essity)} is substituted for {poss}. An interesting question is to what extent these features are deconstructible. The example of nominal quantifiers suggests, at least, that 'necessity' involves a denial that there is a possibility of something not being the case, as in (60b). But we still have to begin to attempt a representation for the 'moodal' modals of the (b) examples in (58) and (59).

These are concerned not merely with possibility but with the permission or obligation attributed to the subject. I suggest this can be expressed as in (61).

(61)

```
                              {P}
                              {P/{src}} ........................................ { {loc}\{P/{src}}}
        { {src}} .............. {P/{{src}}{loc}{abs}} .... { {abs}}   {N_T{TEMP}}
        { {loc{src}}}    { {abs}}              { {loc{gol}}}
        {N{def}}         {N/{P}}               {N{def}}
        { {ego}}         {P}                   { {tu}}
                         {P/{abs}{{src}/{N{int,e}}}} ....... { {loc}\{P{int,e}}}
                         { {abs}} ............ { {loc{src}}}   {N_i, T ⊆ i}
                         {N{poss}/{P}}    {N{int,e}}
                         {P/{{src}/{N{int,e}}}{P}}
        { {abs}}         {P/{{gol}}{P;N}} ......................... { {loc{src}}}
        { {abs}}         { {loc{gol}}}    {P;N/{src{abs}}}   {N{int,e}}
        { {src{abs}}}    {N_i}
        {N_i}
        { {masc}}

         he              must               leave
```
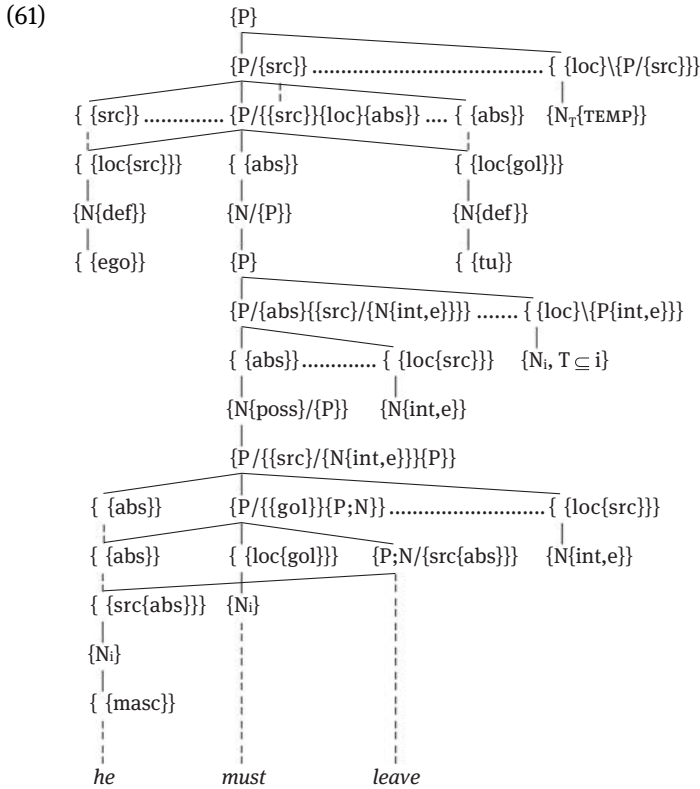
This again shows decomposition of 'necessity' as a double negation involving possibility, as implemented in the epistemic of (60b), but in this case the referent of the subject lacks the possibility of not performing the action designated. We have a change of 'mood' compared with (60); in (61) we have a 'declared imperative' in the form of attribution of a necessary happening to the subject. There is no possibility that the subject can not perform the action of the verb. The upper negative denies the possibility for a {N} coindexed with the subject, the possibility of that subject not carrying out the action of the verb.

A case can be made for the contrafactive *would* and *should*, in particular, as potentially grammatical periphrases, filling out the impoverished subjunctive conjugation of English mentioned in Chapter 29, on inflectional morphology. The *would* periphrasis is most generally used, in my experience, and introduces fewer complications. So let's look at this phenomenon and its characterization first.

The sentence in (62a) is ambiguous in a way that (62b) is not.

(62) a. If he left she would follow him
      b. If he left she used to follow him
      c. If he left she followed him
      d. If he would leave she would follow him

(62a) could be interpreted as a habitual past throughout, as in (62b). But there is also a prominent non-past **contrafactive** interpretation for (62a). The form realizing contrafactive in the protasis of (62a) is expressed by the descendant of what is traditionally referred to as the 'preterite subjunctive', but the interpretation is simply past if the equivalent form also occurs in the apodosis, as in (62c), as well as in the dedicated habitual past expression in (62b). *Would* in the apodosis of (62a) allows expression of the full contrafactive conditional structure. *Would* in the protasis, however, as in (62d), expresses volitional contrafactivity, rather than simple contrafactivity. Apodosis *would* is an alternative expression of contrafactivity to the preterite subjunctive (the latter being restricted to the protasis), what we might call a **contextual periphrastic** expressing of contrafactivity. What we mainly have to formulate here is the simple contrafactivity of the protasis, and, of course, the representation of contrafactivity in the periphrastic expression, before we can return to (62d).

In formulating the suggested representation for (62a) we must recall now the treatment of 'subordinating conjunctions' in Chapter 16, as well as anticipate the subsequent elaboration of syntax here. (63), for simplicity, contains only the spine of the mood segment of the finiteness path, ignoring tense (present), and it does not show the satisfaction of the existential valencies or of the declarative {P}s at the top; and it simplifies the internal structure of the main clause, where *would* is interpreted as {pred(ictive)}, like *will* – with respect to the future, in the unmarked case – but here demanding a subordinate contra(factive), which requires the irreality of the whole existential configuration, so that one non-situation is predicted to be reversed on condition that another has its negative existential reversed.

(63)

```
                                            {P/{src}}
                                               |
                                        {P/{{src}}{loc}{abs}}
                                               |
                                           { {abs}}
                                               |
                                     {N{pred}/{P//{contra}}}
                                               |
                                    {P/{loc{{src}/{N{int,e}}}}
                                               |
                                   {P/{{src}/{N{int,e}}}}
                         { {abs}}              {P;N}
      { {loc}\{P;N}}                          {P;N/{abs}{src}}
      {N{contra}/{P}}            { {src}}              { {abs}}
            {P/{loc{{src}/{N{int,e}}}}   {N}            {N}
                  {P/{{src}/{N{int,e}}}}
            { {abs}}   {P;N/{src{abs}}{{src}}}
            { {...}}
              {N}

     if   he        left           she    would  follow  him
```
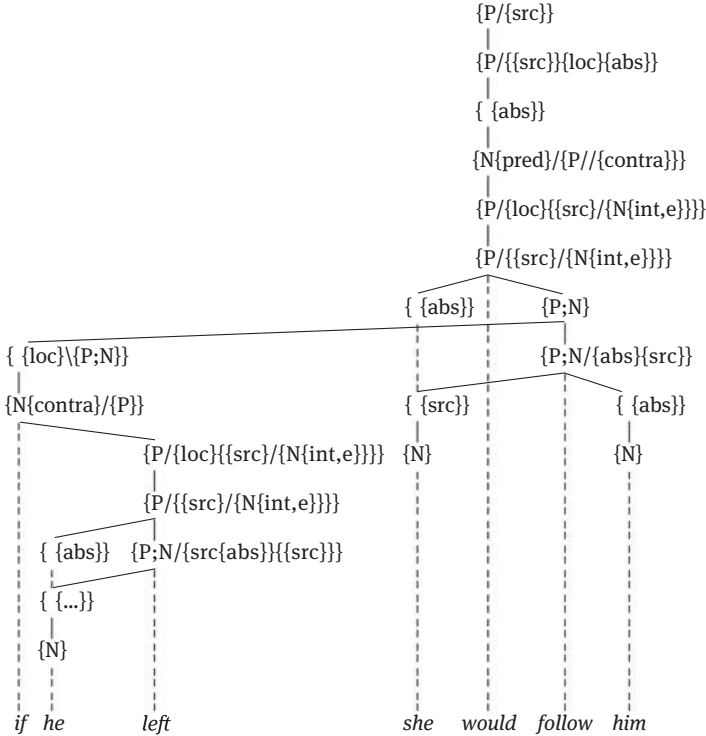
In (63) what is expounded as *if* is a finiteness determiner whose content satisfies the contrafactive requirement associated with the prediction. We shall see in Chapter 37 that such a determiner can also introduce factivity, presupposed factuality. Contrafactivity is deconstructed as prediction of a negativization of a negation based on an unreal condition. On condition that an event that doesn't exist didn't continue not to exist, the speakers offers a prediction that another negative existence would be negated. The *would* could alternatively be interpreted as volitional rather than predictive, with suitable modifications to (63).

Thus, the periphrasis complements the distribution of the subjunctive: the morphological protasis offers the contrafactive conditions under which the operator in the main clause could be realized. *Could* is another contrafactive, but also concerned with potentiality rather than simple prediction, and a corresponding non-epistemic sense equivalent to the (b) types of (58–9), in this case involving 'ability' (*You could try harder if you really wanted to*). The periphrases allow contrafactive to be expressed in the main clause of these conditional structures. However, the periphrastic contrafactives typically also appear in the sentential context of a coordinated explanation of the contrafactivity: *I would/could have*

come, but …. But this could be said to be notionally parasitic upon such as (63): *but* compacts 'if it had not been for the fact that', and introduces a fact that accounts for the contrafactivity.

In this sentential interdependence between subjunctive morphology and the modal subjunctive-substitutes, they again differ somewhat from the non-modal periphrases we've looked at, which, despite the poverty of inflections in English, are closer to the periphrastic prototype usually taken to be manifested by the Latin perfect passive periphrasis. The English non-modals do, like the Latin, fit into a paradigm, of which, however, there is only one morphological member associated with the absence of the periphrasts in the 'sequential paradigm' of (56c). The non-modal periphrases allow occurrence in finite clauses of distinctions marked on non-finites; the *would* periphrasis of (63), on the other hand, allows main clause expression of contrafactivity corresponding to the morphologically expressed contrafactivity of the conditional clause.

A somewhat more directly paradigmatic role is illustrated in (64), though again with only one simple morphological member of the paradigm, but with perhaps two periphrasts.

(64) a. I wish that she smiled
      b. I wish that she had smiled
      c. I wish that she would smile
      d. /{N/{P/{{gol}}{{src}/{N{int,e}}}}}
          |
          {P/{{src}/{N{int,e}}}}

In (64a) we again have a subordinate subjunctive, a contrafactive. Here the optative main verb, imposes contrafactivity on the subordinate, via the finiteness determiner; the relevant valency of *wish* is given in (64d). Only in (64b) is past time reference expressed, thus extending the paradigm. Some speakers find that (64c) extends it further by being more future-oriented than (64a), rather than being in free variation with it. We have another 'paradigm' that is expressed partly morphologically, partly syntactically. Recall too the paradigmatic-like role of *would* in (62d).

(62) a. If he left she would follow him
      d. If he would leave she would follow him

Here the *would* of (62d) introduces volition in the subordinate clause rather than simple contrafactivity.

Similarly, *should* introduces futurity into the protasis in (65a), and the *had* in (65b) is both (periphrastically) past and (inflectionally) contrafactive (as in (64b)).

(65) a.   If she should leave, he would follow her
      b.   If she had left, he would have followed her

(62a) constitutes the third member of this paradigm. This brings the auxiliaries in (65) as well as (64) closer to the canonical periphrast. Note finally that we could substitute *were to* for *should* in (65a), with little difference in sense.

As already anticipated, we shall return to contrafactivity in Chapter 37, in the context of the discussion of factivity and subordination. Let's note at this point that there are also vestiges in modern English of the 'present subjunctive', as in (66a), which occurs under rection by the upper verb, which 'demands' an eventuative.

(66) a.   They demanded that she resign
      b.   They demanded that she resigns
      c.   They demanded that she not continue
      d.   They demanded that she should resign
      e.   /{abs}/{N{imp}/{P/{loc{gol}/{N{int,e}}}}}

The main verb here imposes an eventuative interpretation on the subordinate, via the valency in (66e). But for almost all verbals this subjunctive is distinctively expressed only in the third-person singular (present), indicated by the lack of inflection. Only the distinct *be* subjunctive of the copula embraces all the persons and numbers. Moreover, the subjunctive is not expressed morphologically at all by some speakers and by others not in all their registers: in (66b) the only (inconclusive) indication of the subjunctive is the difference in the tenses. Contrast (66c), where the negative demands an uninflected form, shared with the infinitive. The subordinate in (66c), at least, may involve a blend of finite and non-finite, given that negatives generally follow finite forms. *Should* in (66d) provides another periphrastic subjunctive, alternative to (66a); but this form can be ambiguous with non-periphrastic *should*, as indeed is possible in (66d). A non-periphrastic interpretation is made more salient in *I really think he should resign*, the recognition that resignation is necessary is what is demanded rather than the resignation's eventuating, its actual coming about.

We might represent (66a) as a whole as in (67).

(67)

```
                              {P}
                               |
          { {abs}} {P;N/{src}{abs/{N{imp}/{P}}}}
              |        ┊              |
          { {src}}     ┊          { {abs}}
             |         ┊              |
            {N}        ┊      {N{imp}/{P/{{gol}/{N{int,e}}}}}
             ┊         ┊              |
             ┊         ┊              └──────── {P/{{gol}/{N{int,e}}}}
             ┊         ┊                              |
             ┊         ┊          { {abs}}   {P;N/{src{abs}}} …. { {loc{gol}}}
             ┊         ┊              |              ┊              |
             ┊         ┊          { {src{abs}}}      ┊          {N{int,e}}
             ┊         ┊              |              ┊
             ┊         ┊             {N}             ┊
             ┊         ┊              ┊              ┊
            they    demanded        that  she      resign
```
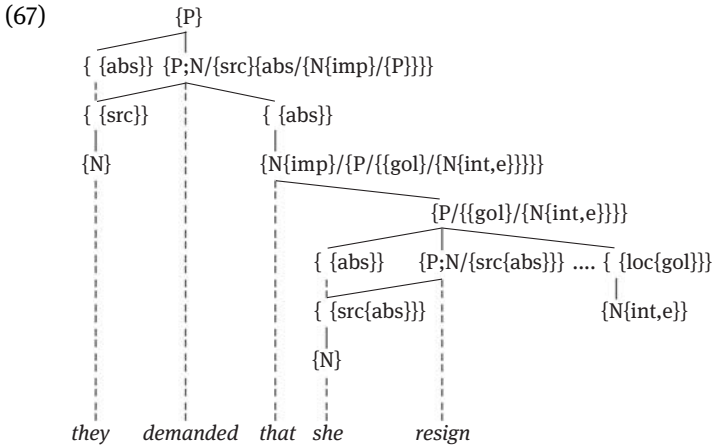
(66c) would differ only in having an independent operative realized as *should*. In this instance it is even more clear than in the case of *would* in (62a)/(63a) that it is not the prototypical periphrast that enters into paradigmatic relations with (a) morphological form(s). *Should* is an approximate alternative for the 'present subjunctive', expressing eventuative in a reported imperative, as well as for the 'preterite subjunctive', expressing future contrafactive. Despite the historically-motivated labels 'present and preterite subjunctives', the present-day English subjunctive is not a verbal form that expresses the tense distinction suggested by these historical labels.

Of course, as is familiar, and as we have observed here, the periphrastic operatives also share with other operatives the role of allowing expression of finiteness in 'affective' contexts (interrogative, negative, and emphatic). And operative *do* is limited to this role. But the copula is the most familiar item to allow non-verbal contentives to occur predicatively (compared with *She became surly/a nun*, etc.).

This chapter concludes with some more attention to subjects, to complement the discussion of subject selection that initiated the chapter and the treatment of subject-formation in previous chapters, starting with Chapter 5. Chapter 29 offered a brief description of person-number concord of {P} with the subject, focused on the most inflected verbal *be*. We must look again at the formulation of **concord**, or coreferential agreement between subject and operative, in the light of this and the previous chapter, beginning with the typical minimal concord of most verbals. The cross-category subject-verbal concord works rather differently from the extensive nominal agreement in gender of various languages discussed in the notes to Chapter 29.

Well, the modals, of course, are non-concording, except for *have to*, which also takes a *to*, as does the even more untypical *am to*, with the (for English) generously concording copula. *Ought* is exceptional in taking a *to* but not inflect-

ing for concord at all; and those users who treat it as an operative otherwise (*I oughtn't (to) stay* rather than *I didn't ought (to) stay*) tend to drop the *to*. The schizophrenic historical residue *dare* shares such a pattern for some speakers. The regular pattern for verbals, however, is that only a third-person singular subject is associated with a verbal concord – or, rather, concord with (non-modal) {P} – and then only if the {P} is present tense and traditionally non-subjunctive.

I assume the concord is carried by a lexical modifier of the propositional {P}, which we can distinguish as {P{EXIST}}, the category embracing the various basic kinds of existential – simple, eventuative, negative, status-unknown (in interrogatives, for instance). A concording {P} is rejected by past tense, modals and subjunctives; and most subject types do not participate in concord. The {N} of the modifier that introduces concord on the operator, as shown in (the somewhat redundant) (68), is marked as coreferential with the subject by its co-indexed subscripted 's' that seeks another 's', which is redundantly associated with the {N} of the participant of the dependent {P;N} that is hosted by the free absolutive of {P}, by virtue of heading the subject-selection hierarchy.

(68)　　　*SUBJECT-OPERATIVE CONCORD*

　　a.　　　　　　　　　　\<{P*{past/subj}}>
　　　　　　　　　　　　　　　|
　　　　　　　　　　　　\<{P*{MODAL}}>
　　　　　　　　　　　　　　　|
　　　　　　　　　　　　　　{P}
　　　　　　　　　　　　┌─────────────────┐
　　　　　　　　　　{P/EXIST} .... { \\{P/EXIST}}
　　　　　　　　┌──────┘　　　　　　　　　|
　　{ {abs}}　　{P;N/{src{loc}}{abs}}　　{N_{S//S}}
　　　⁝　　　　┌──────⁝　　　　　　　　⁝
　{ {src{loc}}}　　⁝　　{ {abs}}　　　{iii}
　　　|　　　　⁝　　　　|
　{N_S*{pl}}　　⁝　　　{N}
　　　|　　　　⁝　　　　|
　{ *{SAP}}　　⁝　　{ {distal}}
　　　⁝　　　　⁝　　　　⁝
　　Geoff　　*know+s*　　*that*
　　{N_S} ◂--------▸ s
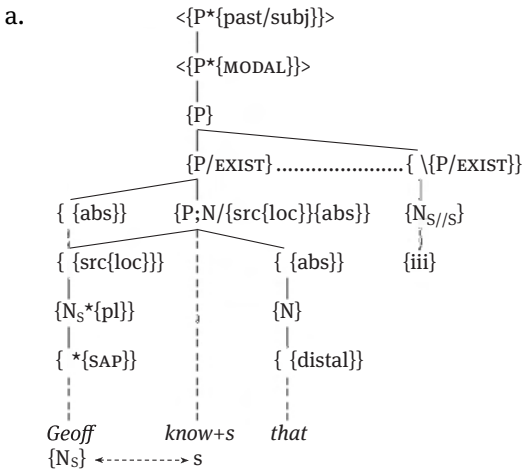
　　b.　{N_S{pl}/{N}}　⇒　*(68c)　{P{past/subj/MODAL}}　⇒　*(68c)
　　　　　　　　|
　　　　　　{SAP}

　　c.　{P/EXIST}　⇒　{P/EXIST}
　　　　　　　　　　　　　|
　　　　　　　　　{ \\{P/EXIST}}
　　　　　　　　　　　　　|
　　　　　　　　　{N_{S//S}}, s = subject

In (68a) plural and speech-act-participant subjects are shown to be excluded from the presence of concord, as are past or subjunctive and modal {P}s wherever they occur in the sub-mood complex. Tense itself (as well as subjunctive) is marked as optional, given the possibility of representing verbal generics by its absence. The concord on the {P} is provided by the lexical redundancy in (68c) which provides an incorporated modifier of {P/EXIST}, realized prosodically as the inflection on the finite verb; and (68b) explicitly excludes plurals/SAP and {past/MODAL} {P}s from this concord redundancy. (I am not of course concerned here with the variation in realization of the concord affix, which, as morphophonological, was described in Chapter 29.)

As I have anticipated, I talk here about 'concord' in order to distinguish what is involved from 'simple agreement' between like categories. In (68c) the concord {N} is co-indexed with the subject: the subscripts in the redundancy, indeed, are intended to indicate coreference. In imperatives, for instance, a subject may be absent, but as the imperative subject is prototypically a SAP, concord is absent anyway. This is a rather different relationship from that described in the notes to Chapter 29 in relation to gender agreement in French and Greek. In French *le beau chapeau* 'the fine hat', masculine grammatical gender in agreement with the noun is marked on the determiner and attributive. But these forms are not coreferential: the determiner is referential but the other forms are descriptors that are intended to help identify the referent, but they don't corefer with *le*; they do not refer either, but denote different sets of denotata. Here we have simple prosodic agreement.

Of course, in other languages than English, indeed in Greek, for example, there may be a fuller differentiation in the expression of person and number on the verb, and the 'concord' formative may indeed fully refer (as would a pronoun). The subject requirement can be satisfied internally to the verbal. The same inflections that concord with a syntactic subject can appear in a predication lacking the latter. Thus, *Ayorasame to spiti* 'Bought-we the house' and the like. There is systematic differentiation of person and number on the verbal, detracted from only by very isolated syncretism (*ine* is either singular or plural third person of the non-past copula – with number normally distinguished elsewhere in the sentence). In such a situation concord with pronouns is 'emphatic' or accompanies deixis.

The situation with the copula in English, as we have seen, is more complex than with other verbals, however, and expression of concord is not even excluded with past forms. In Chapter 29 the diagram in (III.46a) expressed the hierarchization of the 'inflectional' distinctions associated with the copula, where expression is as for a non-rhotic variant.

(III.46) *THE FORMS OF OPERATIVES*

    a. *THE COPULA*

```
 *{P}        ⎡ {progressive/gerund}..........................[[bi]ŋ]
  |          ⎪
{P;N} ⇒     ⎨ {passive}.......................................⎫
            ⎪                                                  ⎬...[[bi]{V;C{c}}]
            ⎩ {past}..........................................⎭
```

```
          {number}—  ⎧{sg}  ⎫
                     ⎨      ⎬ ⇒ {person} —    {i/iii}....................... [wəz]]
                     ⎩{past}⎭ ......................................................
 {P} ⇒ {tense}—   ⎡                              {i}...............{am}
   |              ⎪  {pres}  .........................  ..................................
   *              ⎪         ⇒ {person} —   {iii}...[[ ɪz]]            ⎫ ... [[wɜ]]
                  ⎪  ⎧{sg}                                   ...{ɑ} ⎬
          {number}—  ⎨      {ii} ........... ⎫............ ⎭
                     ⎩{pl}  ................................ ⎭.........
```

    SYNCRETISMS   i)   *{P}   ii)   {finite, past, pl/ii,sg} = {contra}

                            |
                    {P;N} = {non-factual} = {P{imp}}

Below the main diagram further syncretisms are indicated by the commas, slash, or equals sign separating the categorizations whose expression is neutralized: the realizations are the formatives in (i), {bi}, and (ii), {wɜ}.

    From the middle of (III.46) we can read off that person concord is fully differentiated only if singular and in the present tense, and the second person is the same as the plural. In the past tense the first and third persons singular syncretize, as (once again) do the second singular and the plural. Let us now look at the concord redundancy in relation to the copula.

    Though they are based on an analysis of the progressive that has been extended in the present chapter, we had already looked at some illustrative sentences in Chapter 29, such as shown in (III.57a–b), where the {abs} of the {P}s is, as usual, free, and concord in these examples is indicated only schematically by co-indexing.

(III.57)   a.

```
                        {P/{loc/{N{e}}}//{iii}{sg}ᵢ}
        { {abs}}        {P/{loc/{N/{P;N}}}}
        { {abs}}               { {loc}}
                            {N{int}/{P;N}}
                            {P;N/{src{abs}}}
        { {src{abs}}}
        {N{iii}{sg}ᵢ}
        { ꜰ}

        Frances        is     running
```

b.

```
                        {P/{loc/{N{e}}}//{pl}ⱼ}
   { {abs}}             {P/{loc/{N/{P;N}}}}
   { {abs}}                    { {loc}}
                            {N{int}/{P;N}}
                            {P;N/{src{abs}}}
   { {src{abs}}}
   {N{i}{pl}ⱼ}
   { }

        we            are     leaving
```

(III.57b) suggests that plural participates in concord, and in this respect the copula is unlike any other verbal, though even here it does share its exponent with second person. But this sharing is synchronically non-systematic, incidental. The copula thus differs in showing fewer exceptions to the concord redundancy, as is evident from (III.46), cited above. This generalizing of concord is associated with the presence of the copula.

(69a) illustrates specifically speaker concord, regulated by the two absolutive-free predications (specifying tense and agreement), and (69b) lists the small set of exceptions to the concord redundancy (68c).

(69) a. *SUBJECT-COPULA CONCORD*

```
                          {P}
                           |
            {P}                     { {loc}/{Nᵢ, i < T}}
             |
        {P/{loc/{N{int,e}}}}.............................{ \{P/EXIST}}
             |                                              |
{ {abs}}   {P/{loc/{N/{P;N{n}}}}} .... { {loc}}        {N_{S//S}{sg}}
   |            |                          |                |
{ {abs}}    { {loc}}                    {N{int,e}}        {ego}
             |
           {N{int}}
             |
         {P;N{n{process}}}
             |
{ {abs}}   {P;N/{src{abs}}}
   |
{ {src{abs}}}
   |
{N_S{sg}}
   |
{ego}

   I        was    working
```
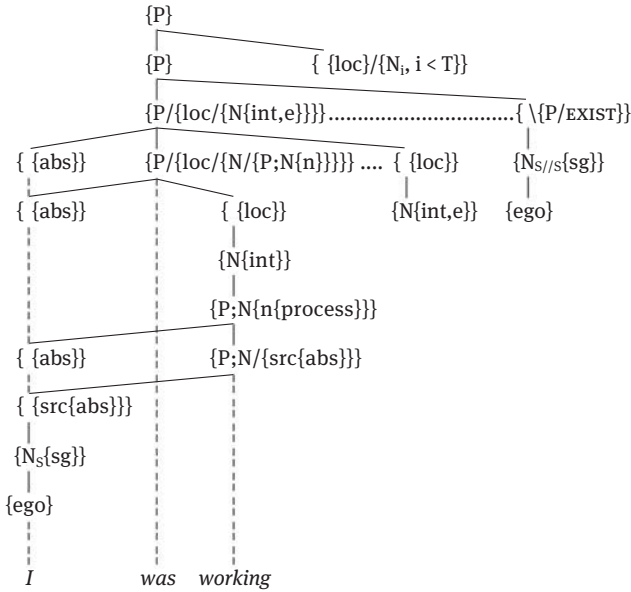
b. $\{N_S\{pl\}\{\text{PERSON}\}\} \Rightarrow *(68c), \{P\{past/subj\}\} \Rightarrow *(68c)$

In general, then, if we take the coincidence of past tense first and third person and of plural and second singular as simple syncretisms (they reflect the strong conjugation of Old English), i.e. not systematic, even though the second of these syncretisms is replicated in the present, then we can formulate what is different from what we find in non-operatives, as in (69b). (Syncretisms are given at the end of (III.46a) in Chapter 29, repeated above.) There is nothing in (69b) equivalent to the {SAP} exclusion in (68b): each of the person features may be involved or not, but mutually exclusively; as suggested, the copula also shows absence of person concord in plurals, as well as in pasts and subjunctives. Determining the shape of concord realization involves consultation of the paradigm in (III.46a), above.

The use of 'subject' in (69) is deliberately vague, since, even though normally the distributional and the inflectible subject coincide, even in verb-second constructions, in the 'existential *there*' construction this is not the case and either subject may control concord, either the locational 'usurper' or the 'displaced' usurpee: *There (i)s/are many questions*. But if we regard the former example (*(i)s*) as showing absence of concord, a default form, then we can generalize that concord can be said to be with the morphological subject. This is compatible

with the construction with post-copular plural personal pronouns, as in *There's her/us/them (to consider)*.

With this second look at the expression of subjecthood, we end Chapter 36. The chapter has been concerned with further deconstruction of aspects of finiteness as elements in the finite sub-modal dependency path and the syntactic consequences of this. To begin with, the apparent anomalies in subject selection were related to 'weakening' of the valency of certain verbs, so that neither a secondary source nor an absolutive, but a locative, occurs in subject position, in, for instance, (43).

(43)   a.   The party includes a priest
          b.   The box contains nails
          c.   The envelope enclosed an anonymous letter

This synchronic phenomenon was allowed for in terms of lexical linking, as shown in (45b).

(45)   b. {P;N}
               | ⋮
       {P;N/{abs}{loc/{N{int}}}}

Overt operatives too, and their role as periphrasts, are a product of historical 'weakening'.

Thus, some operatives, including both the non-modal forms, develop a valency dedicated to giving expression in finite clauses of distinctions (passive, progressive, perfect) that are marked only on non-finites or are otherwise restricted (the subjunctives). Such operatives have this periphrastic function as well as allowing for finiteness, thus analytically, in 'affective' contexts; and *do* is a default in such contexts. *Be* also serves as a copula for non-verbals

Something of the nature of the non-modal set of periphrases is illustrated by the passive in (III.52), modified here (and possibly clarified) as (55) above.

(55)
```
                              {P/{P;N{pass}}}
              _____|_____
         { {abs}}                  {P;N}
            ┊                        |_____
            ┊          {P;N/{abs{loc}}}            { {loc{src}}\ {P;N/{abs}}}
            ┊_____|_____                        |
         { {abs{loc}}} ┊   {P;N/{src}{abs{gol}}}      {Nᵢ}      {P;N}
            |          ┊    |_____                |         |
          {Nⱼ}         ┊   { {src}} ….. { {abs{gol}}}  { ᴿ}    { {src}}
            |          ┊    |           |               ┊         |
          { ꜰ}         ┊  {N₍ᵢ₎}      {Nⱼ}             ┊        {Nᵢ}
            ┊          ┊    ┊           ┊               ┊         ┊
            ┊          ┊    ┊           ┊               ┊         ┊
            ┊          ┊    ┊           ┊               ┊         ┊
          Fred       was  rescued                      by Rosie
```
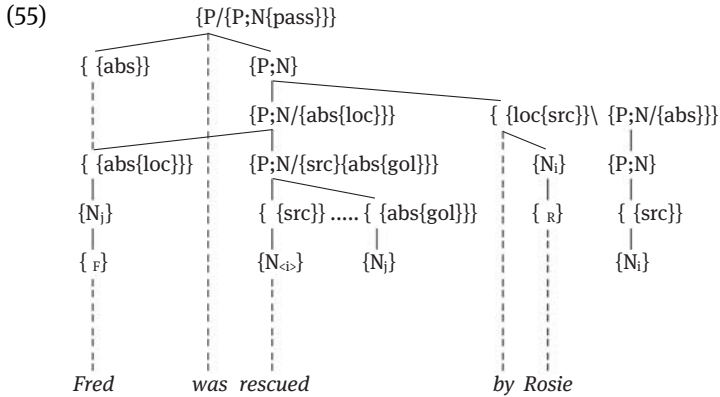
Concern with the character of grammatical (rather than lexical) periphrases occupied the bulk of the chapter before the attempt at classifying the modals and then our return to the expression of subjecthood by concord.

Chapter 37
Subordinate Finites

finite predications – subjunctives – functional ellipsis – the finiteness determiner – in apposition and as argument – valencies and rection – factivity – factive vs. nonfactive – subordinate interrogatives, imperatives, declaratives, exclamatives – quantifying factuality – revealed vs. acquired factuality – restrictive and non-restrictive relative clauses – simple attributives vs. appositives

We have deconstructed the elements of the subjunction path of root finiteness, particularly distinguishing the segments of the path characterizing mood and existence/truth-value and the place(s) of tense and agreement. A mood-bearing sequence of elements that conforms to the structural redundancies supplied by the grammar (lexicon, syntax and phonology) is a finite construction, even if it consists of only *yes* or *on Tuesday*, if they realize a **response** mood. Moods can be 'performed' or reported on the basis of {P;N} elements, expressed by contentives such as *say, ask*, *order*, *wish*, etc., which need not even be finite. And the clausal argument that expresses the content introduced by the mood need not be finite, as illustrated in *She ordered them to leave*, where traditionally the infinitive is not considered so (hence the name), and normally in English is indeed not able to function as a non-elliptical independent sentence. But a mood-bearing {P} does not occur in subordinate clauses.

Now we are about to consider subordinate finiteness, those components of the finiteness complex and related properties that can appear in subordinate clauses. Existential {P}, the minimal finiteness element, governs structures that can be or have been assigned a mood. Mood {P}s, however, are obviously absent with subordinates. Subordinate finites show an existential {P}, absolute tense and concord (where appropriate), and normally a pre-finite subject (though there may be systematic ellipsis in non-initial conjuncts, for instance).

On the view adopted here, as suggested in Part I, subordinate finiteness may be introduced by a dedicated determiner, most obviously *that* – but the determiner may be non-overt. Its overt presence is not 'criterial', as is typically the case with distributional 'criteria'. Structurally, I start from the assumption that some (possibly covert) occurrence of {N/P} introduces a subordinate finite; but this obviously remains to be given firmer motivation. Its alleged presence also needs to be compared with traditional claims that finiteness is associated with presence of a subject and certain verbal categories, and/or that subordinate finites are the potential basis for an independent sentence structure. Let us work towards assessing these latter claims.

There is, as usual, again no simple criterion for what constitutes a finite structure, even in the case of a single language; and such language-particularity would,

anyway, undermine any general (rather than typological) theoretical interest the term might have. Prototypically, the finite structure introduced by {N/P} consists of a **propositional {P}** (positive, negative, in question, presupposed factual, contrafactive) concerning the existential status of a **predication**, headed by {P;N} the valency of whose head is satisfied, covertly or overtly, within that proposition, one of them by being hosted by the free absolute of the lexically governing {P}, the head of the proposition, or an overt {P}. Overt {P}s are associated with the presence of modals, which qualify the proposition, or periphrasts that qualify the predication or predicative copulas. And the predication may be tensed with respect to the time of utterance and bear person-number concord. Such clause structures are said to be potentially syntactically independent, subordinate to a mood. Traditionally, finites in general are also said to be syntactically complete, and, though 'completeness' needs clarification, this seems to be prototypical; answers are, obviously, necessarily context-dependent structurally. But they can support a mood.

The structure described in the above paragraph characterizes the unmarked finite construction, the **indicative** that can realize declarative mood if it is the main clause, even if elliptical. The indicative can also be complicated by the presence of further existentials co-indexed with quantifiers, as discussed in Chapter 35, and a topic-introducing {P}. However, subordinate (and main) clauses can lack many of these characteristics while still being regarded as finite; crucial is evidence, notional and/or structural, for the presence of a {P} and its determiner – though possibly lexically expressed in answers and the like.

In English, the free absolute of existential {P} hosts either another free absolute or the functor of the participant in a governed {P;N} that is highest in the subject-selection hierarchy (unlike in 'ergative' systems, for instance); and predications have verbal heads. Nouns and adjectives can be **predicative**, not introduced by a functor, as in *George is small/an accountant*; but they are not the head of a predication (though again this is not true of all languages). Similarly, functors in English do not head predications, but they can occur as the head of an argument of the copula, without dependence on a non-finite verb, as in *George is in Birmingham*. Let us now focus on evidence for {P} in subordinate clauses and its relation to other properties of the indicative construction.

Subject-formation is prototypically associated with finiteness in English, but, as well as main clause imperatives, which though finite, may lack an overt subject, there are also non-finite verb forms, {P;N}s we shall encounter below that are typically regarded as without subjects but that will call into question the presence of subjecthood as a necessary sign of finiteness. The distributions of subjunctives also seem indeed to be problematical for the associating of potentiality for appearance in main clauses with the presence of subjecthood. Let us look firstly at this latter phenomenon.

The apparently subject-taking contrafactive subjunctive in (62a) occurs only in the protasis, as observed in Chapter 36, and indeed it is the presence of the periphrast in the main clause in (62a) that confirms that the *left* of the protasis is possibly contrafactive subjunctive rather than necessarily past, as in (62b–c).

(62) a. If he left she would follow him
      b. If he left she used to follow him
      c. If he left she followed him
      d. If he would leave she would follow him

However, both the inflected form in the protasis of (62a) and the periphrast are either contrafactive or past; and as realizations of the former they are in complementary distribution. Notionally, they are components of an integrated construction. Indeed, in terms of the representation in (63) the unreality of the circumstances in which the protasis would occur is required by the prediction's valency, and this is just one instance of requirements imposed by main clauses on subordinates that are not unlike the requirements imposed by mood on the main clause, i.e. requirements involving connections between the {P}s in lexical and syntactic representation.

(63)

```
                                                 {P/{src}}
                                                    |
                                            {P/{{src}}{loc}{abs}}
                                                    |
                                               { {abs}}
                                                    |
                                          {N{pred}/{P//{contra}}}
                                                    |
                                        {P/{loc}{{src}/{N{int,e}}}}
                                                    |
                                        {P/{{src}/{N{int,e}}}}
                                            ╱‾‾‾‾‾‾‾‾‾‾‾╲
                                      { {abs}} ┊        {P;N}
                                                          |
   { {loc}\{P;N}}                                   {P;N/{abs}{src}}
        |                                          ╱‾‾‾‾‾‾‾‾‾╲
  {N{contra}/{P}}                          { {src}} ┊  ┊  ┊ { {abs}}
   ╱‾‾‾‾‾╲                                      |    ┊  ┊  ┊    |
        {P/{loc}{{src}/{N{int,e}}}}            {N}  ┊  ┊  ┊   {N}
             |
        {P/{{src}/{N{int,e}}}}
       ╱‾‾‾‾‾‾‾‾‾╲
  { {abs}}  {P;N/{src{abs}}{{src}}}
       ╲‾‾‾╱
   { {...}}
      |
     {N}

   if   he       left            she   would follow  him
```
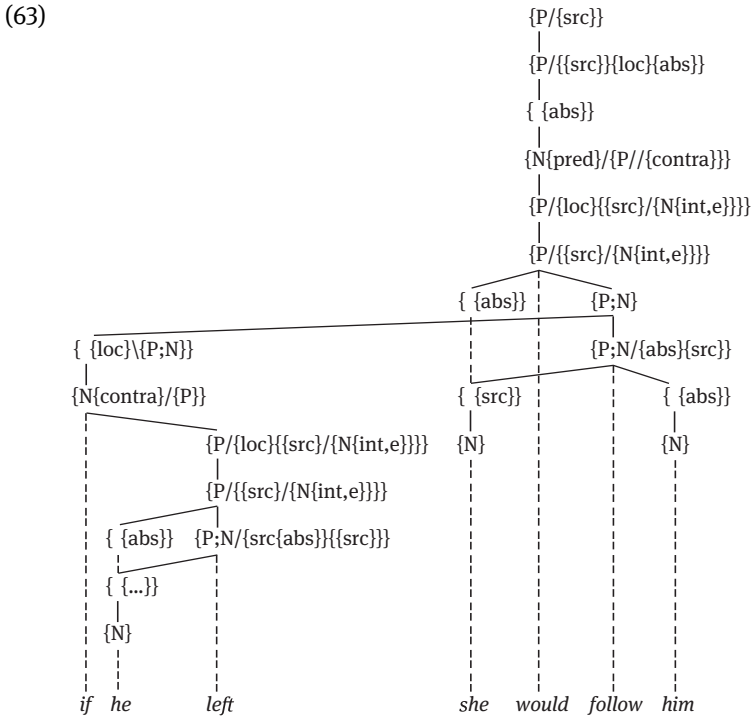
'{contra(factive)}' abbreviates the configuration of existentials that the finiteness determiner governs. Neither this rection from without nor the restriction of the inflected subjunctive here to the subordinate clause need be interpreted as evidence that it is non-finite. As a finite, the valency of the subjunctive is satisfied within the clause (and it has a subject). But, more importantly, the bearing of contrafactivity or absolute tense is an indication of finiteness ({P}-headed) status rather of a {P;N}; these are notional properties of finiteness when associated with a verbal.

Compare with (63) the non-contrafactive conditional in (70a) and both of them with the much simplified representation of a subordinate interrogative in (70b), where we have respectively a habituality requirement and unknown existentiality, as opposed to the contrafactivity in (63), all kinds of conditional requirements, all imposed by **long-distance valency** ('//') involving features of {P}s.

(70) a.

```
                                                      {P/{src}}
                                                        |          ¦
                                                      {P/{{src}}{loc}{abs}}
                                                        |
                                                      { {abs}}
                                                        |
                                                      {N{decl}/{P}}
                                                        |
                                                      {P{past//{habitual}}}
                                                        |
                                                      {P/{loc/{N{e}}}}
                                                   ___/
                                          { {abs}} {P;N}
                                                    ¦            ___
             { {loc}\{P;N}}                         ¦         {P;N/{abs}{src}}
                 |                                  ¦         /
             {N/{P/{P;N{habitual}}}}                ¦     { {src}}      { {abs}}
               __/                                  ¦        |             |
              /         {P/{loc/{N{int,e}}}}        ¦       {N}           {N}
             ¦      ___/                            ¦        ¦             ¦
             ¦  { {abs}}   {P;N{habitual}/{src{abs}}}        ¦             ¦
             ¦   |__/                               ¦        ¦             ¦
             ¦  { {src{abs}}}                       ¦        ¦             ¦
             ¦   |                                  ¦        ¦             ¦
             ¦  {N}                                 ¦        ¦             ¦
             ¦   ¦       ¦                           ¦        ¦             ¦
             if  he     left                       she    followed       him
```

b.

```
                              {P{past}/{loc/{int,e}}}
                     _____|_____
            { {abs}}                        {P;N/{abs}{src}}
         _____|_____                 _____|_____
   { {src}}    ┊    { {abs}}
        |      ┊         |
      {N}      ┊    {N{q}//{P{0}}
        ┊      ┊       _____|_____
        ┊      ┊      ┊        {P{0,past}/{loc/{N{int,e}}}}
        ┊      ┊      ┊    _____|_____
        ┊      ┊      ┊  { {abs}}          {P;N{...}}
        ┊      ┊      ┊ _____|_____    _____|_____
        ┊      ┊      ┊ { {src}}  ┊  { {abs}}
        ┊      ┊      ┊     |      ┊      |
        ┊      ┊      ┊   {N}      ┊    {N}
        ┊      ┊      ┊     ┊      ┊      ┊
        he   asked   if   she   followed  him
```
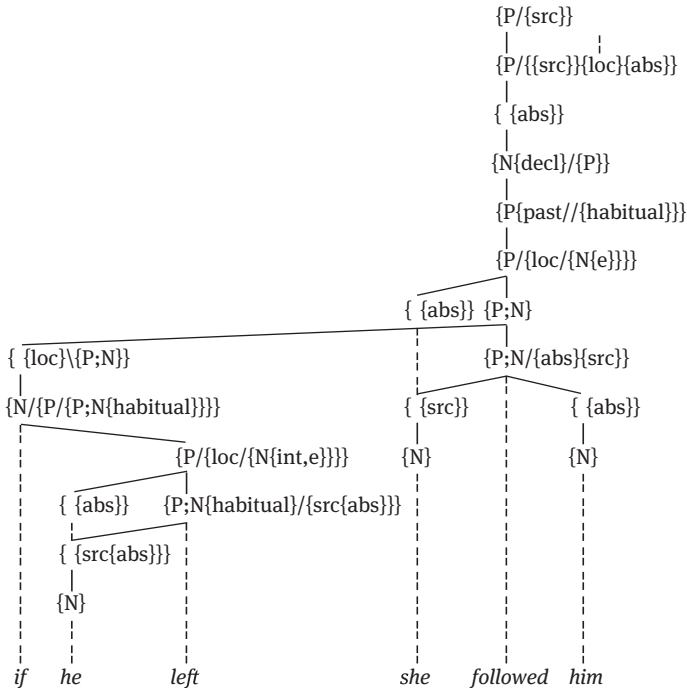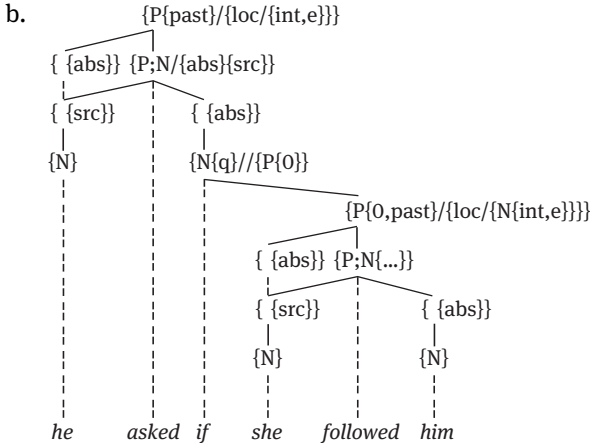
In (70a) both finite verbs are habitual (as stipulated there) or perfective. If in (70a) we substitute *leaves* for *left*, the apodosis will contain either a habitual (*follows*) or a prediction (*will follow*) – or an imperative – in accordance with the non-past of the protasis. What has been omitted from the representation in (70b) can be filled in from the direct question representation in (30a) of Chapter 35. We return to subordinate interrogatives later in the chapter.

Rather than requiring that finites could all form independent sentences, what the phenomena we've just looked at begin to suggest is that, rather, the very restrictions that are associated with their necessarily subordinate status are signs that these clauses are finites, headed by {P}. Finites can support semantic distinctions that characterize finiteness, in main or subordinate clauses. In the latter case, this involves non-immediate valency.

Moreover, to return to subjunctives, the optative *would* of (27c–d) from Chapter 36 governs an inflected contrafactive, where, unusually for English (cf. French *que*), the finiteness determiner linking the mood and existential parts of finiteness is made overt.

(27) c. Would that she were here!

d.

```
                            {P}
                             |
           {P/{src}} ........................................... { {loc}\{P/{src}}}
                     |                                            |
   { {src}} ......... {P/{{src}}{loc}{abs}} ........ { {abs}}    {N_T{TEMP}}
         |              |                              |
   { {loc{src}}}    { {abs}}                       { {loc{gol}}}
        |              |                              |
     {N_i}          {N{opt}/{P}}                     {N}
        |              |                              |
    { {ego}}        {P{vol}/{src{loc}}{abs}}       { {tu}}
                       |
              { {src{loc}}}  { {abs}}
                   |            |
               {N_i{def}}     {N/{P}}
                   |            |
               { {ego}}              { P/{loc} {{src/{N{int,e}}}}}
                                      |
                              { {abs}}  {P/{{src}/{N{int,e}}}} .................. { {loc{src}}}
                                          |                                        |
                                 { {abs}}  {P/{abs}{loc}} .... { {loc{src}}}    {N{int,e}}
                                   |          |                                    |
                               { {abs}}    { {loc}}                              {N{e}}
                                  |            |
                                {N}          {N}
                                 |            |
              would          that he     were here
```
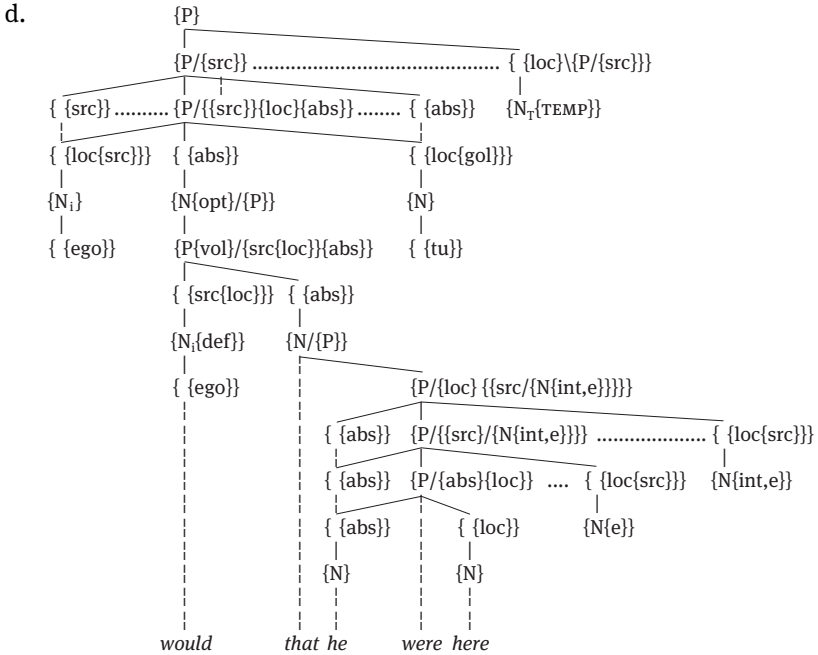
Here we have a similar pattern to what we found in (63), with again a contrafac-
tive valency, but in this case imposed by the optative. The interdependence of the
two contrafactives is even more evident.

   We have a similar situation with the 'present subjunctive' in (66a), where the
eventuative interpretation is governed by rection from the main verb, but in this
case the mood is reported and only the morphological subjunctive is non-factual,
in signifying a demanded eventuative, as with main-clause imperatives.

(66) a. They demanded (that) she resign
      b. They demanded (that) she resigns
      c. They demanded (that) she not continue
      d. They demanded (that) she should resign
      e. /{abs}/{N{mand}/{P/{loc{gol}/{N{int,e}}}}}

It is not problematical, or even relevant, except for students of language varia-
tion, that the subordinates in all of (66a–d) can be interpreted as eventuative.
(66b) does not give a distinctive expression of the notion, however; and (66d)
contains what is apparently a periphrastic equivalent to (66a), both expressions

being arguably finite. Traditionally, it is, of course, the rection from the main clause that apparently undermines finite status for the subordinate in (66a): the form and its interpretation do not in this case occur in a main clause, since the rection exercised by a {P;N} goes from superordinate to subordinate. I'm suggesting, however, that long-distance valency involving such properties is a sign of finiteness in subordinate clauses.

Demand is a contentive **mand**, like *command,* the contentive imperative mand, though the latter usually requires an infinitive. *Command* is a mand that more directly requires an affected actor or actors, as in *I command(ed) you to disperse* (whether performative or reported), whereas *demand* requires a changed situation. But *demand* can also be, as well as reporting, a performative expressing a mood, as in *I demand that she resign*. And it is thus not surprising that the same verb form as that in the subordinate in (66a) also signals the eventativeness demanded by simple imperatives, as represented in (14) from Chapter 35, where the eventative is a requirement of a particular mood and is itself finite, and where {N{imp}} abbreviates the command mand.

(14)
```
                {P}
                 |
              {P/{src}} ................................................. { {loc}\{P/{src}}}
                 |                                                            |
     { {src}} .......... {P/{{src}}{loc}{abs}} ............... { {abs}}   {N_T{TEMP}}
        |                       |                                 |
   { {loc{src}}}   { {abs}}                          { {loc{gol}}}
        |              |                                  |
      {N}      {N{imp}/{P/{{gol}/{N{int,e}}}}}        {N_i}
        |              |                                  |
   { {ego}}    {P/{loc{gol}/{N{int,e}}}}            { {tu}}
                       |
               {P;N/{src{abs}}} ..... { {loc{gol}}}
                       |                    |
               { {src{abs}}}          {N{int,e}}
                       |
                    {N_i}
                       |
                   { {tu}}
                       ⋮
                    leave!
```
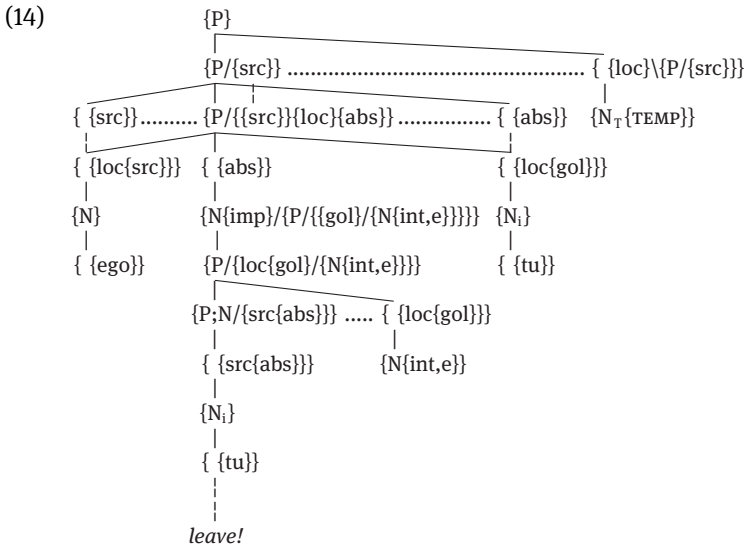
The eventative requirement by imperatives can be manifested in both main and subordinate clauses, and in both instances the same verb form is involved, the bare form, *resign* and *leave* in the examples cited. The subjunctive in (66a) is dependent on the same finiteness-requiring 'mood' that we find in the imperative, linking a 'mood' and a finite. This and the analysis of (66e) suggest that undergoing rection by 'mood', even if merely reported, is not incompatible with finiteness of the rectee.

Moreover, *that*, which realizes the mand – as in (67) – and which marks subordination, is nevertheless a dedicated governor of a finite, as we shall return to.

(67)

```
                    {P}
            ┌────────┘
     { {abs}} {P;N/{src}{abs/{N{imp}/{P}}}}
        │        │            │
     { {src}}    │         { {abs}}
        │        │            │
       {N}       │      {N{imp}/{P/{{gol}/{N{int,e}}}}}
        │        │         ┌──────┘
        │        │         │    {P/{{gol}/{N{int,e}}}}
        │        │         │    ┌──────────┘
        │        │      { {abs}}  {P;N/{src{abs}}} ..... { {loc{gol}}}
        │        │         │           │                      │
        │        │      { {src{abs}}}  │                  {N{int,e}}
        │        │         │           │
        │        │        {N}          │
        │        │         │           │
       they   demanded   that  she       resign
```
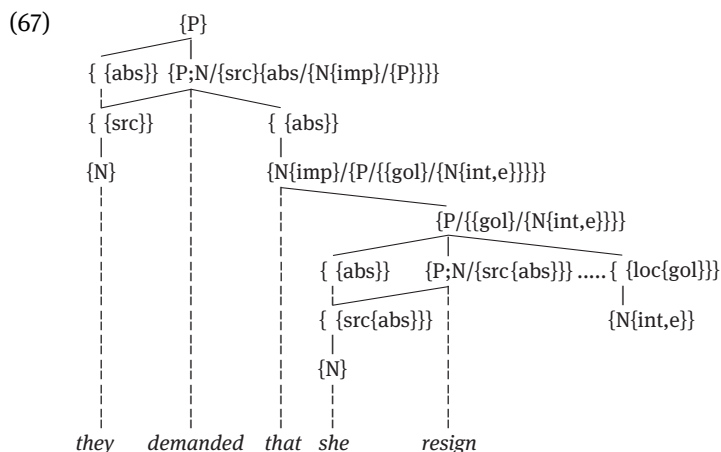
Meanwhile, let us observe that there are also extended subordinating conjunctions that favour a modal subjunctive, such as that in *He stole the money in order that he might/could travel more*, and here *that* is obligatory, unless, of course, the infinitive-requiring goal is deployed: *in order to*).

On the other hand, absence of an overt subject, as in (14), does not always threaten finite status. Such an observation also applies to instances of what I call **functional ellipsis**. 'Ellipsis' is a 'slippery' term. In common parlance it can be identified as a fault: a discourse is '(too) elliptical' if there is deemed to be lacking essential information or connections, for instance – which we can all be guilty of. And all discourse is to some degree potentially elliptical, given differences in lexical and/or encyclopaedic knowledge between participants in the speech act. What I intend by 'functional ellipsis' is where the interpretation of a structurally impoverished utterance depends on knowledge of the linguistic and/or situational context as well as whatever in the structure is derived from the lexicon.

We have already encountered an extreme form of this in the dedicated functional ellipsis of (24) in Chapter 35, the lexical structure realized as *yes*; and such ellipsis is indeed common in other answers, as illustrated again in the dialogue (15b) + (25).

(15) b. When does Dolly fly to Delhi?

(25) a   Dolly/She flies (to Delhi) on Tuesday
      b. On Tuesday

And the establishment of the reference of third person pronouns, for example, depends on context (as in one alternative of (25a)), including potentially concrete deixis. So too the short exclamatives of (22):

(22) a. How graceful!
      b. What a man!

But the hearer should be able to construct a full representation of the structure intended if the speaker has judged the context appropriately. We return to such ellipsis in Chapter 41.

Let us at this point try to sum up what we can say about subordinate finiteness. Basic here is the assumption that the indicative structure that expounds declarative mood is the prototypical finite. It inflects for person-number and tense, which relate the predication to the act of speech; and its valency is satisfied entirely within the indicative clause headed by {P}, even when the indicative is subordinate. Subordinate indicatives are governed, in adjunction or subjunction, by the unmarked finiteness determiner, overtly expounded by *that*. The indicative has an overt subject, but this is not a necessary concomitant of finiteness. Subordinate finites of any character behave as expected of a verb-headed construction; but there are properties that require the presence of {P} above {P;N}.

A subject may be absent in finite imperatives and in answers, but recoverable from context. Even person-number concord and tense may be absent under the rection of certain moods. The *would that* mood of (27c–d) is of course idiomatic, in that a modal expounds the mood, and it requires a finiteness determiner, usually overt, and a contrafactive subordinate.

(27) c. Would that she were here

(62) a. If he left she would follow him

Given the presence of this determiner and the satisfaction of the valency of the contrafactive within its predication, I take the subordinate clause in (27c) to be finite. And we find a similar situation in (62a), except that the mood concerned is predictive, and there is a distinctive rectional finiteness determiner, *if*.

These subjunctive forms do not appear, outside idioms, in main clauses. However, even subordinate, reported interrogatives differ from main-clause ones, in crucially lacking the verb-second structure of the latter. The subordinate indeed is closer in word order to the prototype indicative, as is the main-clause intonation-expounded interrogative. The predictive main-clause contrafactive of (62a) also differs in expression from the subordinate subjunctive, but the modal

and the subjunctive share not only contrafactivity but also lack of person-number concord and tense. One might argue that the modal form is the main-clause equivalent of the 'preterite' subjunctive. They can also occur in the same 'tense-paradigm', as we find under rection from the reported performative in *She wishes they visited/would visit more often*. The subjunctive is linked to a mood by prosodic valency. Overall, this suggests finiteness, though the main and subordinate equivalents are unlike. Similar observations can be made of (62d).

(62)   d.   If he would leave she would follow him

And, again, there is a similar close tie between the reported demand and the eventuative 'present subjunctive' of (66a).

(66)   a.   They demanded that she resign

The subjunctive is, of course, deficient in person-number concord and tense, but it shares the same form as the imperative mood of *Resign!* Again, it is plausible to consider the subjunctive as the subordinate equivalent of a mand, rather than a marker of non-finiteness. Its valency is satisfied in the (subordinate) predication. Again it is finite, and optionally introduced by the overt finiteness determiner.

This determiner warrants more attention now, and that will take us to another requirement that is imposed on lower finite clauses by an upper one, via the finiteness determiner. In the context of the discussion of subordinating conjunctions of Chapter 16 we encountered the finiteness determiner that, overtly or lexically, introduces subordinate finites, and, as we have seen, the determiner regularly bears a mood feature within the lexical root complex, as in, for example, the imperative of (14), cited above.

In the determiner's role in introducing, covertly or overtly, subordination of a finite verb, its various syntactic functions were summarized in Chapter 16 as follows.

> The finiteness determiner connects the subordinate sentence by:
> Apposition to an adverb or to a definite abstract noun;
> or by conversion to an attributive;
> or by satisfaction of a valency,
>   either in its own right
>   or by virtue of being subjoined to a source or absolute functor.

Its presence may be syntactically overt, as *that*, as in (71a), or lexical, as (71b). We have the alternative representational possibilities in (71c–d).

(71) a. She said that he was sick
　　　b. She said he was sick

　　　c. {N/{P}}
```
{N/{P}}
  |    \
  |    {P}
  |
 that
```

　　　d. {N/{P}}
```
{N/{P}}
   |
  {P}
```
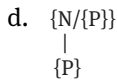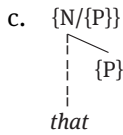
The hypothesis is that subordinate finites are necessarily introduced by {N/{P}}. One or the other variant may be unacceptable depending on the circumstances, as we have witnessed.

The two possibilities in (71c–d) are further illustrated by (I.191a–b), which exemplify the first of the functions listed above.

(I.191) a. We shall eat dinner now he has left
　　　　b. We shall eat dinner now that he has left
　　　　c. In that he defaulted he is liable to prosecution

But (I.191c) shows with some adverbs it is syntactically obligatory. And with many others, notably *wh*-forms and other adverbs where the apposition of the finiteness determiner is obligatory, the finiteness determiner is now present only lexically, covertly.

(I.188) a. We shall eat dinner when Bill arrives

(I.191b) was represented by (I.192a).

(I.192) a.


```
                      {P}
         _____/ |  _____
       { {abs}}       |      {P;N}
         |            |        |
         |            |    {P;N/{src}{abs}}   { {loc}\{P;N}}
         |            |        |         \        |
       { {src}}       |        |        { {abs}} {N}
         |            |        |          |       |
        {N}           |        |         {N}    {Ni}    {Ni/{P}\{Ni}}
         |            |        |          |       |          |
         |            |        |        {N;P}     |         {P}
         |            |        |          |       |          |
         we         shall     eat      dinner    now      that  he has left
```
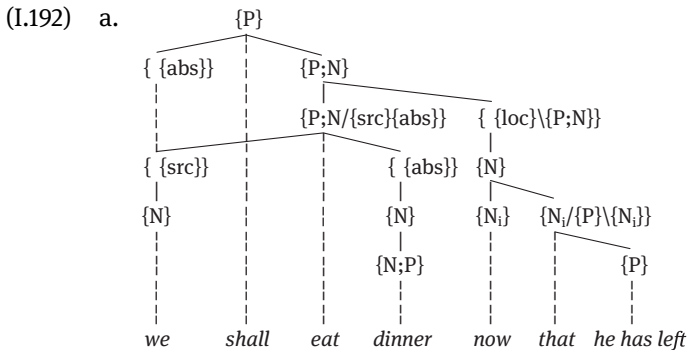
The representation does not spell out the internal structure of the adverb *now*. I shall not pursue this role of the finiteness determiner, since it attracted much of our attention in Chapter 16 and is illustrated in the appendix to the commentary on Chapter 17. But we should keep ourselves aware of the range of subordinating constructions that the definiteness determiner can be apposed to, ranging from *now that* to *in that* to *on condition that* to *provided that* to *to the extent that* ... .

The second kind of apposition in the list is illustrated by (I.196a) – along with the optionality of overt presence of the finiteness determiner.

(I.196)   a.   the fact (that) he has left doesn't help

However, though (I.202a) again illustrates the optionality of *the fact*, we have seen that the overt finiteness determiner in (I.202b) is obligatory in subject position (in the absence of *the fact*), and so facilitates parsing, in forestalling a 'garden path'.

(I.202)   a.   It is odd (that) she dislikes him
          b.   That she dislikes him is odd

In (I.202b) the finite determiner phrase is in subject position by virtue of satisfying the functor highest on the hierarchy; whereas in (I.202a) there is apparently no functor governing the finiteness determiner, and the absolutive of the copula hosts an expletive subject.

Avoidance of versions of (I.202b) with subject-verb inversion also facilitates parsing, particularly if the main clause is light, as in ?*Is that she likes him odd?* Parsing is easier in *Is it odd that she dislikes him?*, which delays the embedded clause till the end. It was suggested in Chapter 16 that in (I.202a) the finiteness determiner seems to satisfy the valency of the adjective 'in its own right', without a linking functor, and may be lexical rather than overt, while in (202b) it is only via dependency on a functor that it is an argument, and it must be overt.

My talking here about apposition of the finiteness determiner to an 'abstract noun' might seem odd, given that *the fact* may often be absent in the circumstances we've just been looking at. Indeed, quite so. The motivation is ultimately notional but the formulation as apparently necessarily involving apposition is unfortunate: the point is that even in the absence of *the fact* in these examples the clause headed by the finiteness determiner retains presupposed factuality with factive verbs, whereas *that* is not equivalent to *the idea that*, which does not introduce the necessarily factual. I take up **factivity** below. But other aspects of the present examples require our attention more immediately, given what was argued in previous chapters.

Our discussion of (I.202a–b) would give the minimum content of the respective valencies of the adjective suggested in (72a–b).

(72) a. {P:N/{N$_i$/{P}}}
    b. {P:N/{abs/{N/{P}}}}

In (72a) the finiteness determiner is an argument of the adjective. The subscripted {N} in (72a) indicates coreference with the expletive. In (72b) the finiteness determiner is the argument introduced by the absolutive of the copula. The extraposed examples were represented as in (I.203a) and (I.203b) in Chapter 16; the former, with overt finiteness determiner is repeated here.
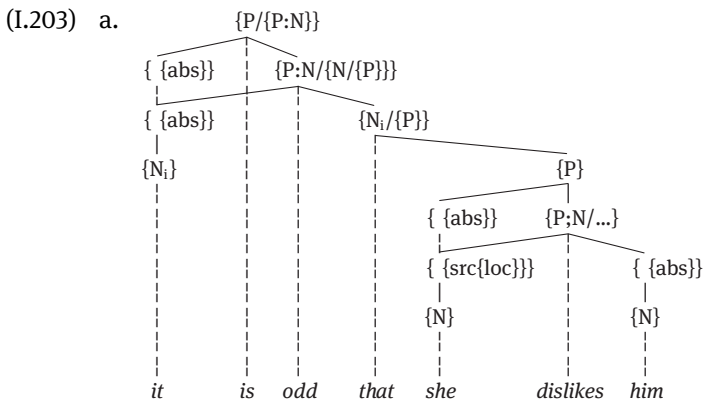
(I.203) a.

However, we are now in a position to improve on this picture, wherein, as it stands, the finiteness determiner constitutes an odd participant in such as (I.203a), and the adjective is assigned a valency, contrary to what was argued in Part II.

We can regularize the role of the finiteness determiner as a participant, by inserting an absolutive in (I.203), as in (73a).

(73) a.

```
                    {P/{loc/{N{int,e}}}}
        { {abs}} {P/{abs}{P.N}}
          |        |
        {Nᵢ}     {P.N}   { {abs}}
                   |        |
                 {P:N}    {Nᵢ/{P}}
                                 {P}
                          { {abs}}      {P;N/...}
                            |
                        { {src{loc}}}      { {abs}}
                            |                  |
                           {N}                {N}

        it      is   odd   that  she    dislikes  him
```

b.

```
                         {P/{loc/{N{int,e}}}}
        { {abs}}              {P/{abs}{P.N}}
          |                      |
        { {abs}}               {P.N}
          |                      |
        {N/{P}}                {P:N}
          |
                {P}

      that  she dislikes him  is    odd
```
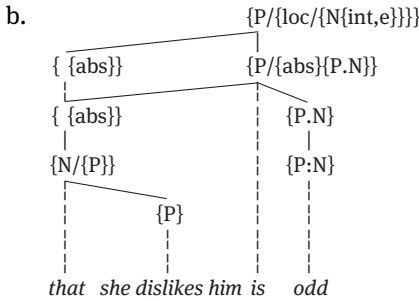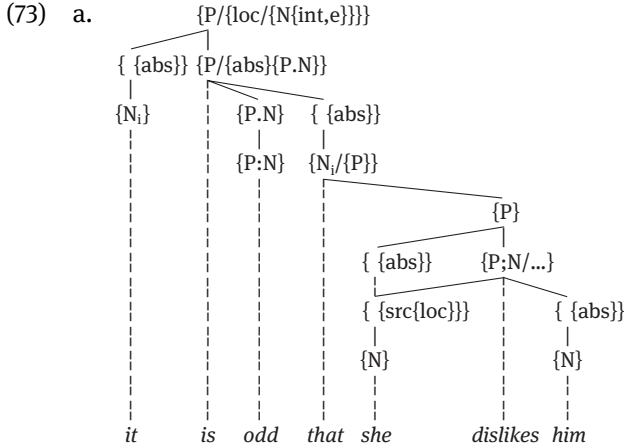
In this way the finiteness determiner behaves like other participants. (73a) also brings the representation up-to-date by depriving the adjective of participants and including the comparator.

On this analysis, the difference between (I.202a) and (I.202b) is, after all, not the absence vs. presence of an absolutive governing {N/{P}}, but an instance of the failure of subject formation in the former, motivated by the facilitating of parsing – though 'garden-pathing', at least, is obviated in (I.202b) by the obligatory presence of *that*.

(I.202) a.   It is odd (that) she dislikes him
         b.   That she dislikes him is odd

There is a similar failure in (36a) vs. (33a), from Chapter 35, but in this case to avoid the non-optimally indefinite subject:

(36) a. There are some cups in the cupboard

(33) a. Some cups are in the cupboard

Both such configurations prefer the lack of subject-formation at the interface. In the present case it is not the indefiniteness of the 'rejected subject', as in (33a), that is undesirable, but the self-embedding associated with (I.202b), and the associated 'artificiality'.

This limits the role of participant finiteness determiner to government by a functor, thus simplifying the last three lines of the list of roles from Chapter 16.

> The finiteness determiner connects the subordinate sentence by:
> Apposition to an adverb or to a definite abstract noun;
> or by conversion to an attributive;
> or by satisfaction of a valency,
> > either in its own right
> > or by virtue of being subjoined to a source or absolute functor.

Thus, as well as limiting the participant-status of {N/{P}} to mediation by a functor, as with other {N}s (except the predicative {N}-phrase in such as *Bert is a butcher* – Chapter 21), it removes another putative participant from an adjective: the subordinate clause and the adjective are both arguments of the copula. This is clearer in (73b), which updates (I.204) of Chapter 16. The absolutive of (72a) has failed at the interface to appear in subject position; in (73b), of course, subject-formation has not failed, and {N/{P} must be overt, thus avoiding the possibility of 'garden-pathing'. This discussion has taken us away from considering instances where the finiteness determiner is associated with factivity, whether or not it is in apposition to *the fact* – which we should now take up.

Having reminded us above of the contrafactivity found in some conditional structures, I would like now to pursue (what I see as) the main questions to do with the factuality of the participant subordinate finites, before taking up the conversion of the finiteness determiner to an attributive, i.e. in a relative clause, the remaining function in the list repeated above. The first thing to observe is that with such a predicative adjective complex as *odd* the factuality of the proposition expressed by the subordinate {P} in (71–3) is presupposed. This is made particularly clear in the overt standard appositional structure involving *fact*; but, as I've observed, its presence is not essential. A verb that requires one of its arguments to be supposed true is a **factive**.

I regard the *fact* of (I.196) as a nominalized existential – roughly, 'the being in existence', 'true', 'a fact', just as *death* is based on a negative existential, 'being out of existence'.

(I.196)   a.   the fact (that) he has left doesn't help

As suggested, the overt or lexical finiteness determiner is in apposition to the determiner of the noun. Such a determiner phrase might be represented as in (74a), where the apposed subordinate finite merely gives the content of the fact that is assumed and the valency of the main verb is abbreviated as '/...{src/{N//fact'.

(74)   a.

```
                                              {P/{{src}/{N{int,e}}{P;N}}}
            { {abs}}                          { {{src}}}   {P;N/... src/{N//{fact}}}}
            { {src}}                          {N{int,e}}
            {N{def}}
            {N}
            {Nᵢ/{src}}      {N{def}ᵢ/{P}\{Nᵢ}}
                  { {src}}            {P}
                     {N}               {P;N}
                   {N;P}
                   {P;N}
                  { {loc}}
                  {N{int,e}}

            the     fact      that   he has left  doesn't    help
```

b.

```
                            {P/{{src}/{N{int,e}}}{P;N}}
            { {abs}}          { {{src}}}   {P;N/... src/{N//{fact}}}}
            { {src}}          {N{int,e}}
            {N{def}/{P}}
            { {loc}}   {P}
            {N{int,e}}  {P;N}

            that     he has left  doesn't       help
```

c. *help*   {P;N//{fact}/{abs}{src/{N}}}
                            |
                         { {loc}}
                            |
                        {N{int,e}}

d. *is...odd*   {P/{P.N} ...... {abs/{N/{P}}}}
                    | |
               {P:N{fact}}   { {loc}}
                                    |
                                {N{int,e}}

(74a) is an expansion of the hypotactic apposition of (197a) in Chapter 16, in order to accommodate the existential-verb base of the noun and the sub-type of rection by the main verb or other contentive. The presupposing that is demanded by the contentive is embodied in the *fact* phrase, and what is presupposed is specified by the locative existential in what is apposed to the initial determiner. The '{factive}' in the valency of *help* abbreviates the positive existential configuration.

However, even without the governing nominal structure, the finiteness determiner of (74b) can satisfy the subject functor of the superordinate clause, ... *doesn't help*, and the latter imposes a positive existential valency on it, perhaps as represented in (74b), where '//{fact}' in its categorization again abbreviates the requirement for a factual structure. (74c) gives the valency of the *help* of (I.196a).

But *is odd* in (I.202) also assumes factivity of the lower proposition:

(I.202)   a.   It is odd (that) she dislikes him
           b.   That she dislikes him is odd

I take it that *is odd* is a copular 'periphrasis' that allows *odd* to have access to a factive proposition that introduces a fact, a presupposed existentiality. Thus, (74d) expresses the valency of the copula and predicative adjective periphrasis of (I.202) – though, in a fuller treatment, we would have to allow for such as *I find it odd that* ..., as well as copulative structures.

Such superordinate predicators, 'periphrastic' or simple, have been called **fact(ive)**, a term included in (74c–d): they presuppose the truth of the proposition expressed by the subordinate. We have another requirement imposed from above and mediated by the finiteness determiner. Factives, unsurprisingly, are opposed to **non-factives**, which simply lack the presupposition.

The subordinate finites of the factives we have looked at occupy subject-position when subject-formation occurs, but are 'post-posed' if not: they are 'extra-posed' in Jespersen's terminology, as in (I.202a) above; but 'movement' is not involved. We find a similar position with non-factives: so, we have both *That she was*

guilty was widely suspected/It was widely suspected that she was guilty. However, a familiar non-factive whose subordinate can, as such, appear in the 'extraposed' position, is *seem*, as in (75a), but it apparently fails to undergo subject-formation, as illustrated by (75b).

(75) a. It seems (to Bill) (that) she hates them
      b. *That she hates them seems (to Bill)
      c. *The fact (that) she hates them seems (to Bill)

      d.

```
                    {P/{loc/{N/{int,e}}}}
          ┌──────────────┐
     { {abs}}   {P;N/{N/{P}}}
       │          ┆       │
     { {abs}}     ┆    {N/{P}}
       │          ┆      │
     {N}          ┆      ┆          {P/{loc/{N/{int,e}}}}
       ┆          ┆      ┆                 │
       ┆          ┆      ┆          {P;N/{src{loc}}{abs}}
       ┆          ┆      ┆         ┌──────────┐
       ┆          ┆      ┆  { {src{loc}}}  ┆  { {abs}}
       ┆          ┆      ┆         │        ┆     │
       ┆          ┆      ┆        {N}       ┆    {N}
       ┆          ┆      ┆         ┆        ┆     ┆
       ┆          ┆      ┆         ┆        ┆     ┆
       it       seems  that     she      hates  them
```

      e.

```
                                        {P/{loc/{N/{int,e}}}}
          ┌───────────────────────────────┐
     { {abs}}                          {P;N/{ /{P;N}}}
       │                              ┆  ┆     │
     { {abs}}                         ┆  ┆   { /{P;N}}
       ┆                              ┆  ┆      │
       ┆                              ┆  ┆   {P;N/{pass}}
       ┆                              ┆  ┆   ┌────┐
     { {abs}}───────────────────────────────┆  {P;N/{abs//{fact}}}
       │                           ┆  ┆  ┆   ┆        │
     { {abs}}                      ┆  ┆  ┆   ┆   {P;N/{abs}{src//{fact}}}
       │                          ┆  ┆  ┆   ┆  ┌─────────┐
     {N_k/{P}}                    ┆  ┆  ┆   ┆ { {src}} ..... { {abs}}
       ┌──────────┐               ┆  ┆  ┆   ┆    │             │
     { {loc}}          {P}        ┆  ┆  ┆   ┆  {N_{<i>}}      {N_k}
       │           ┌──────┐       ┆  ┆  ┆   ┆    ┆             ┆
    {N{int,e}}  { {abs}}  {P;N/{...}}
       ┆        ┌──────┐       ┆   ┆  ┆  ┆   ┆
       ┆    { {src{loc}}} ┆  { {abs}} ┆   ┆  ┆   ┆
       ┆          │      ┆    │     ┆   ┆  ┆   ┆
       ┆         {N}     ┆   {N}    ┆   ┆  ┆   ┆
       ┆          ┆      ┆    ┆     ┆   ┆  ┆   ┆
      that      she    hates them seems to  be  welcomed
```
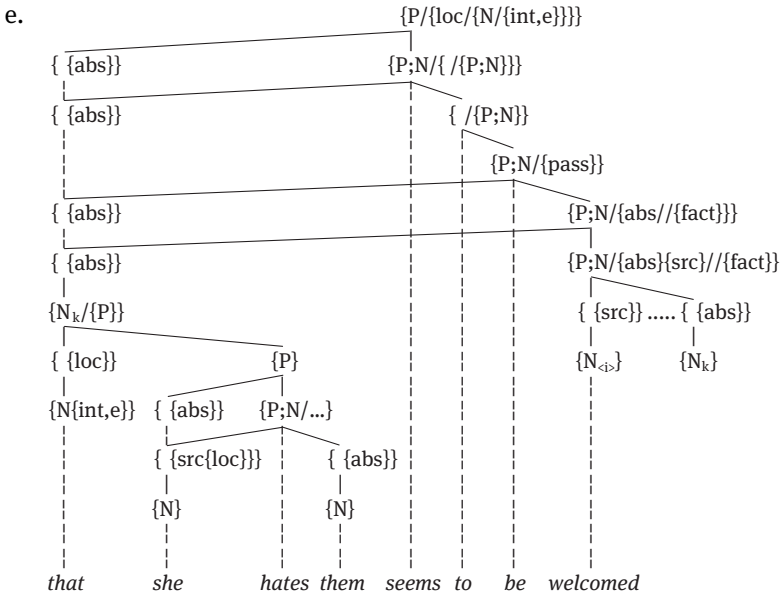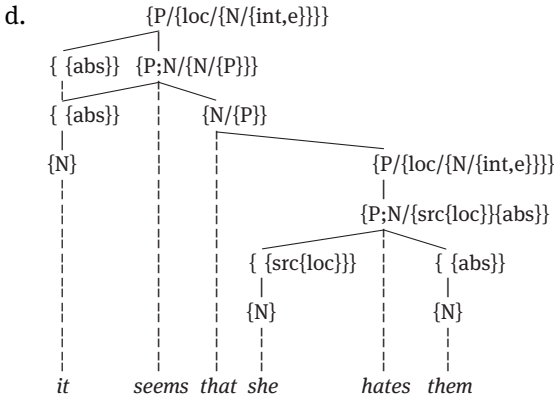
The inclusion of initial *the fact* in (75c) doesn't affect acceptability – again unsurprising, in that *seem* is non-factive. (75a) is represented as in (75d), characterizing the possible structure for such non-factive finites, where in the absence of the factive feature subject-formation fails. I have represented *seem* as a 'copular' verb that takes a non-functor argument, as in *She seems quite (a) nice (girl), really*. The argument is therefore not available for subject-formation.

An intervening subordinate factive infinitive, as squeezed into the graph in (75e), changes the picture somewhat, particularly in permitting subject-formation of the subordinate finite, and an optional initial *the fact*. This subject thus 'by-passes' by raising to the free absolutive of the copular verb, via that of the passive *be* in this case.

Sometimes the subordinate factive finite is outranked by another argument as potential subject, as illustrated for factives by (76a), but we find the expected pattern in the passives in (76b–c).

(76) a. You resent (the fact()that) he dismissed them
      b. (The fact()that) he dismissed them is resented
      c. It is resented (that) he dismissed them

The linked brackets in (76a–b) indicate again that either or both *the fact* and *that* must be present in this context, ignoring the *it that* possibility in the active (see below). The passive in (76b) suggests that the subordinate clause is dependent on the functor next on the subject-selection hierarchy to the absorbed highest functor, viz. absolutive; whereas in (76c) the subordinate clause fails to appear in subject position, and an expletive is introduced, as in (I.203a), cited above; subject-formation has failed.

Compare with (76) the non-factives in (77).

(77) a. Shirley assumes (*the fact) (that) Bill feels the same
      b. ?*That Bill feels the same is assumed
      c. It is assumed (that) Bill feels the same

Here *the fact* is again lacking, and the passive in (77b) I find awkward. The impersonal passive in (77c) is much preferred to (77b). This illustrates a preference with non-factives for the failure of subject-formation with the absolutive {N/{P}}.

We can observe too that with many verb factives *the fact* in (76a) can be replaced by an expletive *it* when preceding *that*, as in (78a), whereas it is in many cases uncomfortable with non-factives (**You suspect it that he dismissed them*).

(78) a. You resent it that he dismissed them

b.
```
{ {abs}}
  |
{N}
  ┌──────────────
{Nᵢ{def}} {Nᵢ/{P/{loc/{N{int,e}}}}\{Nᵢ}}
  |         ┌──────────
{ }      { {loc}}    {P}
  ┆         |
  ┆      {N{int,e}}
  ┆         ┆
  ┆         ┆
  it       that        ...
```
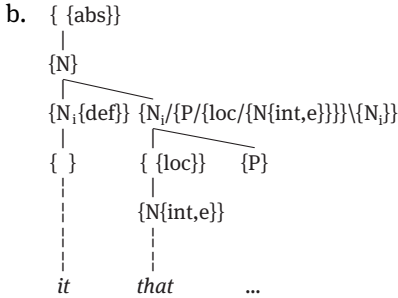
c. It is resented (that) he dismissed them
d. That he dismissed them is resented

This possibility is common with negative-polarity items. Since, however, the finiteness determiner can by itself embody the presupposition, this *it* can be interpreted as a simple anticipatory pronoun to which *that* is apposed, as in (78b). In that case, it would not be surprising that this non-expletive *it* might trickle through into the subordinates of non-factives such as (77c). (78c) and (78d) illustrate that we find passive versions with either an *it* or the *that*-clause. But in the first case the *it* is indistinguishable from an expletive subject.

We shall find in the chapters in Fit the 2nd that the factive/non-factive distinction among exercisers of rection is also reflected in the syntax of non-finites. But we should remind ourselves here that the valencies of superordinates may affect the existential status of the subordinate {P} of the subordinate finite in other ways, in the first place when the main clause sentence reports a mood whose content is expressed in the subordinate. It should not surprise us that these retain some of the properties of the corresponding (unreported) moods.

We have already observed this with reported mands such as (66a), as represented in (67).

(66) a. They demanded that she resign

(67)

```
                        {P}
              {  {abs}}  {P;N/{src}{abs/{N{imp}/{P}}}}
              {  {src}}         {  {abs}}
                {N}      {N{imp}/{P/{{gol}/{N{int,e}}}}}
                                    {P/{{gol}/{N{int,e}}}}
                           {  {abs}}  {P;N/{src{abs}}} .... {  {loc{gol}}}
                           {  {src{abs}}}              {N{int,e}}
                              {N}
     they      demanded  that she           resign
```
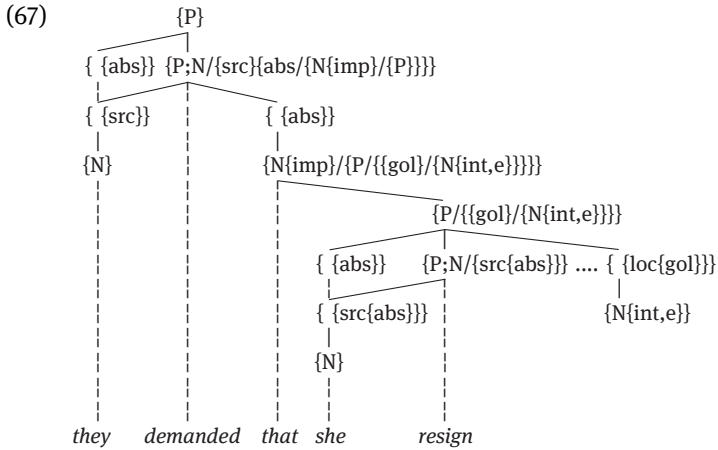
The valency of the reported mand verb, *demanded*, imposes rection on the subordinate verb, which, as in mandic moods, requires of it an eventuative finiteness, again signalled by the bare form of the verb, the descendant in this case of the 'present subjunctive'.

Similarly, with a reported interrogative, as with moodal interrogatives, the factuality of a proposition is open. And again the rector of openness is a verb, here *asked*, and not an operator. This is illustrated in the example in (79a–b) (which again ignores tense and mood), which also indicates the role of the finiteness determiner in imposing open existentiality on the subordinate operative, while (79c–d) illustrate questioning of participant-identity.

(79)   a.   He asked if Dolly had arrived

b.

{P/{loc/{int,e}}}

{ {abs}}   {P;N/{src}} .... { {loc}}

{ {src}}   {P;N/{loc{src}}}   {N{int,e}}

{ {loc{src}}}   { {abs}}

{N_i}   {N{req}/{P}}

{P/{loc{gol}/{N{int,e}}}}

{ {abs}} .... {P;N/{loc{gol}}{abs}} ... { {loc{gol}}}

{ {loc{gol}}} { { {abs}}   {N{int,e}}

{N_i}   {N{value://0}/{P}}}

{P{0}}

{ {abs}} { {P;N/{src{abs}}}

{ {src{abs}}}

{N}

he   asked if   Dolly   had   arrived

c.   He asked when Dolly arrived

d.

```
                        {P/{loc/{int,e}}}
        { {abs}}        {P;N/{src}}.................{ {loc}}
          |               |                          |
        { {src}}        {P;N/{loc{src}}{abs}}   {N{int,e}}
          |               |
        { {loc{src}}}   { {abs}}
          |               |
        {Nᵢ}            {N{req}/{P}}
          |               |
          |             {P/{loc{gol}/{N{int,e}}}}
          |      { {abs}}....{P;N/{loc{gol}}{abs}}.........................................{ {loc{gol}}}
          |        |           |                                                           |
          |      { {loc{gol}}} |                                                   { {abs}} {N{int,e}}
          |        |           |                                                           |
          |      {Nᵢ}          |                                                   {N{value://0}/{P}}
          |                    |                                                           |
          |                    |                                                         {P//{top}}
          |                    |           { {abs}}                               {P/{loc/{N{int,e}}}}
          |                    |             |                              { {abs}}     {P;N}
          |                    |           { {loc}{top}\{P:N}}                 |            |
          |                    |             |                                |          {P;N/{src{abs}}}
          |                    |           {N{temp,0}}                       { {src{abs}}} |
          |                    |                                               |          |
          |                    |                                             {N}          |
          |                    |             |                                |           |
          he                 asked        when                             Dolly       arrived
```
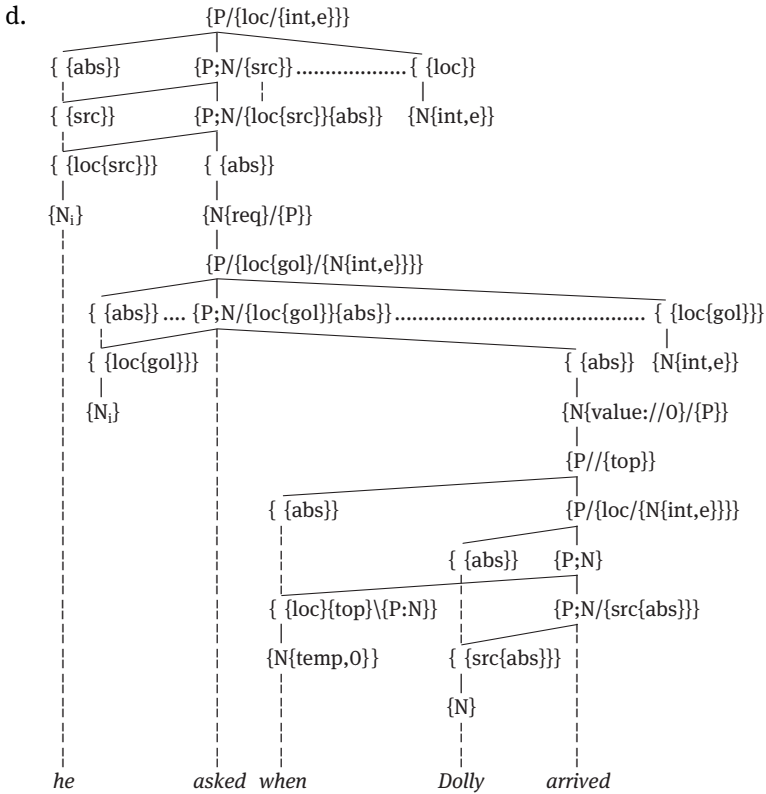
The reported questions retain some of the lexical linking found with the structure of interrogative mood, as well as a participant, ultimately expounded as *he*, that bears three relations, the agent of the main clause and its directional { {loc{src}}} and the lower reversed-direction locational. The lower part of the spine realized as *asked* is lexical, so its branches, apart from the lowest absolute, are not realized independently, so that the lower directional 'subject' { {loc{gol}}}, is not directly expounded but co-indexed to the sentential subject. (79c–d) retains the 'fronting' of the open argument, but there is no 'subject-operative inversion' and the 'alternative interrogative' in (79a–b) is initiated by a form of the finiteness determiner that is a dedicated 'openness marker', *if*. This is also found in such as *Let's see if Dolly has arrived*. The 'bridging' role of the finiteness determiner in relation to factuality is similar to that in contrafactive conditionals and (positive) factivity.

This form of the finiteness determiner also, appropriately, initiates protases, where it can presuppose contrafactivity, and, via its abbreviated {contra}, reduce the {P} of the protasis to non-existential status, under rection from the predictive contrafactive periphrasis of the main clause.

(63)

```
                                                        {P/{src}}
                                                           |
                                                        {P/{{src}}{loc}{abs}}
                                                           |
                                                        { {abs}}
                                                           |
                                                        {N{pred}/{P//{contra}}}
                                                           |
                                                        {P/{loc}{{src}/{N{int,e}}}}
                                                           |
                                                        {P/{{src}/{N{int,e}}}}
                                                      ╱‾‾‾‾‾           ‾‾‾‾‾╲
                                              { {abs}}  ┊          {P;N}
                                                                      ╲
   { {loc}\{P;N}}                                                  {P;N/{abs}{src}}
         |                                                           ╱‾‾‾    ‾‾‾╲
   {N{contra}/{P}}                              { {src}}  ┊    ┊    { {abs}}
         ╱‾‾‾   ‾‾‾╲                                |      ┊    ┊       |
   ┊        {P/{loc}{{src}/{N{int,e}}}}         {N}    ┊    ┊      {N}
   ┊              |                                    ┊    ┊
   ┊        {P/{{src}/{N{int,e}}}}                     ┊    ┊
   ┊           ╱‾‾‾  ‾‾‾╲                              ┊    ┊
   ┊  { {abs}}    {P;N/{src{abs}}{{src}}}              ┊    ┊
   ┊     |          ┊                                  ┊    ┊
   ┊  { {...}}      ┊                                  ┊    ┊
   ┊     |          ┊                                  ┊    ┊
   ┊    {N}         ┊                                  ┊    ┊
   ┊     ┊          ┊                                  ┊    ┊
   if    he        left                               she would follow him
```
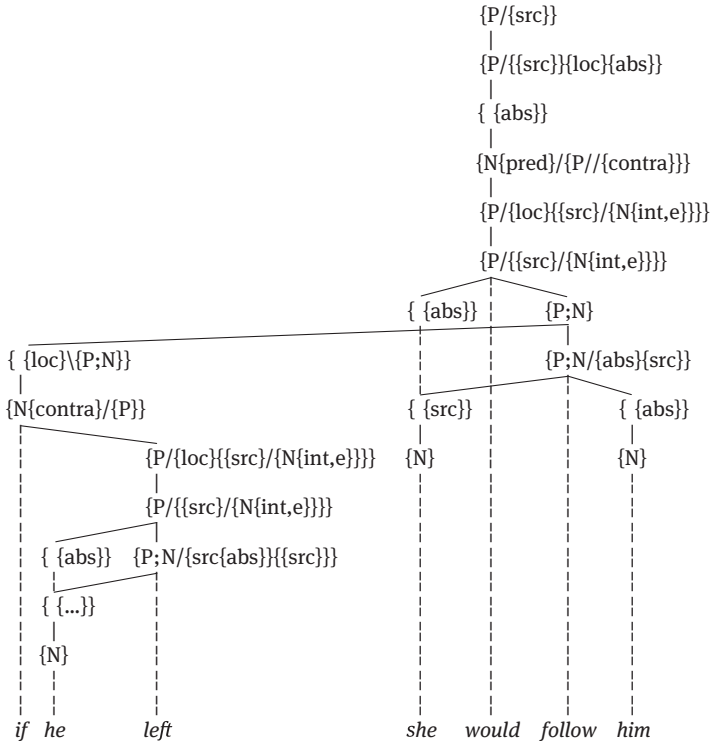
Compare with the example in (62a) those in (62b–c), where, in the absence of prediction, sequence of tense, as in (80a), is appropriate, but not mandatory, while in (80b–c) the prediction about the past involves a perfect auxiliary.

(62) a. If he left she would follow him
      b. If he left she used to follow him
      c. If he left she followed him

(80) a. apodosis: {P{past}}
                ⇓
          protasis: {P{past}}

      b. If he (has) left she will have followed him
      c. If he had left she would have followed him
      d. If he attended, she didn't care to

The finiteness determiner in (62b–c) is purely conditional; there is no contra-factivity: the existentiality or otherwise is conditional upon some value of the

existential in the protasis, but the two existentials need not concord in value, as illustrated by (80d). However, let's return to our consideration of the syntax of verbs reporting mood.

The above reported-mood verbs – mandative and interrogative – are naturally non-factive: rather than presupposing the truth (or otherwise) of a proposition, they require an eventuative (imperative) or a resolution of a proposition with an empty element (interrogative). Similarly, declarative main verbs have subordinates that assert a proposition, rather than presuppose it, such as (81a), with a proposition within the speaker's own proposition.

(81)   a.   She says (that) they are in Peru {P;N/{src}{abs/{N/{P}}}}
      b.   She says <to everybody> (that) they are in Peru <to everybody>
      c.   She told us (that) they are in Belgium

The main verb in (81a) takes the unmarked finite subordinate, with a simple existential {P}, which, as a default, a simple indicative, need not be specified further in the valency of the main verb. *Say* is, like declarative mood, a causative directional the alternative placements of whose goal argument is made overt in (81b). The receiver of *tell* is more generally overt, as in (81c).

The reported exclamation in (82a), however, is factive, as is the reported surprise in (82b).

(82)   a.   She exclaimed at how beautiful he was
      b.   She was surprised at how beautiful he was
      c.   She exclaimed at him/his being so beautiful
      d.   I wish that they came/would come/had come

That normally cannot be adjoined to a(n overt) functor such as *at* (unlike *in*), and including *the fact of* is cumbersome at best, this perhaps being associated with the co-presence of the dedicated exclamative specifier and *the fact of*, which both proclaim factuality; the sequence requires a rather special interpretation: ??*She exclaimed at the fact of how beautiful he was*. Better, I think, is *She exclaimed (at the fact) (that) he was so beautiful*, which avoids the partial duplication of *exclaimed* and the exclamatory marker *how*. A subordinate *-ing*-form, specifically a gerund, {P;N{n}}, such as that in (79c), is also characteristic of factive main verbs, though, as we shall see, not criterial of such. Reported optatives such as those in (82d), however, require as a subordinate a contrafactive, morphological or periphrastic, depending on the tense.

Some moods are less amenable to being reported, except, say, by direct quotation. However, such rectional phenomena as we have been looking at are par-

ticularly evident also with the various verbs offering estimates of the likelihood of propositions being true. These have the general form of (83) (where I continue to omit the root mood), which lacks the causative part of the reported-mood main verbs, and whose subject is simply experiencer and whose verb is merely {cog(nitive)}, not mood-reporting, nor factive.

(83)

```
                      {P}
               _____/
        { {abs}}      {P;N{cog}/{src{loc}}{abs}}
           |         /            |
        { {src{loc}}}|         { {abs}}
           |         |            |
          {N}        |         {N/{P}}
           |         |            |
           |         |              {P/{loc/{N{int,e}}}}
           |         |             _____/
           |         |      { {abs}}  {P/{abs}{loc}}......{ {loc}}
           |         |         |     /         |
           |         |      { {abs}}| { {loc}}  {N{int,e}}
           |         |         |    |    |
           |         |        {N}   |  {N}
           |         |         |    |   |
         Sally    thinks  that they are in Peru
```
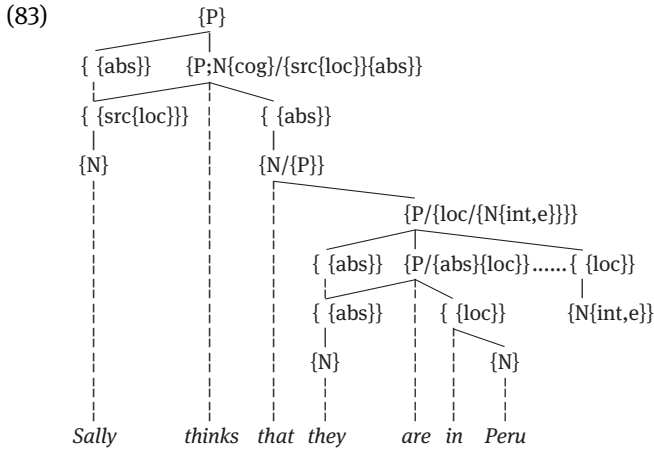
As far as Sally is concerned, the 'they' referred to are in Peru; we have an implied reported declarative: cf. *Sally says that they are in Peru*. However, *the fact* cannot precede *that* here. Both instances (*thinks/says*) are also non-factive.

Consider now, however, such main verbs as those in (84).

(84)   a.   Sally speculates that they are in Peru
       b.   Sally knows that they are in Peru

(84a) seems to introduce some doubt on the part of Sally (and others), but there is a calculated possibility that 'they' are in Peru; whereas (84b) doesn't allow any doubt on the reporter's part (unless we have a sarcastic reporter). We must complicate the representations of verbs of knowledge and belief to allow for the expression of degrees of confidence.

We might introduce the quantification of possibility that was attributed to the core modals in Chapter 35. Thus, for (84a) I would suggest a representation such as that in (85a), which is interpreted as a self-affecting causative, characterizing 'speculation' as an internal activity that leads to a cognitive state, whereas *know* in (85b) is a denial of the possibility that some proposition is not the case.

(85) a.

```
                    {P}
       ┌─────────────┘
{ {abs}}      {P;N/.........{src}}
   │           │
{ {src}}    {P;N{cog}/{src{loc}}{abs/{N/{P{E}/{abs/{N{poss}/{P{E}}}}}}}}
   │           │
{ {src{loc}}}      { {abs}}
   │               │
  {N}             {N/{P}}
   │        ┌───────┘
   │        │        {P/{abs}{loc/{N{e}}}}
   │        │       ┌──────┘
   │        │   { {abs}} ..............{ {loc}}
   │        │        │               │
   │        │     {N{poss}/{P}}     {N{int,e}}
   │        │        │
   │        │     {P/{loc/{N{int,e}}}}
   │        │    ┌─────┘
   │        │ { {abs}}  {P/{abs} {loc}} ... { {loc}}
   │        │    │        │          │
   │        │ { {abs}}    │       { {loc}}   {N{int,e}}
   │        │    │        │          │
   │        │   {N}       │         {N}
   │        │    │        │       │  │
 Sally  speculates that  they    are in  Peru
```

b.

```
                    {P}
       ┌─────────────┘
{ {src}}     {P;N{cog}/{src{loc}}{abs/{N/{P{¬E}/{abs/{N{poss}/{P{¬E}}}}}}}}
   │           │
{ {src{loc}}}      { {abs}}
   │               │
  {N}             {N/{P}}
   │        ┌───────┘
   │        │        {P/{abs}{loc/{N{e}}}}
   │        │       ┌──────┘
   │        │   { {abs}}.............. { {loc}}
   │        │        │               │
   │        │     {N{poss}/{P}}     {N{int,e}}
   │        │        │
   │        │     {P/{{src}/{N{int,e}}}}
   │        │    ┌─────┘
   │        │ { {abs}}  {P/{abs}{loc}} .... { {{src}}}
   │        │    │        │                  │
   │        │ { {abs}}    │     { {loc}}    {N{int,e}}
   │        │    │        │       │
   │        │   {N}       │      {N}
   │        │    │        │     │  │
 Sally    knows  that  they    are in Peru
```
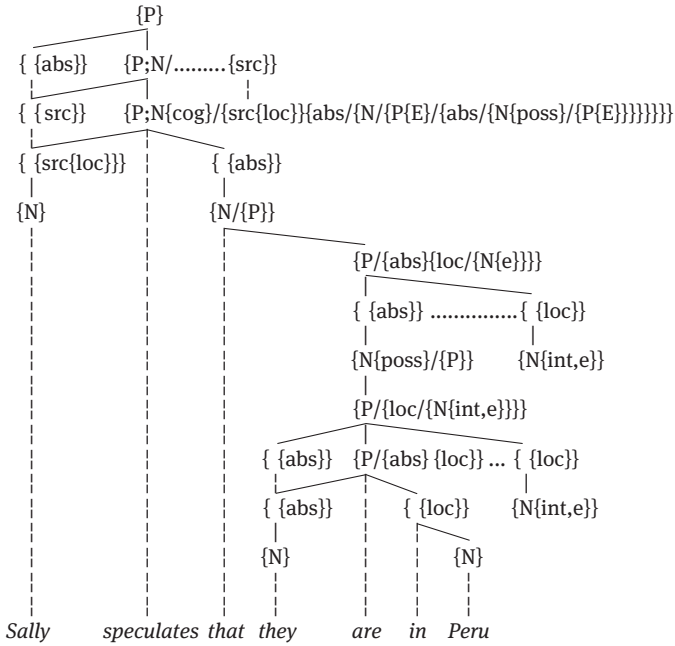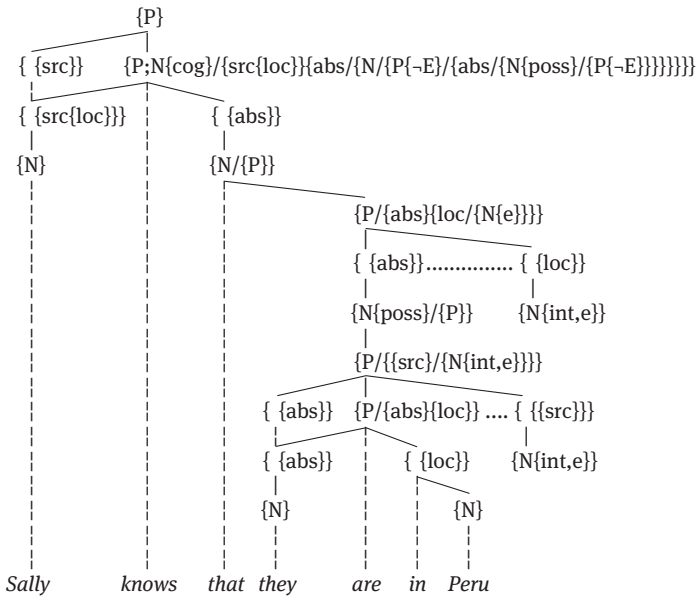
In (85a) Sally envisages, on the basis of mental effort, a possibility; but in (85b), representing (84b), she allegedly does not admit the possibility that 'they' are not in Peru. 'E' abbreviates (even more than usually) 'in existence', which needs some comment.

These representations in (85) involve a complex valency for the main verbs involved. Extended rections of this sort are no doubt a nightmare for the human reader, so I have employed a shorthand such as I used in the description of the valency of passive valencies – '{pass}'. Most in need of explication is perhaps the notation {P{E}} and {P{¬E}} for positive and negative existentials. Still, I suggest that this complexity in the representation of verbs involving the status of knowledge is not unexpected, or necessarily an argument against this kind of proposal.

Judgments of the appropriateness of these mental-content verbs in particular circumstances vary a great deal, of course. This is perhaps most striking in the case of *believe* (for some users roughly 'I think that I know', perhaps), which, when uttered in many contexts, may be interpreted as claiming something admittedly inconclusive, as in (86a), where *think* might also be appropriate.

(86) a. I believe (that) they are in Peru
      b. I believe/know (that) fairies exist
      c. I/they fantasize (that) they are in Peru

But (86b), and other examples involving ontologically controversial entities, will be interpreted by many interlocutors as pronouncing an article of faith, and thus for the speaker a fact, one that a hearer may not take seriously. The sense of the enunciation of any of these thoughts can be controversial. In (86c), indeed, the speaker explicitly disassociates themself from the truth of the proposition expressed by the subordinate, even if it is their own fantasy that is being reported; the proposition is anti-factual.

Finally, here, as concerns factuality, I would like to mention the phenomenon of revealed rather than acquired factuality. The latter of these is exemplified by (87a) and represented in abbreviated form, without marking tense, in (87b), where here the ego-oriented goal of the metaphorical *came* marks the entry of this event into the speaker's world.

(87) a. It came about that John moved to Paris

b.
```
                  {P}
      ┌─────────┐
    { {abs}} {P;N/{abs}{{src}{loc/{N{int,e}/{loc/{{ego}}}}}}}
      │         │
    { {abs}}    │    { {loc{gol}}}   { /{N/{P}}}
      │         │       │                │
    {Nᵢ}        │    {N{int,e}}      {Nᵢ/{P}}
      ┊         ┊       │             ┌──────┐
      ┊         ┊    { {loc}}         ┊    {P}
      ┊         ┊       │             ┊      ┊
      ┊         ┊    { {ego}}         ┊      ┊
      ┊         ┊       ┊             ┊      ┊
      ┊         ┊       ┊             ┊      ┊
      it      came    about        that John moved to Paris
```

c. It came out that John had moved to Paris
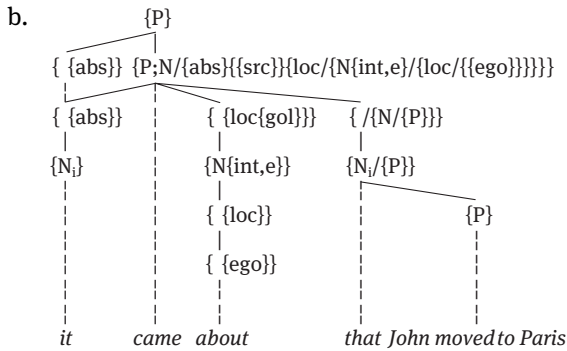
d.
```
                  {P}
      ┌─────────┐
    { {abs}} {P;N{fact}/{abs}{loc/{cog}}{{src}}}
      │         │
    { {abs}}    │    { {loc{goal}}   { {abs}}
      │         │       │               │
    {Nᵢ}        │    {N{cog}}       {Nᵢ/{P}}
      ┊         ┊       │           ┌──────┐
      ┊         ┊    { {loc}}      { {loc}}   {P}
      ┊         ┊       │             │      ┌────┐
      ┊         ┊    { {ego}}     {N{int,e}} ┊  {P;N/...}
      ┊         ┊       ┊             ┊      ┊    ┊
      it      came    out         that   John had moved to Paris
```
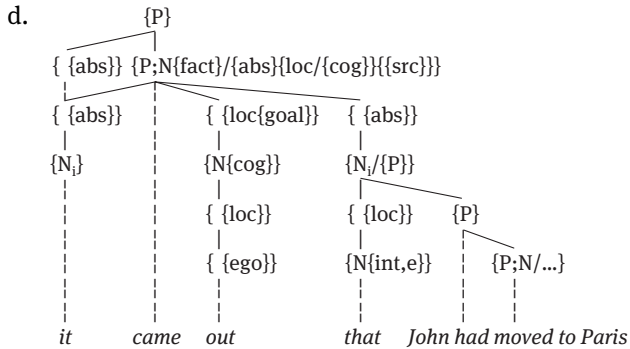
e. (The fact()That) John had moved to Paris came out (eventually)
f. I predict that she will arrive later/has already arrived

(87a–b) is clearly non-factive, but eventuative. Not so (88c), shown as factive in (87d), and having the alternative, with subject-formation in (87e). Performative predictions are declaratives that embody either acquired or revealed factuality, as illustrated in (87f).

  Some constructions of revelation involve a 'light' or 'uncovering' metaphor: *It came to light that …*, *it was revealed that …*, and even *It was dis-covered that …*, and implicitly in *It came out that …* . Thus we might represent the first of these as in (88a), where the metaphor is enclosed in square brackets, and the sense is carried by a higher {P;N}.

(88) a.

```
                    {P}
         ┌──────────┘
    { {abs}}    {P;N{factivized}}
    └─┬─┘         │
    { {abs}}   [{P;N/{abs}{loc}{src}}
      │      ┌───┴──────────────────┐
    { {abs}} ┊  { {loc{gol}}}       { {abs}}
      │      ┊  ┌──┴──┐               │
    {Nᵢ}     ┊  {N}                 {Nᵢ/{P}}
      ┊      ┊     │              ┌────┴────┐
      ┊      ┊  {N;P{visible}}] { {loc}}   {P}
      ┊      ┊     ┊               │
      ┊      ┊     ┊            {N{int,e}}  {P;N/...}
      ┊      ┊  ┊  ┊               ┊         ┊
      it    came to light        that  John lived in Paris
```

b.

```
                              {P}
                 ┌────────────┘
    { {abs}}              {P;N{factivized}}
    └──┬──┘                      │
    { {abs}}             [{P;N/{abs}{loc}{src}}
    └─┬─┘              ┌──────────┴──┐
    { {abs}}          ┊    { {loc{gol}}
      │               ┊    ┌──┴──┐
    {N/{P}}           ┊      {N}
    ┌──┴───┐          ┊       │
  { {loc}}  {P}       ┊    {N;P{vis}}]
    │        │        ┊       ┊
  {N{int,e}} {P;N/...}┊       ┊
    ┊        ┊        ┊  ┊    ┊
   that  John lived in Paris came to light
```
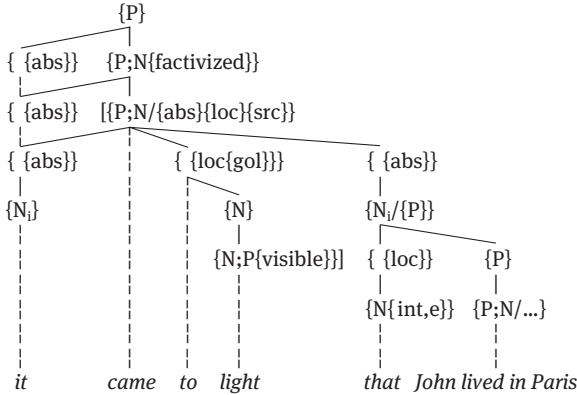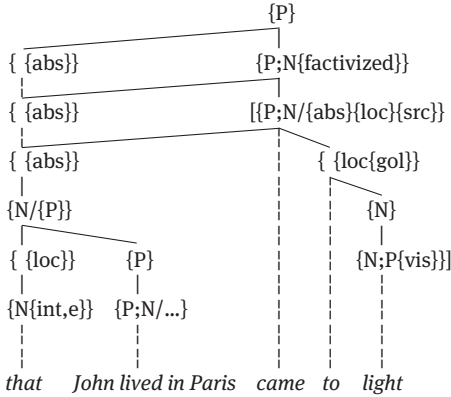
   c.   The fact that John lived in Paris came to light

   d.   The fact/it came to light that John lived in Paris

The metaphor is again factive, so we can also have (88b), as well as (88c), and (88d), with the heavy apposee 'extraposed'. Personal revelations can involve a different figure: currently, *She opened up about the fact that ... .*

    Let us now look at the final role attributed above to the finiteness determiner {N/{P}}, namely as a post-nominal attributive. This role was illustrated in Chapter 16 as (I.199) and (I.200).

(I.199) a. {N{def}}
|
{N}

{N$_i$/{src}}   {N/{P//{N$_i$}}\{N/{src}}}

{ {src}}   {P}

{N}   { {abs}}   {P;N/{src{loc}}{abs}}

{N;P}   { {src{loc}}}   { {abs}}

{N}   {N$_i${def}}

the   pipe   that   Bill   adores

b. {N{def}}
|
{N}

{N$_i$/{src}}   {N/{P//{N$_i$}}\{N/{src}}}

{ {src}}   {P}

{N}   { {abs}}   {P;N/{src{loc}}{abs}}

{N;P}   { {src{loc}}}   { {abs}}

{N}   {N$_i${def}}

the   pipe   Bill   adores

(I.200)   {N{def}}
|
{N}

{N$_i${src}}   {N/{P//{top}}\{N/{src}}}

{ {src}}   {P//{top}}

{N}   { {abs}}   {P}

{N;P}   { {abs}}   {P;N/{src{loc}}{abs}}

{ {abs}}   { {src{loc}}}

{N$_i${top,def}}   {N}

the   pipe   which   Bill   adores
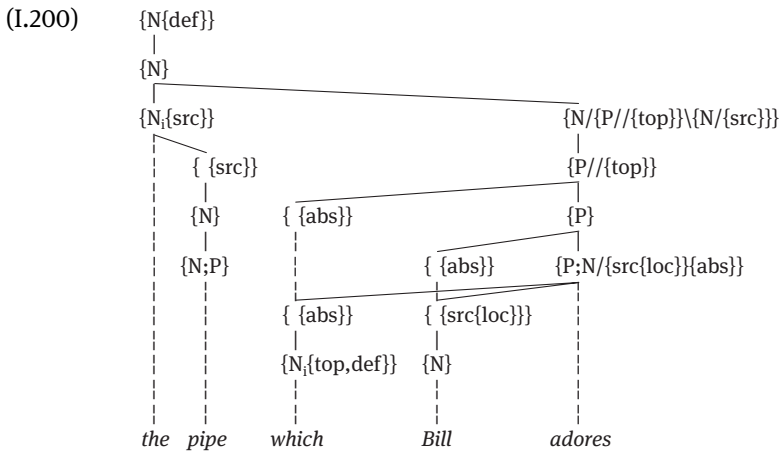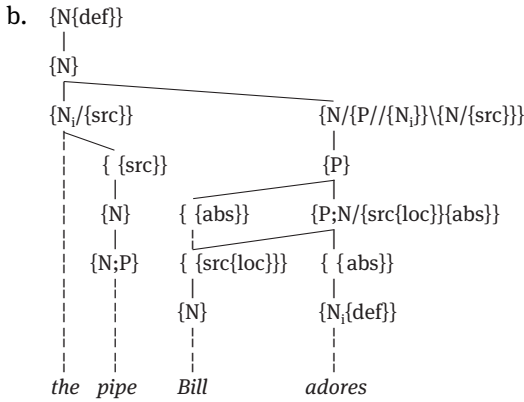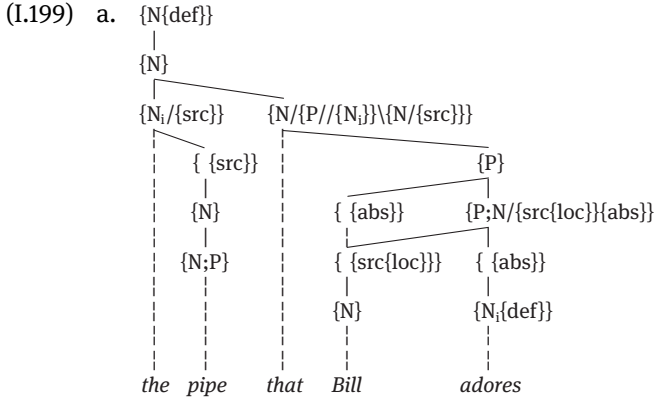
(I.199) and (I.200) are constructed respectively without and with the routinized topical construction that hosts the *wh*-form. The *wh*-form in (I.200) is definite, whereas in interrogatives it is open, though the latter interpretation of a determiner {N} does presuppose that the unidentified entity is a member or subset of an identified (definite) set (*which boy* vs. *which boys* – cf. the pronoun *what*). In present-day English *which* and other such forms are mutually exclusive with *that*. In both interrogatives and relatives the open/coreferential element anticipated may be indefinitely deeply embedded.

What we have just been recalling are 'restrictive' relative clauses, which I have analysed as postnominal attributives. However, the list of roles I repeated from Chapter 16 did not include 'non-restrictive' relative clauses. These are clearly not postnominal attributives, on both notional and expressional grounds. Their expression is unlike that of such attributives, as is recognized in traditional orthography by enclosure in commas if the clause is medial, or by presence of an initial clause, if final. This is an expression of their status as 'interruptions' or 'excrescences' of the syntactic structure.

Traditionally they do not begin, even optionally, with an overt finiteness determiner, as does (I.199a), but with *wh*-forms, as in the sentences in (89).

(89) a. The story, which she disowns, caused a stir
      b. I saw Clive, who is her broker
      c. She married him, which was a mistake

'Restrictive' relatives narrow the range of sense and denotation from which the referent is taken, while the 'non-restrictive' provides information amplifying the situation of a referent, possibly that of a whole sentence, that may or even may not be thought to be relevant to the discourse at that point. I suggest they are appositional, and non-restrictive apposition is another role of the finiteness determiner.

We have already encountered two types of appositional structures, paratactic and hypotactic, which are illustrated by (I.94c) and (I.108) respectively.

(I.94)   c.   {N}

{Nᵢ{def}}   {Nᵢ{def}\{Nᵢ}}

{ ₗ}   {N{sg}/{src}//{*pl}}

{ {src}}

{N{*pl}}

{N;P}

Ferguson   the   butcher
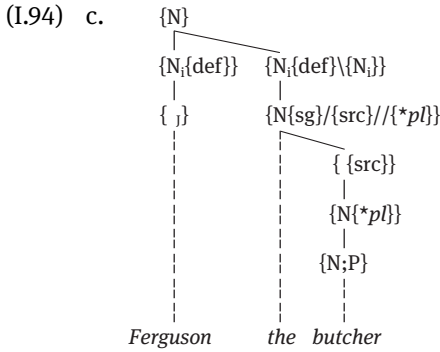
In the former apposition is to the highest {N} in the nominal construction. In the latter it is to the partitive {N} possibly subjoined to the highest {N}, as in post-nominal attributives.

(I.109)   {N{def}/{N/{src}}}

{N}

{Nᵢ/{src}}   { {abs}\{Nᵢ/{src}}}

{ {src}} | {Nᵢ}

{N} | { {masc}}

{N;P}

the   name   of   Ferdinand
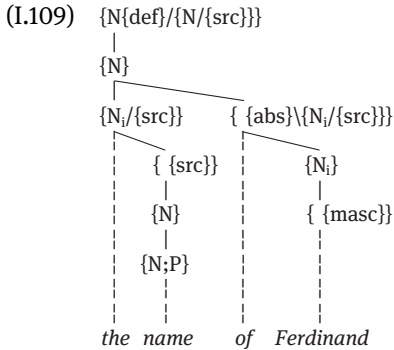
(I.109) is a variant of postnominal attribution that requires co-indexing.

In (89a), I suggest we have another type of paratactic apposition, an apposed relative clause, introduced by a relative pronoun, as represented in (90a).

(90)   a.   {N}

```
{Nᵢ{def}}                                    {N/{P//{top}}\{N/{src}}}

{N/{src}}                                     {P//{top/{def}}}

        { {src}}  { {abs}}              {P}

           {N}                    { {abs}}   {P;N/{src{loc}}{abs}}

          {P;N}      { {abs}{top}}  { {src{loc}}}

                       {Nᵢ{def}}    {N}

         the  story    which        she      disowns
```

b.   {P{decl}}

```
                  { {abs}}

                   {N}

           {Nᵢ/{P/{EXIST}}}              {N/{P//{top}}\{Nᵢ/{P}}}

              {P/{EXIST}}                   {P//{top/{def}}}

        { {abs}} {P;N…}          { {abs}}      {P/{EXIST}}

        { {src}}     { {abs}} { {abs}}      {P/{abs}{N}}

         {N}         {N}    { {abs}{top}}   {N{sg}/{N}}

        { {f}}      { {m}}  {Nᵢ{def}}            {N}

                                                {N;P}

         she    married him    which      was   a   mistake
```
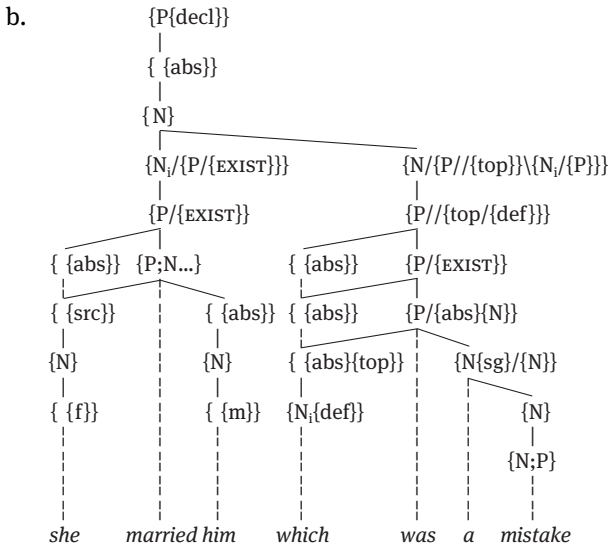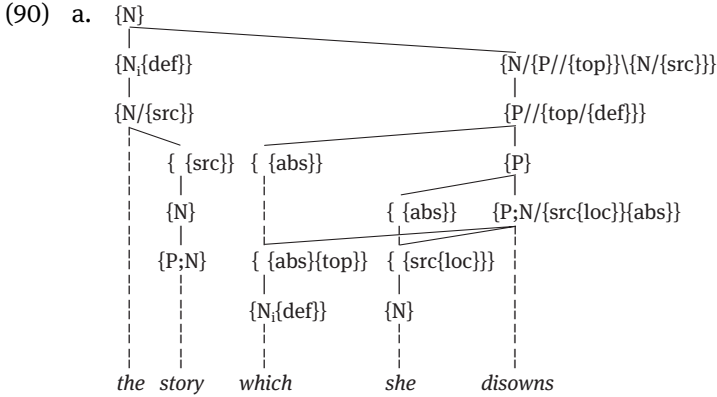
What is apposed to the root {N{def}} of the determiner phrase is the finiteness determiner.

(89c), with a predication as the goal of apposition, involves apposition to the {N} of the mood absolutive that introduces the existential, i.e. another finiteness determiner, as shown in (90b), which, for legibility, is much abbreviated, both in the representation of mood and the valency of *married*, for instance.

The most obvious interpretation of (91a) also involves apposition to the {N} above the existential {P} of the main clause, whereas in (91b) it is normally the finiteness determiner of the immediately preceding subordinate clause.

(91)   a.   She said she had married him, which was a lie
     b.   She said she had married him, which had been a mistake

An overt finiteness determiner appears in none of these in Modern English, to my knowledge, though an overt one is equally functional here.

What we have been looking at are non-restrictive postnominal sentential attributives. However, as we were reminded in the notes to Chapter 9, there are also non-restrictive prenominal attributives, which were represented there as (ivb), which I have relabelled here as (92).

(92)   {N}
     {N$_i${def}} {P.N\{N$_i${def}}}
     {N/{src}} {P:N}
                { {src}}
                {N}
                {N;P}
     the   *white*   *swan*
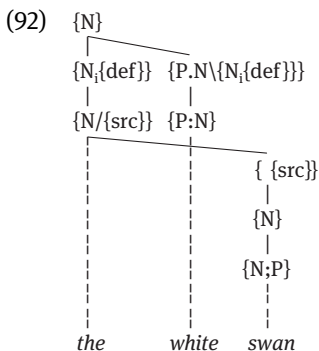
(92), perhaps appropriately, as representing an apposition, involves 'tangling'.

This side glance concludes our survey of the main varieties of subordinate finiteness associated with the listing of the roles of the finiteness determiner reproduced earlier, which we can now modify as follows.

> The finiteness determiner connects the subordinate sentence by:
> Apposition to a subordinating conjunction or to an abstract noun;
>   or by conversion to an attributive or apposed attributive;
>   or by participating as a source or absolute functor.

And this, indeed, summarizes our brief look at subordinate finites, introduced by the finiteness determiner, overt or not, a look that began with a general consideration of subordinate finiteness, followed by potential problems with the finiteness of subjunctives and then the status of functional ellipsis.

Fit the 2nd: **Non-Finites**

Chapter 38
Gerunds and Participles

non-finites – the perfect/passive participle – *be* and the progressive – progressive gerunds – bare infinitives and *to*-infinitives – factive gerunds – gerund vs. nominalization – attributive gerunds – participles, perfect and passive – attributive participles – the development of the perfect (again) – 'open' verbals and *do*

We have already encountered non-finite verbs in various places in what precedes, notably in the recent discussion of the different verbal complements of operatives. Prototypical modals govern the bare form, which is traditionally in this context labelled 'infinitive'. More commonly the **infinitive** is preceded by a *to*, even when governed by some modals, such as *ought*. And *to* is almost ubiquitous with infinitival complements of verbs. We shall recall and look more carefully at this distribution and at other properties of the infinitive subsequently in Fit the 2nd.

Non-finite verbals are identified as such by absence of elements associated with prototypical finites, such as person-number concord (absent in core modals, which are nevertheless always finite) and absolute tense, and presence of elements not normally found with finites, such as, indeed, the infinitival *to* whose valency is minimally '/{P;N}' or of dedicated suffixes. Infinitives overtly satisfy this valency without the help of a governing suffix-marked {P;N}; and none of them can occur as head of a non-elliptical independent sentence. This is also true of typical subjunctives, which also lack person-number concord as well as tense variation, but I have nevertheless tried to motivate the finite status of the subjunctives in terms that do not apply to the verb forms we are now concerned with, particularly motivations to do with finite notions such as mood and complex existentiality and their consequences, as well as the traditionally invoked presence of an unmarked subject in its usual position. With gerunds, however, we shall again encounter factivity.

Diachronically, gerunds and participles are reverbalized deverbal nouns and adjectives, and this history is reflected in their secondary features, which are associated with some non-verbal characteristics, as I have already anticipated. The presence of these characteristics means that these forms are more delicately differentiated from verbal nouns and adjectives than finites. The **gerund** is distinguished from other verb forms by its *-ing* suffix (shared with classes of deverbal nouns and adjectives), and one variety of it is part of the progressive periphrasis. The form governed by the perfect and passive operatives is almost always the same, most commonly spelled as *-ed* (as are some deverbal adjectives). I shall dif-

ferentiate this form as **participle**. Its categorization is, of course, rather different in the two cases, perfect and passive and from that of similar deverbal adjectives.

We can extrapolate from the representation of a perfect sentence in Chapter 36 the configuration in (93a), which shows the **relative tense** of the perfect.

(93) a. $\{P/\{loc/\{N\{int,e\}\}\}\}$

$\{P\}$ .... $\{ \{loc\}\}$

$\{P\{n.p\}/\{P;N\{n.p\}\}\}....$ $\{N\{int,e\}\} ....$ $\{ \{loc\}\backslash\{P\}\}$

$\{P;N\{n.p\}\}$ $\{N_i, T \subseteq i\}$

$\{P;N\}$

$\{P;N/\{...\}\} ....$ $\{ \{loc\}\backslash\{P;N\}\}$

have-form $\{N_j, j < i\}$

b. $\{P/\{P;N\}\{loc/\{N\{e\}\}\}\}$

$\{P/\{P;N/\{abs\{gol\}/\{P;N\}\}\}\}$ .... $\{ \{loc\}\}$

$\{P;N/\{abs<\{gol\}>_m\}\}$ $\{N\{int,e\}\}$

$\{P;N/\{src<\{loc \}>_n\}\{abs<\{gol\}>_m\}\}$

$\{ \{src<\{loc\}>_n\}\} ....$ $\{ \{abs<\{gol \}>_m\}\}$

be-form $\{N_{<i>}\}$ $\{N_j\}$

$< >_m \vee < >_n$
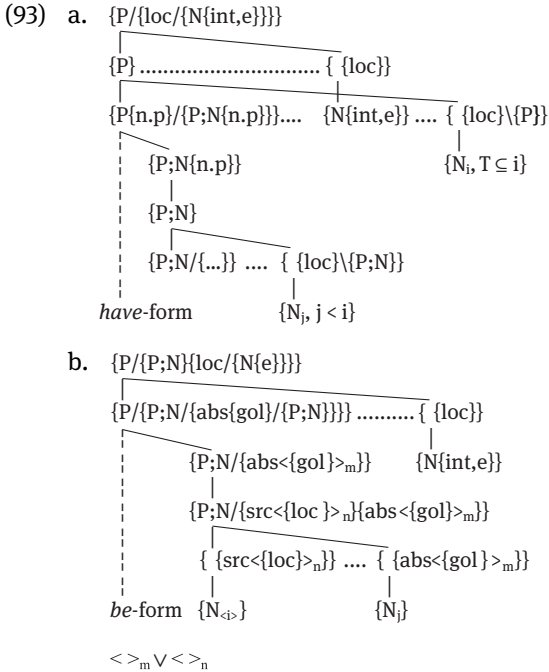
Thus, perfect *have*, which is stative, $\{n.p\}$, governs a participle which consists of a stative verb that has subjoined to it a non-stative that precedes in time the tense of *have* itself. This is expressed by the subscripts to the temporal locatives. The verb so characterized is the **perfect participle**.

Contrast with this the **passive participle** in (93b), mostly distilled from (55) in Chapter 36, and expanding the abbreviatory {pass} into more of the operative valency. Here the operative *be* governs a {P;N}, with typically an affected absolutive participant; the {P;N} is based on a transitive verb, which may have take an agent or an experiencer. The affectedness of the derived valency is normally incompatible with an experiencer base; the pairs of angled brackets in the valencies are mutually incompatible. (93b) ignores the possible modifier that is coreferential with the incorporated source argument, except in terms of the presence of the optional subscript 'i', and it also retains the index 'j' which marks coreferentiality between the incorporated absolutive and the subject of the predication.

The derivation involves **diathesis**, and, unlike the perfect, lacks stativity: it simply creates an intransitive from a transitive verb. I'll sketch below the history that leads to the discrepancy between the two participles of periphrasis, and their relation to the syntax of participles that are not complements of the periphrasts *have* and *be*.

The operative of the progressive periphrasis is also *be*, as in the configuration of (94), extrapolated from (54), again of Chapter 36, but this *be* requires a progressive gerund as a complement.

(94) {P/{loc/{N/{P;N{n}}}}}

```
         ┌──────┐
         ┊        { {loc}}
         ┊           |
         ┊         {N{int}}
         ┊           |
         ┊       {P;N{n{process}}}
         ┊           |
        be       {P;N/...}
```
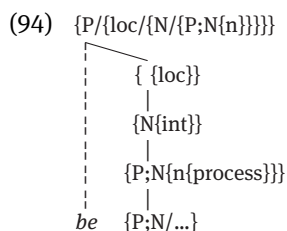
In (94) the basic verb is converted to a gerund, marked by the feature {n}, but specifically the progressive gerund, which results from conversion to a locative-interior {N}. All of the verb forms I've cited here also occur in circumstances other than as the complement of an operative periphrast. An operative is, indeed, in most cases a periphrast governing an independently attested non-finite – though, of course, not all modals are periphrasts, though they are normally complemented. The **gerund** in general, with suffix *-ing*, is the first concern of the present chapter, then the participles.

We again find a progressive gerund, for instance, in the circumstances in (95a), which we have already encountered in Chapter 33.

(95) a. I saw them leaving
      b. I saw them leave

It is in contrast with the perfective bare infinitive of (95b). Each sentence indicates simultaneity of the events in the two clauses, differentiated only in being progressive vs. perfective – though either could be rendered also habitual by the use of an appropriate circumstantial (such as *every day, regularly*). Consideration of the contrast in (95) invites me to diverge a little in terms of reminding us of the properties of the infinitive in (95b).

In Chapter 33, (95b) was represented as in (III.105b), where the absence of the overt infinitive introducer { /{P;N}}, *to*, contributes to the iconicity provided by the adjacency of *them* to both verb forms and its expounding an argument that belongs to both clauses.

(III.105)   b.

```
                            {P}
                         ┌──────┐
    { {abs}}      {P;N/{src{loc}} .... { /{P;N}}
       ┆          ╱ │  ╲             │
       ┆         ╱  │   ╲          {P;N}
       ┆        ╱   │    ╲           │
  { {src{loc}}}┆ { {abs}}  { /{P;N}}
       │      ┆    ┆          │
      {N}     ┆    ┆    {P;N/{src{abs}}}
       ┆      ┆    ┆       ╱      ┆
       ┆      ┆ { {src{abs}}}     ┆
       ┆      ┆    │              ┆
       ┆      ┆   {N}             ┆
       ┆      ┆    ┆              ┆
       ┆      ┆    ┆              ┆
       I      saw them          leave
```
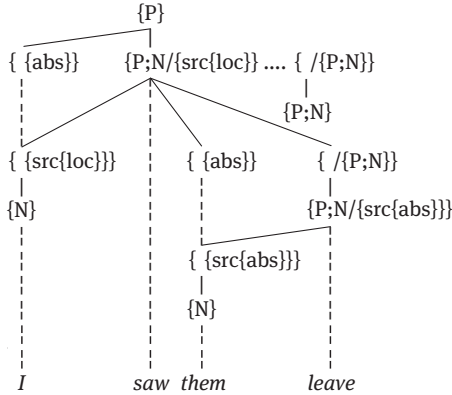
Such perception verbs are subcategorized for a non-overt infinitive-introducing functor.

For (95a) we need the somewhat more complex (96a), where the locational scene is incorporated as the hierarchically lowest component of the main verb, but the adjacency and argument sharing are maintained.

(96)   a.

```
                        {P}
                     ┌──────┐
    { {abs}}      {P;N/{src{loc}}}
       └───────────┐
  { {src{loc}}}  {P;N/{loc/{N/{P;N}}}}   { {abs}}
       │            ┆                  ╱      ╲
      {N}           ┆            { {abs}}   { {loc}}
       ┆            ┆               ┆          │
       ┆            ┆               ┆        {N{int}}
       ┆            ┆               ┆          │
       ┆            ┆               ┆    {P;N{n{process}}}
       ┆            ┆               ┆          │
       ┆            ┆               ┆    {P;N/{src{abs}}}
       ┆            ┆               ┆      ╱       ┆
       ┆            ┆         { {src{abs}}}        ┆
       ┆            ┆               │              ┆
       ┆            ┆              {N}             ┆
       ┆            ┆               ┆              ┆
       ┆            ┆               ┆              ┆
       I           saw           them          leaving
```

b.   I avoided leaving before them

c.
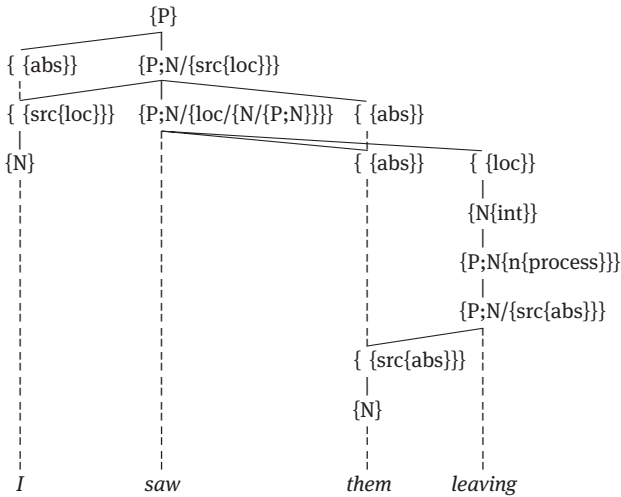
```
                        {P}
      { {abs}}        {P;N/{src}{P;N}}
      { {src}{abs}}  {P;N/{loc/{N/{P;N}}}}
                              { {loc{src}}/{N}}
                              {N}
                              {P;N{n}}
                              {P;N}
                           {P;N/{src{abs}}}  { {loc}\{P;N}}
    { {src{abs}}}                               {N}
      {N}

       I          avoided  leaving      before  them
```
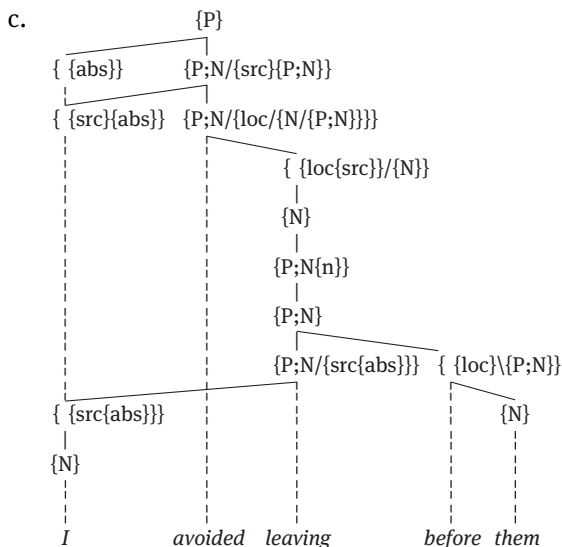
The progressive gerund, like the infinitive in (III.105b) thus allows 'raising': the subject of the gerund is hosted externally to the clause, in a superordinate clause. And (96b) illustrates 'control', where *avoid* and the gerund of *leave* share their participant, via a free absolute attached to the agent in the main clause, as in (96c). Clause-external realization of the subject marks all of the subordinates in (93a–b), (94), (III.105b), (96a), and (96b) as non-finite, even though *leave* in (III.105b) is the 'bare' form.

But consider again now the nominalizations in (II.27) and (II.28), where those in (II.28) bear the same suffix formative as the gerund.

(II.27) a. Biffo's invention of the wheel made slow progress
         b. Biffo's invention of the wheel took place on a Friday
         c. Biffo's invention of the wheel revolutionized social structure
         d. Everybody began to use Biffo's invention

(II.28) a. Fred's building of his house was frequently interrupted
         b. Fred's building of his house took place last year
         c. Fred's building of his house was a great achievement
         d. Fred's building has survived well

We're concerned in the first place with the (a) examples, and I shall concentrate on (II.28a), given the shared suffix form with the gerund. Even though the 'process' noun in (II.28a) is progressive, and even if we put it in apparently appropriate

circumstances, as in (97) (where the asterisked round brackets in (97a) enclose non-omissibles), there is no raising. This confirms that this *-ing* form is a noun, here headed by a genitive determiner and accompanied by an optional *of*-headed phrase reflecting the valency of the verbal base shown in (97b).

(97) a. I saw Fred*('s) building *(of) his house

b.
```
                           {P}
                ┌───────────┴───────────┐
           { {abs}}        {P;N/{src{loc}}{abs}}
              │          ┌──────────┴──────────┐
        { {src{loc}}}    ┊           { {abs}}
              │          ┊              │
            {N}          ┊           {N{def}
              ┊          ┊              │
              ┊          ┊           {N/{src}}
              ┊          ┊         ┌─────┴─────┐
              ┊          ┊      { {loc}}    { {src}}
              ┊          ┊         │           │
              ┊          ┊       {Nᵢ}        {N}
              ┊          ┊         │           │
              ┊          ┊       { ꜰ}        {N;P}
              ┊          ┊                     │
              ┊          ┊                  { {loc}}
              ┊          ┊                     │
              ┊          ┊                  {N{int}}
              ┊          ┊                     │
              ┊          ┊              {P;N{n{process}}}
              ┊          ┊                     │
              ┊          ┊                  {P;N}
              ┊          ┊           ┌─────────┴─────────┐
              ┊          ┊     {P;N/{src}{abs}}   { {abs}\{P;N}}
              ┊          ┊        ┌──────┴────┐    ┌────┴───┐
              ┊          ┊   { {src}}....{ {abs}}┊ {Nⱼ} { {abs}}
              ┊          ┊      │          │     ┊  ┊      │
              ┊          ┊    {Nᵢ}       {Nⱼ}    ┊  ┊    {Nⱼ}
              ┊          ┊      ┊          ┊      ┊  ┊      ┊
              I         saw  Fred's   building      of  his house
```
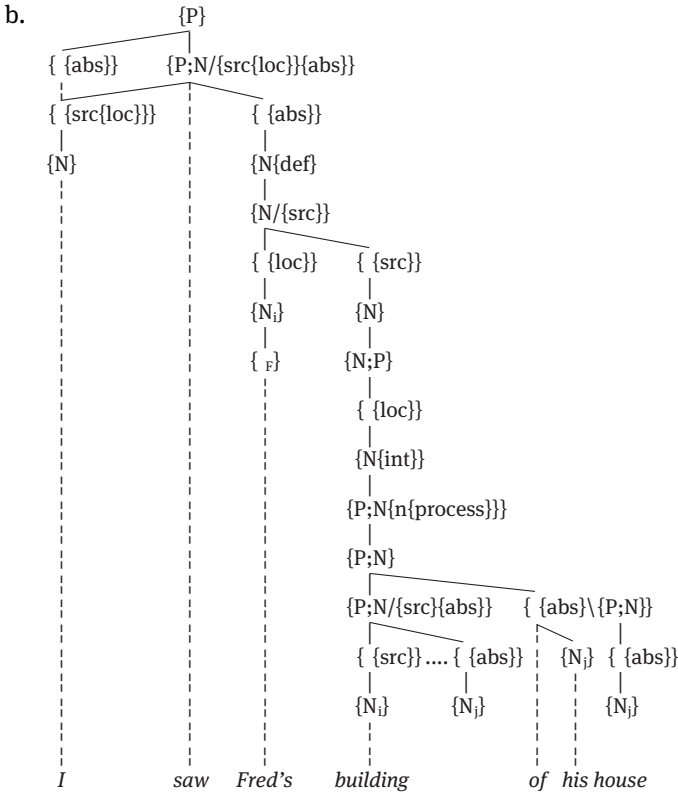
c. I saw Fred building his house/Fred was seen building his house

Both the genitive marker and the *of* following *building* signal 'nominal structure'. This nominal structure blocks 'raising', as is apparent from the representation in (97b), when compared with the gerunds in (97c). Nevertheless, (II.28a) and (97a), as well as (II.27a), are basically progressives, like the gerund in (97c), but are ultimately derived nouns.

We should proceed to the other derived nouns in (II.28), in particular, and their relationship to gerunds; but firstly let us acknowledge another circumstance

in which we find progressive gerunds. This is as an attributive, exemplified in
(98), respectively prenominal and postnominal (recall Chapter 8).

(98) a. {N{def}}
           |
          {N{sg}/{src}}
          ┌──────
          ┊   { {src}}
          ┊ |
          ┊   {N.P/{src}}
          ┊   ┌──────────────
          ┊   { {loc}}   { {src}}
          ┊ | |
          ┊   {N$_i${int}}   {N{sg}}
          ┊ | |
          ┊ {P;N{n{process}}}   {N;P}
          ┊ | ┊
          ┊   {P;N/{abs}}   ┊
          ┊ | ┊
          ┊   { {abs}}   ┊
          ┊ | ┊
          ┊   {N$_i$}   ┊
          ┊   ┊   ┊
          the dripping   blood

      b. {N{def}}
           |
          {N}
          ┌──────────────
         {N$_i${sg}/{src}}   { {loc}\{N/{src}}}
          ┌──── |
          ┊ { {src}}   {N{int}}
          ┊ | |
          ┊ {N$_i${sg}}   {P;N{n{process}}}
          ┊ | |
          ┊ {N;P}   {P;N/{abs}{loc{src}}}
          ┊   ┊   ┌──────────
          ┊   ┊   { {abs}}   { {loc{src}}}
          ┊   ┊ | ┌───
          ┊   ┊   {N$_i$}   ┊   {N}
          ┊   ┊   ┊   ┊   ┊
          the blood   dripping   from the wound
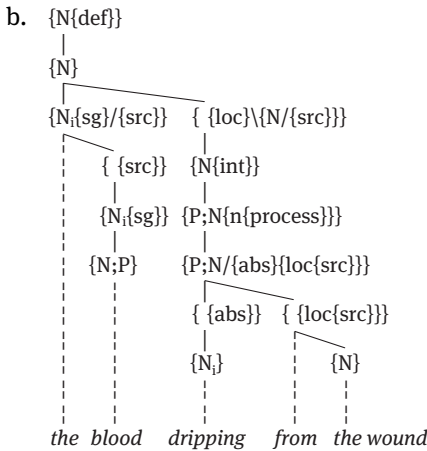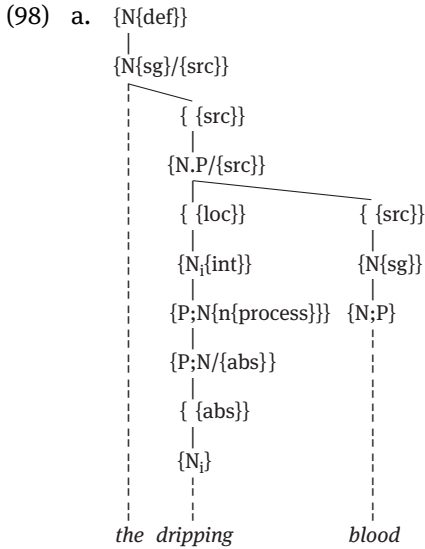
Compare to the structures of these progressive verbals, with no change of conten-
tive class, the representation in (II.70) from Chapter 21 (where the copula relates
asserted coreference) and the representation of an attributive derived adjective in
(99), with optional adjectival comparator specifier.

(II.70) b.

```
                        {P/{abs}{loc}}
            { {abs}}          { {loc}}
               |                 |
             {Nᵢ}               {N}
                                 |
                               {N;P}
                                 |
                               {P;N}
                                 |
                  {P;N/{abs}{src{loc}}}        { {abs}\{P;N}}
                    { {src{loc}}}.....{ {abs}}      {Nⱼ}
                         |            |
                       {Nᵢ}        {Nⱼ}

            she    is   aware                    of  that
```

(99) {N{def}}
        |
     {Nᵢ{sg}/{src}}

```
                 { {src}}
                    |
                {P.N/{src}}
              {P:N}          { {src}}
                |               |
             { {loc}}         {N{sg}}
                |               |
             {N{int}}         {N;P}
                |
         {P;N{n{process}}}
                |
            {P;N/{abs}}
                |
             { {abs}}
                |
              {Nᵢ}

     the  (very) exciting        trip
```
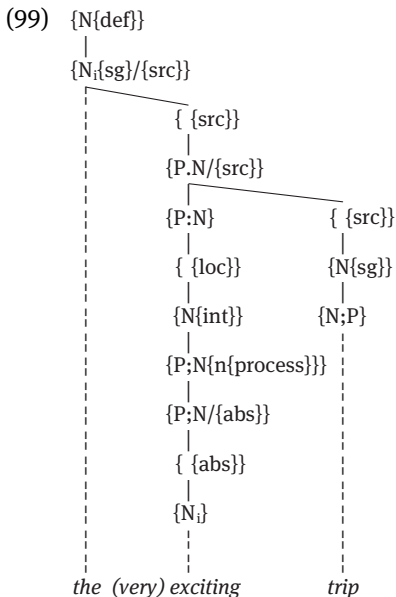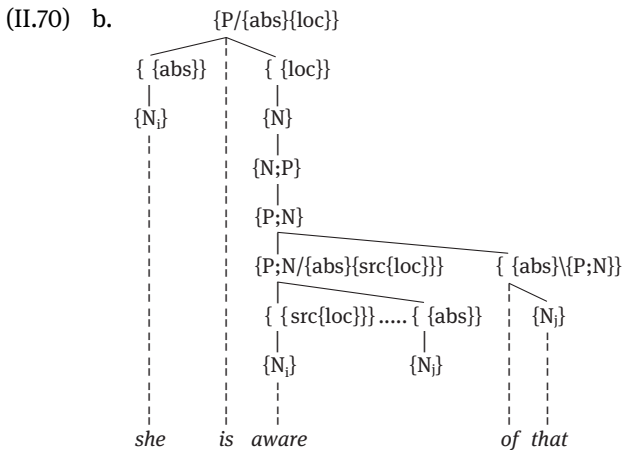
These are all progressives, but only (96) and (98) involve overall verb forms.

Also, Chapter 33 introduced the circumstantial gerunds in (II.260), where even the perfects may be progressive.

(II.260) a.   Bursting/Having burst into tears she walked out
          b.   She walked out, bursting/having burst into tears

Add to these such as (100a–b), again with a non-overt subject of the gerundial verb form.

(100) a. Heaving a sigh, she walked out
      b. In trying it, you are making a mistake
      c. John having left, the party really took off
      d   The chairman being absent, the committee was at a loss

In (100b) we have an overt locative, with a different sense from the covert locative of the progressive in (100a). These circumstantial gerunds are thus like other circumstantials in being introduced by a locative, i.e. as in the representation for the progressive complement of the *be* periphrast in (94) above, but circumstantial, and with an incorporated subject coreferential with the main-clause subject. As non-participant gerunds, though, these do not undergo raising. In (100c–d) there is also no raising, and, indeed, the overt subject is internal to the circumstantial gerund structure, again as in finites, and unlike the typical infinitive. Gerunds are 'intermediate' in this respect.

Gerunds can also occur with alternative governing functors, and these may be overt, as with the fuller version of (101a), where the gerund is a participant, in all versions, transitive and not, or indeed passive, with overt functor or not.

(101) a. We prevented him (from) falling/beating her

      b.
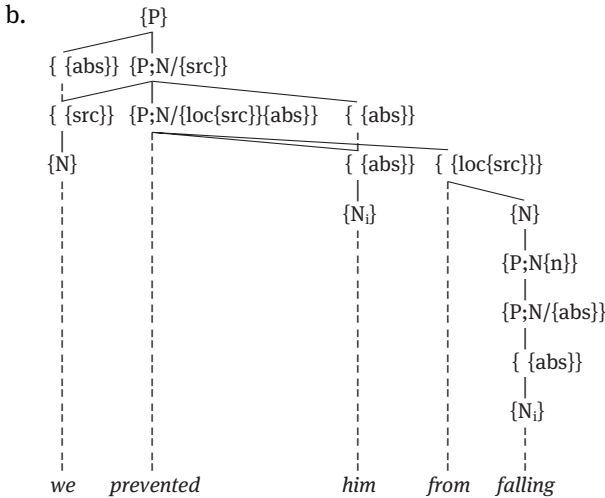
      c. He was prevented from falling/hitting her
      d. There would be no point in (us/our) making an appeal to Ted

The overt-functor alternative has the gerund configuration in (101b), where its subject undergoes raising, and, as a pronoun, it is 'oblique', as it would be with 'raising' out of infinitive clauses. (101c) is the corresponding passive, whose presence offers support for the 'raising' analysis in (101b).

This is not a progressive gerund, nor, of course, is a version of this structure where the functor is lexical; they are perfectives, like (II.28b) or (96c), cited above – though they could also be habitual. And this is just one variety of gerunds introduced by non-progressive functors. Common are circumstantials with *by* + gerund, for instance, and even *in*-preceded gerunds that are not progressive, as with (101d). These nevertheless signal an event, potential here, and can manifest either a (here oblique) subject (so verbal) or a genitive (so not). We have strayed rather from a focus on progressive gerunds, however.

With both the deverbal noun and gerund, there may be no overt reflection of a 'subject' of the *-ing* form as shown in the progressives in (102a–b).

(102) a. (The) building of the house took quite a time
　　　 b. Building the house took quite a time
　　　 c. Fred's building of the house took quite a time
　　　 d. ?*Fred building the house took quite a time
　　　 e. ?Fred's building the house took quite a time

　　　 f.
```
{N{def}
   |
{N/{src}
  ┌──────╲
{ {loc}} { {src}}
   |        |
{N_i}     {N}
   |        |
{ _F}     { {loc}}
 ┆          |
 ┆        {N{int}}
 ┆          |
 ┆      {P;N{n{process}}}
 ┆          |
 ┆      {P;N/{src}{abs}}
 ┆         ┌──────╲
 ┆       { {src}} { {abs}}
 ┆          |        |
 ┆        {N_i}    {N}
 ┆          ┆        ┌──────╲
 ┆          ┆        ┆    {N;P}
 ┆          ┆        ┆       ┆
Fred's   building   the   house
```
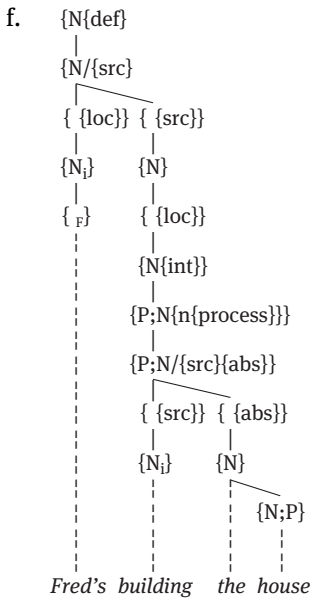
The subjects of the main clauses here are 'temporal agents'. In (102b) we have another gerund that is progressive, while (102a) is a progressive derived noun.

The progressive gerund structure in (102d) is rather awkward at best, as compared with the nominal in (102c) – and (102e), both with a genitive: the overt 'subject' in the subordinate in (102d) cries out to be 'raised', but is 'frustrated'; but compare *Fred took quite a time building the house*, with apparent 'control' – or simply co-reference. I suggest, moreover, that (102e), which some speakers might not be happy with, illustrates a 'hybrid', or 'blend', of nominal and verbal components, as represented in the substructure in (102f). We have in (102e–f) a genitive whose complement is a verbal structure, the simple gerund, progressive in this context.

For many speakers a striking difference between gerund and nominalization lies in passive gerund *He requires being beaten for a change* vs. nominalization *His nails require trimming*, where *his nails* in the latter is coreferential with the absolutive of the transitive verb base of *trimming* without there being any passive marking.

Let us now, however, return to the (b)-(d) nominalizations of (II.27–8).

(II.27) a. Biffo's invention of the wheel made slow progress
         b. Biffo's invention of the wheel took place on a Friday
         c. Biffo's invention of the wheel revolutionized social structure
         d. Everybody began to use Biffo's invention

(II.28) a. Fred's building of his house was frequently interrupted
         b. Fred's building of his house took place last year
         c. Fred's building of his house was a great achievement
         d. Fred's building has survived well

The process nouns of (a) are nominal progressives. And those of (b) are perfective. In Chapter 19 I labelled the (c) forms as 'factual'. And indeed the same presupposition holds with respect to them as we associated with subordinate finites such as (103).

(103) a. That Biffo invented the wheel revolutionized social structure
       b. That Fred built his house was a great achievement

And there is, to match the nominalization in (II.28b), a corresponding gerund in (104a), whose structure I give in (104b) (with simplification of the structure of *his house*), and where the predicative noun structure as a whole, with its indicative copula, takes a subject that is presupposed to be factual.

(104) a. (Fred/Him) building his house was a great achievement

b.

```
                                            {P/{abs{N/{fact}}}{N}}
        ┌──────────────────────────────────┘                │
    { {abs}}                                             {N/{src}}
        │                                                    │
  {N/{loc/{int,e}}}                                      { {src}}
    ┌───────────────┐                                        │
{P;N{n}} ............. { {loc}}                          {P.N/{src}}
  ┌────────┐              │                              ┌──────────┐
{ {abs}} {P;N/{src}{abs}}  {N{int,e}}                  {P:N}    { {src}}
    │      ┌──────────┐                                   │         │
{ {src}}  │     { {abs}}                                  │        {N}
    │     │         │                                     │         │
   {N}    │        {N}                                    │       {N;P}
          │         │                                     │         │
          │       {N;P}                                   │       {P;N}

  Fred/him  building  his  house            was    a   great  achievement
```
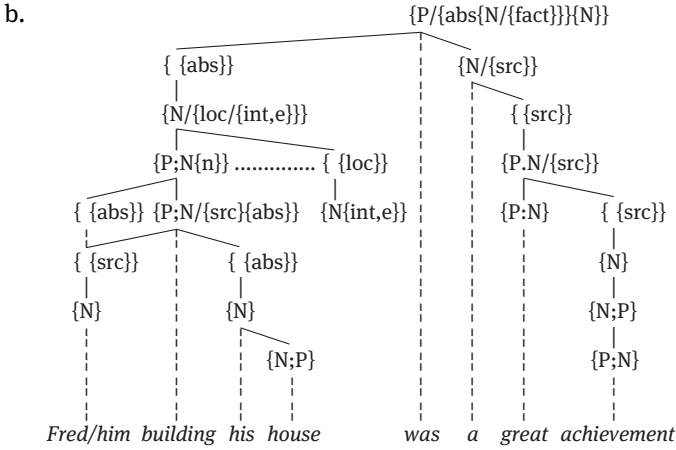
A nouny non-finite, {P;N{n}}, as well as finite subordinates, can be subjoined to factual {N} in this case. In the absence of an overt subject, it is incorporated, as suggested by the optionalities in (104a).

Compare with (104) the finite factual of (74b) from Chapter 37.

(74) b.

```
                        {P/{{src}/{N{int,e}}}{P;N}}
        ┌──────────────────────────┘
    { {abs}}          { {{src}}} {P;N/{src/{N//{fact}}}}
        │             ┌──────────────────┐
    { {src}}        {N{int,e}}
        │
   {N{def}/{P}}
    ┌──────────┐
  { {loc}}    {P}
      │        │
  {N{int,e}}  {P;N}

    that    he has left   doesn't    help
```
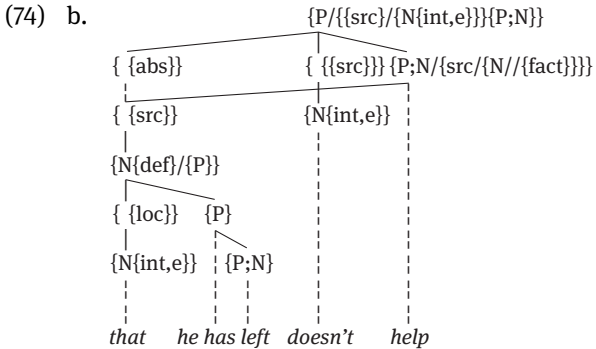
Here the factuality is required by the verb, whereas the whole predicative structure in (104b) is factive, just as with the predicative locative in *Fred/him building his house was against all our expectations*.

The resemblance in configuration between gerundial and finite factive structures is even more striking if the finiteness determiner is not overt, as in (105a).

(105) a.

```
                     {P/{ {src}/{N{int,e}}}}
                          |
{ {abs}} { {{src}}}   {P;N/{src/{N/{fact}...}
    |        |             |
  {Nᵢ}    {N{int,e}}                    { {src}}
    ¦        ¦                              |
    ¦        ¦                         {Nᵢ/{P}}
    ¦        ¦                             |
    ¦        ¦              {P}.............{ {loc}}
    ¦        ¦                 |              |
    ¦        ¦          { {abs}}  ¦  {P;N}  {N{int,e}}
    ¦        ¦              |     ¦    ¦       ¦
    ¦        ¦        { {src{abs}}} ¦  ¦       ¦
    ¦        ¦              |     ¦  ¦       ¦
    ¦        ¦             {N}    ¦  ¦       ¦
    ¦        ¦              ¦     ¦  ¦       ¦
    it     doesn't       help  he    has   left
```
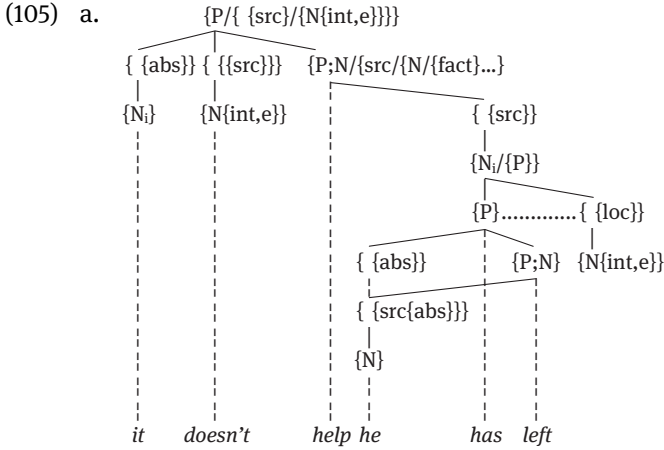
b. It was a great achievement, (Fred/him) building his house

c. I admire Fred/him (for) building/having built his house

With a gerund rather than a subordinate finite, there is no 'extraposition', however, only finally-expressed topicalization, as in (105b), or circumstantialization, as (105c).

Presupposed-factual gerunds also differ from others, as well as (unlike in (97c)) in not participating in 'raising' and 'control' of their subjects, and in occurring regularly in 'object' position, as in (105c) without the preferred presence of the functor; with non-presupposed-factuals this is limited. But instead we have raising to a free absolute, as in the progressive (97c).

(97) c. I saw Fred building his house/Fred was seen building his house

(96) b. I avoided leaving before them

And (96b) illustrates control with a non-presupposed-factual (perfective, possibly habitual) gerund. These differences contribute to an impression of its wide distribution as a whole, but of the 'isolation' of gerunds that are presupposed as factual, compared with other types of gerunds.

There are both gerunds and nominalizations that satisfy factive verbs, as well as others showing **perfectivity** and **progressiveness**. But what of the fourth nominalization type in (II.27–8), the count entitative resultative or **product** form in the (d) examples, which lack an equivalent gerund?

(II.27) a. Biffo's invention of the wheel made slow progress
       b. Biffo's invention of the wheel took place on a Friday
       c. Biffo's invention of the wheel revolutionized social structure
       d. Everybody began to use Biffo's invention

(II.28) a. Fred's building of his house was frequently interrupted
       b. Fred's building of his house took place last year
       c. Fred's building of his house was a great achievement
       d. Fred's building has survived well

This is derived by metonymy from the factual event noun. But there can be no such entitative product verb form, given the notional basis of verbs; so a gerund in contexts of the character of that in (106a) is ruled out.

(106) a. *Fred building has survived well
     b. *Him building has survived well

This takes us to a final observation concerning the gerund to do with the equally unacceptable (106b).

For it is not the accusative-marking of the subordinate 'subject' in (106b) in itself that is undesirable, which is acceptable elsewhere in gerunds. It is not just that the pronominal equivalents of the 'raised' forms in (97c) are acceptable – as in (107a), but also the pronominal equivalent of (105a) is regular, as shown in (107b).

(97) c. I saw Fred building his house/Fred was seen building his house

(105) a. (Fred) building his house was a great achievement

(107) a. I saw him building his house/He was seen building his house
     b. (Him) building his house was a great achievement

The problem with (106b) is indeed the product interpretation of the subject expression, which requires a nominal structure such as *his building*. There is no gerundial equivalent to (II.28d).

What the accusative form in (106b) reflects is the fact that the source governing *him* is satisfied by the free absolutive of a {P;N} rather than a {P}, as in (104b), repeated from above.

(104) a. (Fred/Him) building his house was a great achievement

b.
```
                              {P/{abs{N/{fact}}}{N}}
        ┌─────────────────┤                    ├──────────┐
    { {abs}}                              {N/{src}}
        │                                     ┊  ┊
  {N/{loc/{int,e}}}                          ┊  { {src}}
     ┌───────┤                               ┊  ┊ │
 {P;N{n}}..............{ {loc}}              ┊  ┊ {P.N/{src}}
  ┌────────┤              ┊                 ┊  ┊  ┌────┤
{ {abs}} {P;N/{src}{abs}} {N{int,e}}        ┊  {P:N}   { {src}}
  ┊         │       ┊                        ┊  ┊         │
{ {src}}   ┊    { {abs}}                     ┊  ┊        {N}
  │        ┊       ┌──┤                      ┊  ┊         │
 {N}       ┊      {N}                        ┊  ┊       {N;P}
  ┊        ┊       ┊  {N;P}                   ┊  ┊         │
  ┊        ┊       ┊   ┊                      ┊  ┊       {P;N}
  ┊        ┊       ┊   ┊                      ┊  ┊         ┊
Fred/him building his house              was  a  great achievement
```
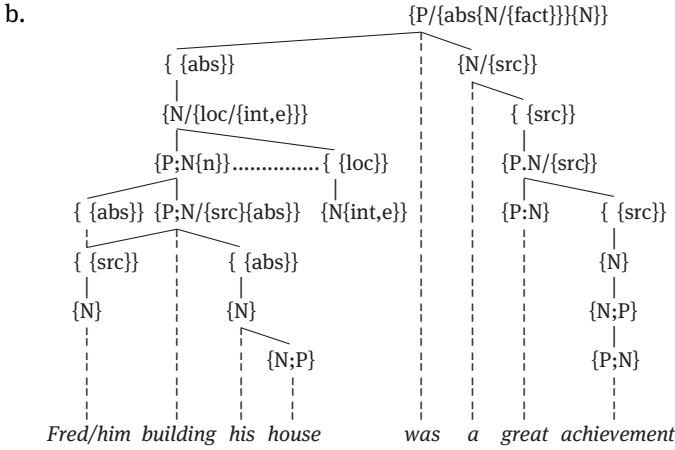
As the highest argument on the subject-selection hierarchy, *Fred/him* occur on the left of the verb whose valency it satisfies: it is a positional 'subject', but not an inflectional one, nor in a finite clause. It is not hosted by the free absolutive of a {P}.

Compare this with clauses containing the *there is/are* construction discussed in Chapter 35, for instance.

(36) a. There are some cups in the cupboard

b.
```
             {P/{loc/{N{int,e}}}}
     ┌──────────┤              ┐
 { {abs}}  {P/{abs/{Nᵢ}}} ............. {loc/{N/{int,e}}}
    │         │                           ┌──────────┤
 { {loc}}  {P/{abs}{loc}}.............................{ {abs}}
    │        ┌────┤                                      │
{N{int,e}}  ┊  { {abs}}        { {loc}}                 {Nᵢ}
    ┊       ┊      │              ┌──┤                   │
    ┊       ┊  {Nᵢ{pl}/{src}}    ┊  {N{det}}
    ┊       ┊      ┊  { {src}}    ┊  │
    ┊       ┊      ┊     │        ┊  {N/{src}}
    ┊       ┊      ┊    {N}       ┊   ┌────┤
    ┊       ┊      ┊     │        ┊  ┊   { {src}}
    ┊       ┊      ┊    {N;P}     ┊  ┊      │
    ┊       ┊      ┊     ┊        ┊  ┊     {N}
    ┊       ┊      ┊     ┊        ┊  ┊      │
    ┊       ┊      ┊     ┊        ┊  ┊     {N;P}
    ┊       ┊      ┊     ┊        ┊  ┊      ┊
  there    are   some  cups     in  the  cupboard
```
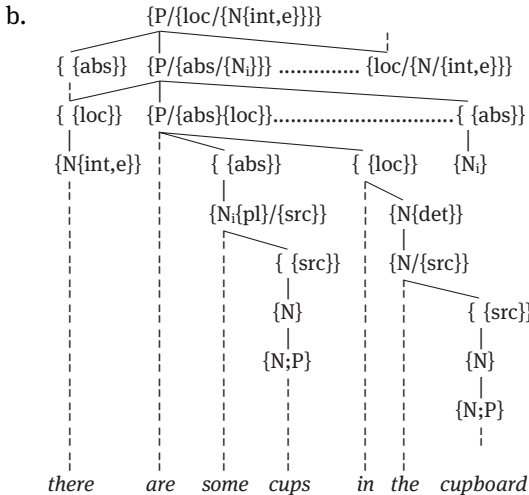
In (36b) *there* occupies the normal position for a subject, by virtue of this locative being linked lexically to the free absolute of the governing existential {P}, thus overriding operation of the subject selection hierarchy; but *some cups* controls verb concord (for pedantic users of the language, at least – for others the copula is invariantly *(i)s*) in such sentences. Thus even in finite clauses the positional subject doesn't always control concord (even if we ignore core modals).

I turn now to the other verb form with non-finite inflection, what I have called the **participle**, the reverbalization of a deverbal adjective. Traditionally, some instances of the *-ing* form have been treated as a 'present' participle, and this form has indeed a complex history, as suggested by the presence in current English of deverbal adjectives in *-ing*; but here I have regarded the non-finites in *-ing* as progressive gerunds, even when non-periphrastic, as in *the dripping tap/ the knife dripping with blood*.

My participle form is associated with the complement of the perfects and passive periphrases. But, as I noted in Chapter 36, these respective complements do not warrant the same categorization, any more than all gerunds. As a (resultative) stative, the perfect form is represented as {P;N{n.p}}, with the stative {n.p} reflecting the historical adjectival source. This was exemplified in (93a).

(93) a. {P}

{P/{loc/{N{e}}}} .... { {loc}\{P/{N{int,e}}}}

{P{n.p}/{P;N{n.p}}} ...... {N$_i$, T ⊆ i} .... { {loc}/{N}}

{P;N{n.p}}   {N{int,e}}

{P;N}

{P;N/{...}} .... { {loc}\{P;N}}

have-form   {N$_j$, j < i}

b. {P/{P;N}{loc/{N{e}}}}

{P/{P;N/{abs<{gol}>$_m$/{P;N}}} ....{ {loc}}

{P;N/{abs<{gol}>$_m$}}   {N{int,e}}

{P;N/{src<{loc}>$_n$}{abs<{gol}>$_m$}}

{ {src<{loc}>$_n$}} ..... { {abs<{gol}>$_m$}}

be-form {N$_{<i>}$}   {N$_j$}

< >$_m$ ∨ < >$_n$
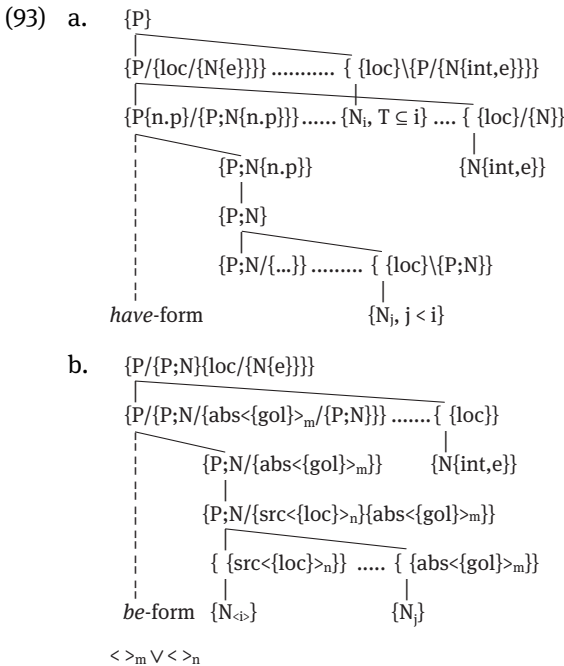
But, as shown in (93b), which ignores tense, the passive participle is not stative, nor is its head, which thus can satisfy the progressive periphrast, as indicated schematically in (56), from Chapter 36.

(56) c.
```
                        {P{MODAL::epistemic}}
                               |
                        {P/{loc/{N{int,e}}}}
              ┌─────────────────┴──────┐
         { {abs}}              {P;N}
              ┊          ┊        └──────┐
              ┊          ┊           {P;N}
              ┊          ┊       ┊      └──────┐
              ┊          ┊       ┊          {P;N}
              ┊          ┊       ┊      ┊      └──────┐
              ┊          ┊       ┊      ┊          {P;N/{abs{loc}}}
       ┌──────┊──────────┊───────┊──────┊──────┐
    { {abs{loc}}}        ┊       ┊      ┊   {P;N/{abs{gol}}{src}}
              ┊          ┊       ┊      ┊      ┊          ┊
           services     may    have   been  being    improved
```
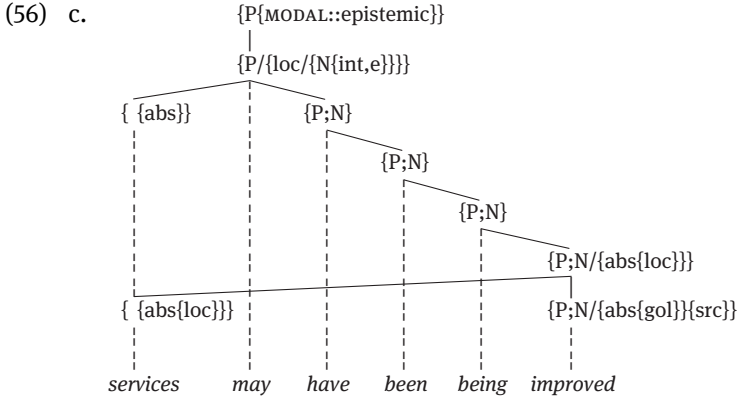
This means that the two periphrastic participles are opposed to the gerund negatively: they are not {P;N{n}}, one by having {P;N{n.p}} above the basic {P;N}, the other as having simply another {P;N} with a different valency from the base.

Etymologically and distributionally, the passive participle is defective in lacking {n.p}. For elsewhere – i.e. when the participle is not the complement of a periphrast – the non-finite *-ed* form is in general stative, as well as being past and either 'passive' or intransitive. Consider, for instance, the attributive participles in (108).

(108) a. the (recently) departed members
       b. the (recently) neglected members

c.
```
        {N{def}}
           |
        {N/{src}}
        ┌──┴────────┐
        ┊      { {src}}
        ┊          |
        ┊      {P.Nᵢ/{src}}
        ┊      ┌────┴──────────┐
        ┊  {P;N{n.p}/{abs/{Nᵢ}}}  { {src}}
        ┊      |                   |
        ┊  {P;N/{abs}...}         {N}
        ┊      |                   |
        ┊   { {abs}}             {N;P}
        ┊      |                   ┊
        ┊    {Nᵢ}                  ┊
        ┊      ┊                   ┊
       the  departed/neglected  parents
```
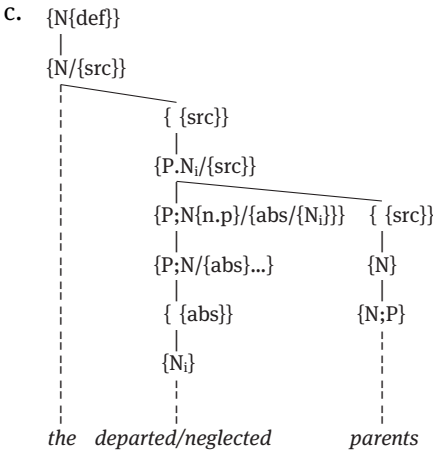
Observe too that it is the absolutes of the base and derived verbs that corefer with the attributive element, whether the verb is intransive (a) or transitive (b), as shown in (108c): we have an 'ergative' phenomenon – though (as often elsewhere in English) transitive bases far outnumber intransitives in such circumstances.

However, we are focusing more widely here on the periphrastic non-finites in general, where an interesting generalization is emerging. *Be* takes state complements when it acts as a copula rather than a periphrast, as in *She is a criminal/ the culprit/guilty/in the dock*; but it normally rejects as a progressive complement stative verbs, including the copula, as in (109b–c).

(109) a. Harry knew/learned/was learning the answer
       b. *Harry was knowing the answer
       c. Harry was (*being) learning the answer

The progressive periphrasis rejects {P;N{p.n}}, as well as the copula governing {P:N} and {N;P}, unless the latter are secondarily {p}, as in *He is being bold/a terror*.

(54)

$$\{P\}$$

$$\{P/\{loc/\{N\{int,e\}\}\}\}\dots\dots\dots\dots\dots\{\ \{loc\}/\{N_i,\ i < T\}\}$$

$$\{\ \{abs\}\}\quad \{P/\{loc/\{N/\{P;N\{n\}\}\}\}\}\ \dots\ \{\ \{loc\}\}$$

$$\{\ \{abs\}\}\qquad\qquad\{\ \{loc\}\}\qquad\{N\{int,e\}\}$$

$$\{N\{int\}\}$$

$$\{P;N\{n\{process\}\}\}$$

$$\{\ \{abs\}\}\qquad\{P;N/\{src\{abs\}\}\}$$

$$\{\ \{src\{abs\}\}\}$$

$$\{N\}$$

Harry   was   working
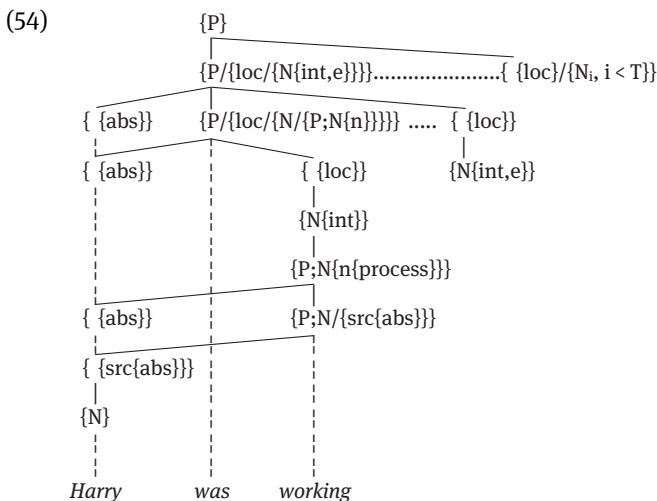
The distribution of stativity in turn throws an interesting light on the development of the perfect periphrasis, as well as the passive.

In Old English, as well as the ancestor of the *have* perfect, we typically find also with simple dynamic intransitive verbs, in certain conditions, what is otherwise a copula (a situation in outline not unfamiliar in other languages). Thus, we find two intransitive verbs with *wæs* in the passage from Chronicle A in (110), and a transitive with *hæfde*.

(110) Wæs Hæsten þa þær cumen mid his herge ...
was H. then there come with his army ...
Hæfde Hæsten ær geworht þæt geweorc æt Beamfleote
had H. earlier built that stronghold at B.
& wæs þa utafaran on hergaþ
and was then out-gone on pillage
(Then Haesten had arrived there with his army ... Haesten had previously
built the stronghold at Benfleet and had then gone out on a foraging expe-
dition.)

And such a distinction persisted, diminishingly, in later English. In present-day
English a *be* periphrast with the perfect participle is archaic, recessive in favour
of *have*. This brings usage into line with other periphrastic uses of *be*, where
it rejects a stative complement; it thus comes to be rejected as periphrast for a
stative perfect participle. This extension of the distribution of the *have* perfect is
possible at the 'cost' of the perfect participle losing the 'ergativity' illustrated in
(108) above.

(108) a. the (recently) departed members
b. the (recently) neglected members

And the *have* perfect periphrast thus distances itself further even further from its
origins as a locative-subject transitive, as was exemplified in (52b).

(52) b.
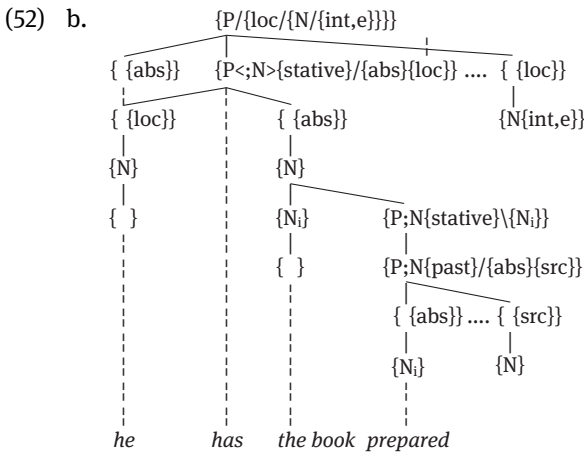
(cited in Chapter 36). Both these progressive and perfect forms alter their behaviour from when they are not periphrasts.

Already in Old English the use of the ancestor of *have* as a periphrasis which hosts the subject of its complement causes this complement to depart from the 'ergative' patterning of the participle, still preserved in (108), for instance. The passive participle preserves part of the 'ergative' pattern of the participle in the form of passivity, but loses its stativity; and the perfect preserves the latter and its resultative character, but loses 'ergativity', as displayed in (111), where a 'free' participle is one not governed by a periphrast.

(111) *'free' participle*   *perfect participle*   *passive participle*
'ergative'   'passive'
'resultative'   'resultative'
{P;N{n.p}/{abs{N$_i$}}}   {P;N{n.p}}   {P;N/{abs{loc}}}
        | | |
{P;N/{abs/{N$_i$}}}   {P;N}   {P;N/{src}{abs{gol}}}

Hence the longstanding inconsistency of the participle in English.

In this context let's look now at a consequence of the discrepancy we have noted between the second circumstantial gerund in (II.260a) and the complement of the progressive periphrasis of (94).

(II.260)   a.   Bursting/Having burst into tears she walked out

(94)   {P/{loc/{N/{P;N{n}}}}}
              ⌐‾‾‾‾‾\
          ┆   { {loc}}
          ┆ |
          ┆   {N{int}}
          ┆ |
          ┆   {P;N{n{process}}}
          ┆ |
         be   {P;N/…}
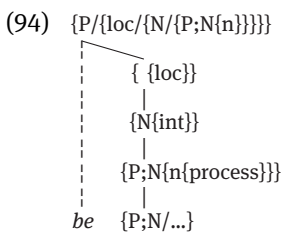
For, while the periphrast rejects a stative complement, the gerund in the alternative circumstantial in (II.260a) is a form of the stative *have* periphrast ({P{n.p}}) of (93a).

(93) a. {P}
    ┌─────────────────────────┐
   {P/{loc/{N{e}}}} ········ { {loc}\{P/{N{int,e}}}}
     | |
   {P{n.p}/{P;N{n.p}}} {N$_i$, T ⊆ i}
    ┌──┐
   ┊ {P;N{n.p}}
   ┊ |
   ┊ {P;N}
   ┊ ┌────────┐
   ┊ {P;N/{...}} ···· { {loc}\{P;N}}
   ┊ |
   have   {N$_j$, j < i}
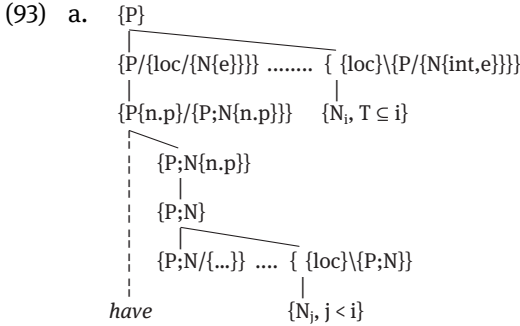
Such a gerund sequence as in (II.260a) is also possible in apposition and as a postnominal attributive (*The/Those candidates bursting into tears were mocked*), but is independently excluded, in so far as it is complemented, from prenominal attributivization. *Bursting* in (II.260a) can be given a progressive interpretation or not, but *having burst* is not a happy progressive. We have another discrepancy between periphrastic non-finites and non-periphrastic.

   There is also an anomaly to be associated with the gerund and participles. We generally talk about these as forms of verbals, marked by inflections. But they are rather different from other verbal forms. These others are either 'bare', or inflected for person/number and absolute tense. Person/number and absolute tense involve the incorporation of functional categories introduced by a locative modifiers of {P}.

   Concord was formulated as in (68) and the roles of tense and concord is illustrated in (III.59).

(68) *SUBJECT-OPERATIVE CONCORD*

   a.   <{P*{past/subj}}>
           |
          <{P*{MODAL}}>
           |
          {P}
        ┌──────────────────┐
      {P/EXIST} ····················· { \{P/EXIST}}
    ┌──────┴──────┐ |
  { {abs}} {P;N/{src{loc}}{abs}} {N$_{S//S}$}
   ┊   ┌─────┴─────┐ |
 { {src{loc}}} ┊ { {abs}} {iii}
   | ┊ |
 {N$_S$*{pl}} ┊ {N}
   | ┊ |
 { *{SAP}} ┊ { {distal}}
   ┊   ┊   ┊
  Geoff *know+s* *that*

b. $\{N_S\{pl\}\}/\{N\}$ $\Rightarrow$ *(68c) $\{P\{past/subj/\text{MODAL}\}\}$ $\Rightarrow$ *(68c)
         |
       {SAP}

c. $\{P/\text{EXIST}\}$ $\Leftrightarrow$ $\{P/\text{EXIST}\}$
               |
          $\{\;\backslash\{P/\text{EXIST}\}\}$
               |
        $\{N_{S//S}\}$, s = subject

(III.59)

Contrast the formation of the periphrastic roles of the participles and gerund in (93) and (94) respectively.

(93) a.

b. $\{P/\{P;N\}\{loc/\{N\{e\}\}\}\}$

$\{P/\{P;N/\{abs<\{loc\}>_m\}\}\}$ .... $\{ \{loc\}\}$

$\{P;N/\{abs<\{loc\}>_m\}\}$ $\{N\{int,e\}\}$

$\{P;N/\{src<loc>_n\}\{abs\}\}$

$\{ \{src<\{loc\}>\}\}$ ..... $\{ \{abs\}\}$

be-form $\{N_{<i>}\}$ $\{N_j\}$

$<>_m \vee <>_n$

(94) $\{P/\{loc/\{N/\{P;N\{n\}\}\}\}\}$

$\{ \{loc\}\}$

$\{N\{int\}\}$

$\{P;N\{n\{process\}\}\}$

be $\{P;N/...\}$

The representations of these verbal forms are more like lexical derivations, which, indeed, can relate source and derivate of the same major category, as with *king* and *kingdom*.

And the structure of passive participles resemble the formation of that other diathesis, the middle, as illustrated in (II.144b), with abbreviated adverb and other aspccts.

(II.144) b.
                    $\{P\}$

$\{ \{abs\}\}$ $\{P;N\}$

          $\{P;N/\{abs\{src\}\}\}$ $\{ \{loc\}\backslash\{P;N\}\}$

$\{ \{abs\{src\}\}\}$ $\{P;N/\{abs\}\{src\}\}$ $\{N\}$ $\{ \{abs\{src\}\}\}$

$\{N_i\}$ $\{ \{abs\}\}....\{ \{src\}\}$ $\{N_i\}$

           $\{N_i\}$ $\{N\}$

the book   *reads*   *well*
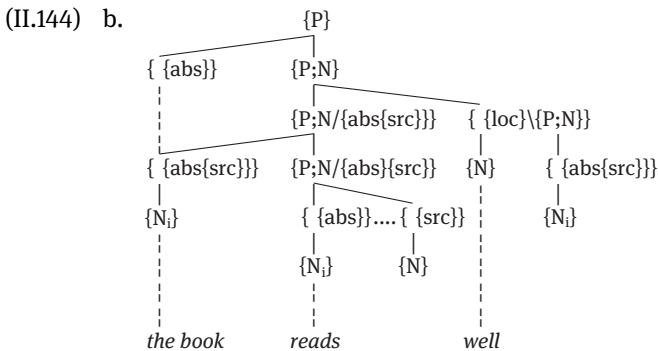
(II.144b) differs mainly in involving 'conversion' rather than morphologically expressed derivation. The middle in (II.144b) may nevertheless be a form of the

same *read* verb, except that it is limited to a small number of verbs compared with other putative verb forms.

But, also, we await a general theory of 'diathesis' or a demonstration of its ungeneralizability (which is beyond my subject here, as well as my competence). We may have to reckon with both inflectional and derivational diatheses. As for the English participles and gerund, I suggest that it is their status as satisfying grammatical periphrasts and the role of these periphrastic heads in 'affective' contexts that motivates regarding these non-finites as forms of the verb. They are embedded in the verbal system.

This chapter has been concerned with the inflectionally-marked non-finite forms of the verbals, forms which are lacking only with the modals: the gerund, factual-presupposing and non-factual, progressive and not; and the participle, with the categorical discrepancy when periphrastic shown in (111). But the preceding paragraph leads on very naturally to one other particular verbal that requires some attention to its forms before we move on to infinitives in general in the next chapter.

This is *do*, which we have encountered as a default operative, as illustrated in (15a), from Chapter 35, where it realizes {P{0}} at the lexicon-syntax interface, in the absence of an eligible independently motivated operative.

(15) a.
```
                      {P}
                       |
          {P/{src}} ................................................. { {loc}\{P/{src}}}
               |   ┌                                                       |
{ {src}}.......... {P/{{src}}{loc}{abs}} ............................. { {abs}}   {N_T{TEMP}}
    |                  |                                                 |
{ {loc{src}}}   { {abs}}                                           { {loc{gol}}}
    |                  |                                                 |
   {N}         {N{q}//{0}/{P/{P;N}{loc/{N{int,e}}}}}                    {N_i}
    |                  |                                                 |
{ {ego}}             {P}                                           { {tu}}
                      ┌                                                  
      {P{0}/{P;N}{loc/{N{int,e}}}}............................{ {loc}\{P...{N{int,e}}}}
          ┌                                                             |
{ {loc{gol}}}   { {abs}}      {P;N/{src{abs}}}                    {N_i, T ⊂ i}
     |              |              |
 {N{int,e}}    { {src{abs}}}    ¦
     ¦              |           ¦
     ¦             {N}          ¦
     ¦              ¦           ¦
     ¦              ¦           ¦
     ¦              ¦           ¦
     ¦              ¦           ¦
     ¦              ¦           ¦
     ¦              ¦           ¦
    does          Dolly       swim?
```
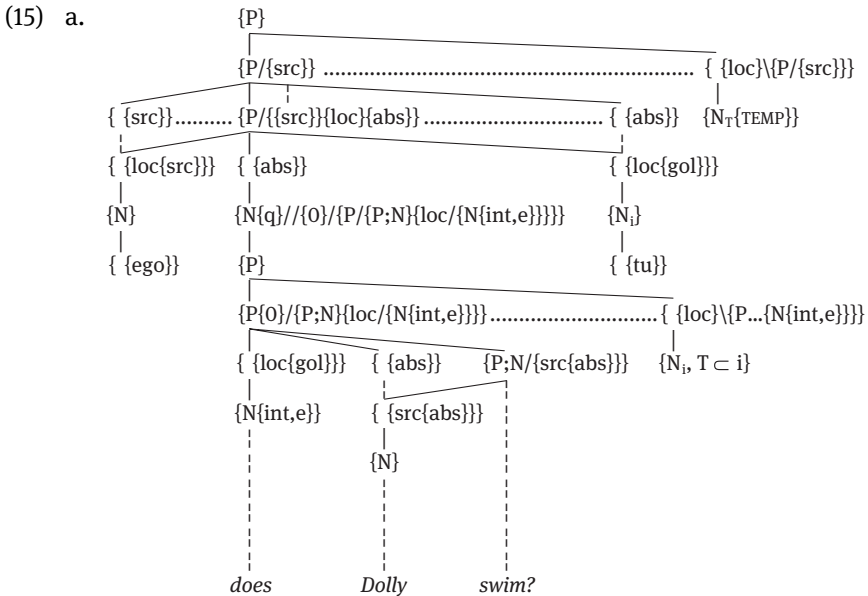
But, like *have*, this *do* seems to have non-periphrastic {P;N} congeners, non-finites inflected and not, which have a distinctive role. In one usage the {P;N} is again open existentially, though in others it is not; but in both it is agentive, whereas the pure operative's valency would be only '/{P;N}'.

These two phenomena are illustrated by (112) and (113) respectively, where *do* comes as close to being an overt 'pro-verb' as any verbal.

(112) a. What did she do?/What has she done?
       b. What did she do to Dolly?/What has she done to Dolly

(113) a. That is what I want to do
       b. That is what I want to be doing

In (112) *do* is associated with the expression of a questioning, by proxy (*what*), of the identity of the event-type; in (113) the *what* is definite (spelled out in the cumbersome gloss 'that which'), and *do* facilitates reference to the event-type pointed to by the initial *that*, with which it is actively coindexed.

The role of *do* in these depends on its lexical non-specificity, beyond being agentive; and this also underlies its role in the lexical periphrasis in (114).

(114) She did the decorating

A nominalized verb complements it, and extends its categorization by a possibly detailed valency in different lexical periphrases. The operative *do*, as noted, is even less lexically specific, with the minimal valency for an operative. Let us look at the phenomena of (112), which introduce the greatest and, I think, least investigated, if not neglected, complications.

In (112), since there is no dedicated interrogative verb form, recourse is had to a 'proxy' question word, *what*, whose presence and openness is triggered, at the interface, by the specification {P;N{O}}, as on the left in (115a), which, however, does not necessarily ask about an action.

(115) a. {P;N{O}} $\Rightarrow$ {P;N{O}/{abs/{N{O}}}}
       b. {P;N{O}/{src}} $\Rightarrow$ {P;N{O}/{src}{abs/{N{O}}}}
       c. What happened?
       d. What happened to her sister?

By the redundancy in (115a) a proxy empty absolutive is introduced; and the result is expounded as in (115c). But a question involving non-finite *do* expects the involvement of some agent, so that the fuller specification in (115b) is more

appropriate to (112a). (115d) invites an answer containing an affected argument coreferential with *her sister*. But the source demanded in (115b) or (112a) can be answered by an intransitive or transitive agentive utterance, and (112b) asks for a transitive.

Such redundancies create the conditions for representations such as that in (116) (which ignores the further, 'request' deconstruction of interrogatives), for the first question in (112a).

(116)

```
                              {P}
                               |
            {P/{src}} ...................................... { {loc}\{P/{src}}}
                                                             |
  { {src}} ................. {P/{{src}}{loc}{abs}} ..... { {abs}}   {N_T{TEMP}}
          |                         |                        |
  { {loc{src}}}              { {abs}}               { {loc{gol}}}
       |                        |                        |
   {N{def}}              {N{q}/{P//{0}}}             {N{def}}
       |                        |                        |
   { {ego}}                    {P}                    { {tu}}
                                |
            {P/{P;N}{loc/{N{int,e}}}} ............... { {loc}\{P/{loc/{int,e}}}}
                |                                         |
         { {loc}}  { {abs}}  {P;N//{top}}   {N_i, i < T}
              |         |         |
      { {abs}}  {N{int,e}}  :  {P;N{0}/{src}{abs/{N{0}}}}
           |         |     :         |
   { {abs}{top}}     :     :   {P;N/{src}}
        |            :     :         |
    {N{0}}           :  { {src}}     :
        :            :     |         :
        :            :    {N}        :
        :            :     :         :
      what          did   she        do
```
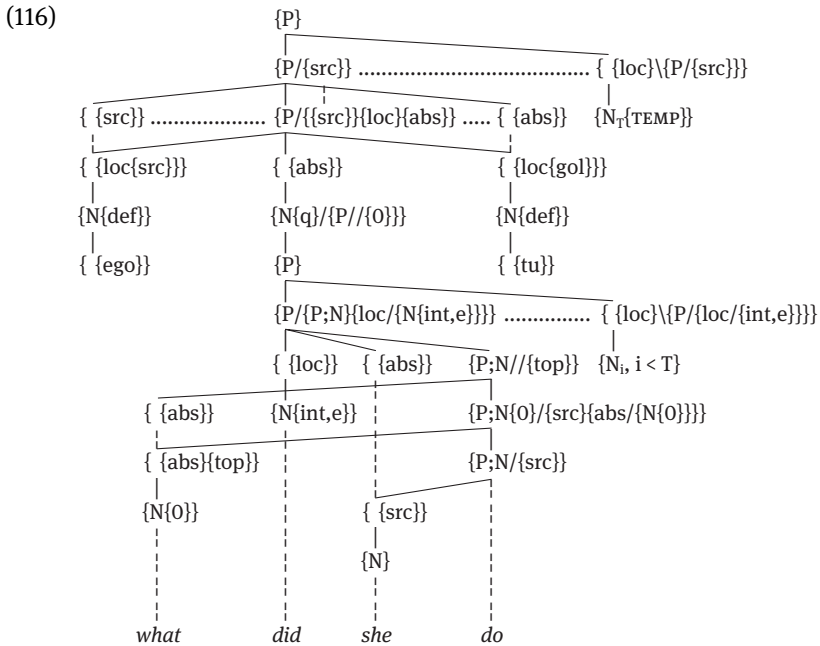
What happened in (115c) lacks the source participant of the basic {P;N} in (116), and there is no 'inversion' there as it is specifically the subject that is open. The verb in (115c) is a dynamic existential, as spelled out in the alternative *What took place?*

(112b) includes, as well as a source, an absolutive, which the relevant redundancy 'demotes' to a goal locative, expressed by *to* and superimposes a causative, as abbreviated in (117).

(117)

```
                           {P}
                           {P/{src}} ....................................... { {loc}\{P/{src}}}
                                                                            |
          { {src}} ................. {P/{{src}}{loc}{abs}} ...... { {abs}}   {N_T{TEMP}}
          |                          |                            |
          { {loc{src}}}              { {abs}}                     { {loc{gol}}}
          |                          |                            |
          {N{def}}                   {N{q}/{P//{0}}}              {N{def}}
          |                          |                            |
          { {ego}}                   {P}                          { {tu}}
                                     {P/{P;N}{loc/{N{int,e}}}} .............. { {loc}\{P/{loc/{int,e}}}}
                                                                              |
                                     { {loc}}  { {abs}}  {P;N//{top}}   {N_i, i < T}
                                     |         |         |
                       { {abs}}      {N{int,e}}|         {P;N/{src}//{0}}
                       |             |         |         |
                       { {abs}}      |         { {src}}  {P;N}
                       |            |          |         {P;N/{abs}}  { {loc{gol}}\{P;N}}
                       |            |          {N}       |            |
                       { {abs,{top}}|          |         { {abs}}     {N_i{def}}
                       |            |          |         |
                       {N{0}}       |          |         {N_i}
                       |            |          |         |
                       what        did       she        do        to  Dolly?
```
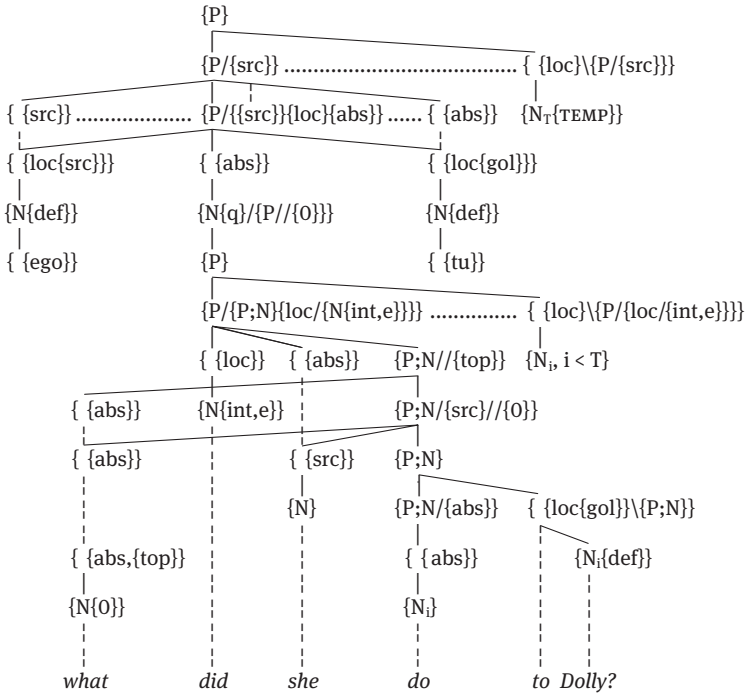
Recall the interrogative structures of Chapter 35, particularly (15b). (117) creates a causative to accommodate the questioning of the verb, which complicates the representation. *What* in (117) expounds the open {N}, which in turn is hosted by the free absolute of the agentive {P;N} and that of the topical {P;N}, since the basic {abs} has been incorporated. Again, the equivalent sentence in (113d) lacks the source, but has a 'demoted' affected goal subject. *To Dolly* in (117) is not a simple circumstantial: unlike, say, *for Dolly* and *with Dolly*, it is coindexed with an incorporated absolutive, as in holistics.

Do is then an operative that has non-periphrastic non-finite congeners, just like that in *He must have the book*. With the *be* and *have* operatives, I suggest the operative is basic and the non-finites, even if non-periphrastic, involve the addition of a dominated **N** where necessary, such as when adjoined to another operative: {P} $\Leftrightarrow$ {P;N}. But operative *do* is a very different verbal from agentive *do*, which behaves like a main verb, though with a limited finite distribution, a major part of which is illustrated by (114), where it is a lexical rather than a grammatical periphrasis, and the main verb is subjoined to a {P}.

(114)   She did the decorating

It is perhaps time, then, to draw together, in contrast, what we can represent about the non-finite forms of the *be* and *have* operatives.

The tabulation in XVI is offered, to complement the above examples of non-finites of operative *do*, with the maximum expansion of *What may have been being done to them?*, excluding the 'modal' *be/have* + the *to*-infinitive. Non-finite *do* ({P;N/{src<>}{abs}<>}) – the two braces within angles being simultaneously optional – can complement any operative, including finite *do* ({P}); but finite *do* cannot be complemented by another operative, except in emphatic imperatives: *Do be persuaded*, *Do be working when he arrives*, *Do have finished by the time he arrives*, where it appears in 'modal position'. The number of non-finite forms of the periphrastic operatives is limited by their categorization, even though the absent forms turn up in other (non-periphrastic) circumstances. Thus, in Table XVI periphrastic *have* has no gerund or passive form, and progressive *be* has no passive participle.

Table XVI: Forms of the operators

verbal		
have	*perfect*	*operative* {P{n.p}/{P;N{n.p}}}
		bare form {P;N{n.p}/{P;N{n.p}}}
be	*progressive*	*operative* {P/{loc/{N/{P;N{n}}}}}
		perfect participle {P;N{n.p}/{loc/{N/{P;N{n}}}}}
be	*passive*	*operative* {P/{P;N/{abs{loc}/{P;N/{src}{abs}}}}}
		bare form {P;N/{P;N/{abs{loc}/{P;N/{src}{abs}}}}}
		progressive {P;N/{loc}/{P;N{abs{loc}/{P;N/{src}{abs}}}}}
		perfect {P;N{n.p}/{P;N{abs{loc}/{P;N/{src}{abs}}}}}

This tabulation underlies the necessarily maximal sequence in (56c), again repeated here.

(56) c.

```
                        {P{MODAL::epistemic}}
                                |
                        {P/{loc/{N{int,e}}}}
            ┌───────────────────┴──────────┐
       { {abs}}                          {P;N}
                                ┌───────────┴──┐
                                          {P;N}
                                      ┌───────┴──┐
                                              {P;N}
                                          ┌──────┴──┐
                                                 {P;N/{abs{loc}}}
       { {abs{loc}}}                            {P;N/{abs{gol}}{src}}

        services     may    have    been    being   improved
```
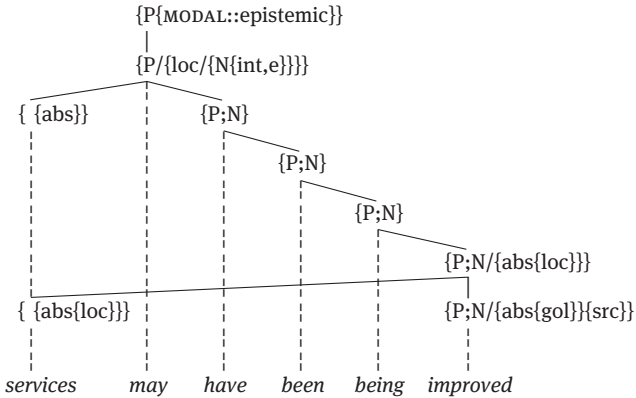
Unlike with full verbs, non-finites of operatives differ from the finites only by addition of ';N' to the {P} representation of the operative. All (full) verbs are basically {P;N}, and acquire finiteness by conversion. The situation is complicated, however, by operative *do* and the existence of the operative *have* and *be* with 'modal' *to*-infinitive complements: *She has/is to leave* – though often too the *have* is, like *do*, a full verb (*Does she have to leave?* rather than *Has she to leave?*, as well as in the lexical periphrasis *Did he have a walk?*).

We have again strayed rather, in places, from our focus on gerunds and participles – but I hope not too irrelevantly, given, for instance, the interaction between operatives and non-finite verbals generally, as well as the existence of non-finite congeners of non-modal operatives. And the last focus on finite and non-finite, including infinitive *do*, anticipates the discussion of 'infinitives' in the chapter that follows.

In this one I have differentiated factual-presupposing and simple event gerunds, including progressives and perfectives; and comparable deverbal nouns, as well as resultatives/products. I have pointed to the differences both between gerunds and nominalization and between adjectivalizations and participles; and among this last I have highlighted the perfect and passive categorizations of the participle and other discrepancies in the periphrastic-complement role of suffixed non-finites when compared with their non-periphrastic distribution. We have also observed concerning the suffixed non-finites the difference in the categorization of operative non-finites and non-finite full verbs: non-finiteness formation with the former is involves the categorial increment {P} $\Rightarrow$ {P;N} (one aspect of the redundancy {P} $\Leftrightarrow$ {P;N}), while finitization of full verbs involves subjunction of {P;N} to a {P}.

Chapter 39
Infinitives

infinitives, 'bare' and 'to-' – direct perception and causation again – the infinitive functor, overt and not – types of infinitive functors – raising and control – control and agency – infinitives, subject incorporation, and *for … to*-infinitive – *for*-'blends' – de-adverbial adjectives – to-relatives – factivity with gerunds and infinitives – modal compounds?

We have already encountered in various contexts the two traditionally recognized manifestations of the infinitive, the unsuffixed simple non-finite verbal form, represented as {P;N}; the 'manifestations' differ in whether or not the infinitive is preceded by and dependent on *to*. The 'bare' infinitive, without *to*, we have encountered in two contexts: as the verbal-form complement of operative *do* and modals, and as the complement of particular verbs, specifically those of 'direct perception' and some 'direct causatives'.

The first of these has just been illustrated in the preceding chapter, showing *do* as both finite operative and non-finite complement in the case of (112a).

(112)   a.   What did she do?

(113)   a.   That is what I want to do

The *do* in (113a) illustrates, on the other hand, the '*to*-infinitive', the other manifestation of the infinitive, i.e. as what I have interpreted (in Chapters 16 & 17) as the complement of the overt functor *to*.

Chapter 36 includes a discussion of modal syntax, particularly the behaviour of the core modals in (58) and (59).

(58)   a.   He must be tired
       b.   He must leave at once

(59)   a.   He may be tired
       b.   He may leave at one

And the preceding chapter includes some discussion of the verbs of direct perception whose verbal complements in (95) manifest the contrast between progressive vs. perfective but share signification of simultaneity.

(95)   a.   I saw them leaving
       b.   I saw them leave

But they were addressed more fully in Chapter 33, along with verbs of 'direct causation' that also take the 'bare' infinitive.

The syntax of a sentence such as (95b) was contrasted, as (III.104a), with what is associated with the *to*-infinitive structures in (III.104b–c).

(III.104)   a.   I saw them leave
            b.   I liked/expected them to visit me
            c.   I expected them to leave

There the syntactic representation of (III.104c) in (III.105a) was thus contrasted with that in (III.105b), where in both instances the morphologically-expressed verbal tense is ignored as not relevant here.

(III.105)   a.

```
                        {P{past}}
                           |
        { {abs}}    {P;N/{src{loc}}{loc{gol}/{P;N}}}
           |
        { {src{loc}}}        { {abs}}  { {loc{gol}}/{P;N}}
           |                                |
          {N}                             {P;N/...}
                         { {src}}
                            |
                           {N}

           I        expected  them     to   leave
```

            b.

```
                       {P}
                        |
        { {abs}}   {P;N/{src{loc}}{ /{P;N}}}
           |
        { {src{loc}}}     { {abs}}      { /{P;N}}
           |                                |
          {N}                          {P;N/{src{abs}}}
                        { {src{abs}}}
                            |
                           {N}

           I        saw  them        leave
```

Most obviously, the main verb in (III.104c) associates **futurity** with the event signified by the subordinate, and this is signalled by the goal functor in (III.105a) that is complemented by the lower verb. Such a representation is consistent with the role of *to* elsewhere, crucially as a spatial goal, concrete or metaphorical. In Old

English the ancestor of *to* was used with an inflected infinitive form to signify 'purpose'; its present role with the infinitive in (III.105a) comes from a semantic weakening and syntactic generalization, though it is potentially purposive when a circumstantial, as in *I'll check again to make sure*, and may be strengthened by a preceding *in order*. Also, particularly with experiential verbs with a focus on volitionality, there are varieties of English where the *to* is reinforced by a preceding *for*, as in *I want for to visit her*.

Moreover, *expect* can be associated, along with the futurity of the scene of the infinitive, with a habitual interpretation (or perfectivity, depending on the verbal tense) of both main verb and complement. This **habituality** is prominent in the case of *like* of (III.104b), and there is no insistence on futurity of the further 'weakened' infinitive relative to the main verb. This invites a functor connection between the clauses that is not a goal, as in (118).

(118)

```
                         {P}
                        /    \
        { {abs}}      {P;N/{src{loc}}{ /{P;N}}}
           |            /          \
      { {src{loc}}}    |   { {abs}}   { /{P;N}}
           |          |      |            |
          {N}         |      |          {P;N/...}
           :          :      |            |
           :          :  { {src}}         :
           :          :      |            :
           :          :     {N}           :
           :          :      :            :
           :          :      :            :
           I        like   them     to  visit (me)
```
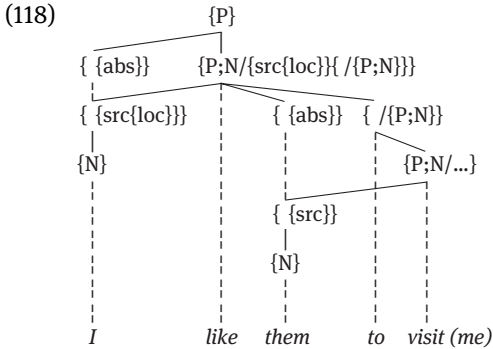
In all of these instances, we have a functor dedicated to the introduction of an infinitive, the non-finite bare form; but in (III.104b), as repeated above, it is not overt – thus permitting the iconicity described in Chapter 33.

The non-overt infinitive functor in (III.104b) has been associated with **simultaneity**: the uninterrupted sequence *saw them leave* is iconic of the juxtaposition of the perception and the event perceived. In (III.105b), this is achieved by the non-overtness of the simple infinitive functor, involving a similar alternation in overt vs. non-overt expression to that we associated with the finiteness determiner {N/{P}}, though of course the respective distributions of the latter depends on rather different circumstances. And the *to*-infinite is of course much more prevalent with non-operative governors than the 'bare' alternative. Thus, the infinitive dependent on direct causative and sensory verbs is not internally 'bare', unlike the infinitive dependent on modals.

All of these examples exhibit 'raising': the free absolute of the upper verb hosts the 'subject' of the infinitive, just as, in subject-formation, the free absolutive of the operative hosts the subject of a dependent {P;N}. But only causative and cognitive, and not emotional, controllers encourage passivization of the 'raisee', as in (119a–b). The presence of 'raising' is one mark of the expected essential non-finiteness of the infinitive.

(119) a. They were made to visit her
      b. They were expected to visit her
      c. *They were liked to visit her

      d.
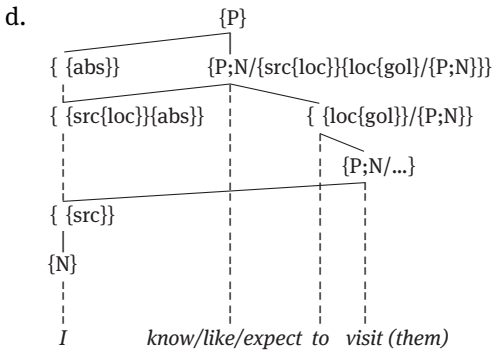
And all of *know*, *expect* and *like*, complemented by an overt infinitive functor, are alternatively 'control' verbs, as in (119d). In (119d) the free absolutive is associated with the functor of a participant in the upper clause, the 'controller', and again hosts the 'subject' of the lower one. The hosted participant has a distinctive role in two different clauses rather than simply being hosted solely by the free absolutive of the upper verb; the 'controlling' upper role is either agentive or experiential. Again we have an indication of non-finiteness in the lower clause: the valency of the infinitive is not satisfied entirely within the subordinate clause.

Expect and *like*, both with experiencer subjects, do not impose expectations on the role of the functor of the 'subject' that is hosted. With agentive controllers there is an expectation that activity will be expected of the referent of the lower 'subject', no matter how 'non-agentive' is its lexically-given functor. The discrepancy between the functor of the subject of the lower verb and the expectation associated with the main verb increases for the participant in (120) as we move through the set of sentences.

(120) a. I tried to leave   {src{abs}} – {src{abs}}
   b. I tried to be wise   {src{abs}} – {src{loc}}
   c. I tried to be accepted   {src{abs}} – {abs{loc}}

The referent of the 'subject' of the second clause is normally associated with less and less control over the scene signified in the lower clause.

  The same is true of indirect 'controllers' that are 'experiencers' lexically subordinate to an agentive. This is exemplified in (121a), where the free absolutive of both the upper, causative {P;N}, as well as that of the lower, attached to an 'experiencer', is satisfied by the doubly-raised infinitive subject, which is variably interpretable in terms of agentivity, depending on its own functor, i.e. the value of 'X'.

(121) a.

```
                    {P}
        { {abs}} {P;N/{src}}
        { {src}}  {P;N/{loc{gol}/{P;N}}{src{gol}}}  { {abs}}
         {N}      { {loc{src,gol}}\{P;N}}   { {src{gol}}{abs}} { {loc{gol}}/{P;N}}
                      {N}                                      {P;N/X}
                                            { {X}}
                                             {N}
         we     persuaded              Matilda        to leave/be examined
```

  b. We persuaded Matilda into leaving/being examined

  c.

```
                  {P}
        { {abs}} {P;N/{src}{loc{gol}/{P;N}}}
        { {src}}        { {abs}} { {loc{gol}}/{P;N}}
         {N}                          {P;N/X}
                        { {X}}
                         {N}
         we     caused  Matilda   to  leave/be expelled
```

The X in (121a) is a variable over the functors of the 'subject' of the infinitive, which is associated with both absolutives of the causative structure, one of them attached to the goal 'experiencer' of the lower {P;N} realized as *persuaded*. But

Matilda is also directly acted upon. I assume too that the main verb incorporates a circumstantial that would specify the means (or path) of creating the event, here left empty. Note finally that the directionality of the subordinate is matched by that in the gerundive subordinate in (121b), whose subject is incorporated, however.

Contrast with (121a) the syntactic causative in (121c), with simple 'raising', and where the sense of the functor of the raisee is only that of whatever is selected by the subject-selection hierarchy: no active participation in the causing is implied of the referent of this lower subject. On the other hand, we have found that causation may be more or less directly exercised. Chapter 33 includes a brief discussion of such as those in (122).

(122)   a.   Margery made him resign
        b.   Margery had him resign
        c.   Margery caused him to resign

As we move from (122a) to (122c) the involvement of Margery in the effecting of the resignation is decreasingly direct, though this can be manipulated by additions to the simple structures in (122). In the more direct cases the appropriate infinitive functor, here { {loc{gol}}/{P;N}}, is not overt.

We must be careful to differentiate the 'control' instances of (119) and (120) from simple 'raising' to what becomes the subject of the main clause, as in (123a):

(123)   a.   She seems (to Bill) to hate them

        b.

I associate with (123a) the structure in (123b), where the free absolute is not associated with a main clause functor, but with another free absolute, given that the only functor valency of the main clause is a predicative, here an infinitive functor.

Compare the infinitive of (123a) with the finite subordinate in (75a–b), where, as was observed, subject-formation fails, as compared with the 'raising' of (123).

(75) a. It seems (to Bill) (that) she hates them
    b. *That she hates them seems (to Bill)

d.

```
                    {P/{loc/{N/{int,e}}}}
         { {abs}}  {P;N/{ /{N/{P}}}}
         { {abs}}        {N/{P}}
           |
          {N}                    {P/{loc/{N/{int,e}}}}
                                 {P;N/{src{loc}}{abs}}
                            { {src{loc}}}      { {abs}}
                                 |                 |
                                {N}               {N}

          it      seems that she      hates them
```

In (75d) the finite subordinate is again predicative, as is the adjective or nominal in *It seems nice/a nice day*, and, like them, it is not subject to subject-formation, or 'raising'.

As we saw in Chapter 33, however, if the finite subordinate is more directly subordinate to an infinitive dependent on *seem*, subject-forming of the subordinate finite is viable, and we have (124a) as well as (124b).

(124) a. That she hates them seems (to Bill) to be regrettable
    b. It seems (to Bill) to be regrettable that she hates them

c.

```
                              {P}
         { {abs}}            {P;N}
                      {P;N/{loc/{P;N}}}   { {{gol}}\{P;N}}
         { {abs}}                           {N}
                                               { {loc}/{P;N}}
                                               {P;N/{abs}{P.N}}
         { {abs}}                                        {P.N}
           |                                              |
         {N/{P}}                                        {P;N}
           {P}

  that she hates them seems      to Bill  to  be  regrettable
```
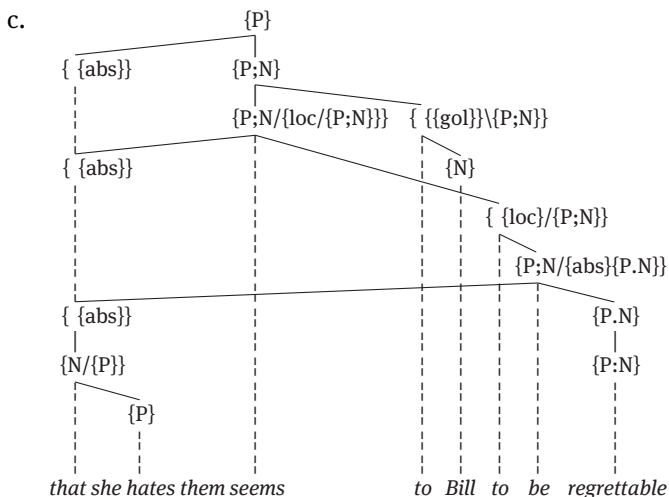
d. That she hates them seems (to Bill) regrettable (to Bill)

In (124a) the subordinate finite is eligible for subjecthood by virtue of being itself an argument of *to be regrettable*, which status is perhaps more apparent in (124b), where subject-formation in the main clause is absent. *Be regrettable* is also factive, but I have omitted this from the representation, along with the marking of the non-factuality of *that she hates them*.

(124c) shows that the sentential subject of *be regrettable* in (124a) is hosted by the most accessible free absolutive, or, rather, again two free absolutives, Finally, (124d) illustrates that in such circumstances the infinitival functor can be covert, along with the copula – as well as the greater tendency for *to Bill* to follow the reduced complement of *seems*. We still have a predicative adjective, but dependent on a copulative verb rather than the copula.

What precedes is very familiar, though from a fresh angle, I hope. But there are other aspects of the distribution of infinitives that still require our attention. Infinitives also occur, for instance, in copula sentences, as well as being the predicative argument of copular verbals. They are again normally post-copular, such as (125a), but can be topicalized in such constructions, as in (125b), though (125c), with failure of subject-selection and so 'extraposition', is often preferred.

(125) a. My ambition is to emigrate
       b. To emigrate is my ambition
       c. It is my ambition to emigrate

       d.

$\{P/\{abs\}\{loc\{gol\}/\{P;N\}\}\}$

$\{\ \{abs\}\}$ $\{\ \{loc\{gol\}/\{P;N\}\}\}$

$\{N\{def\}\}$ $\{P;N\}$

$\{N/\{src\}\}$ $\{\ \{src\{abs\}\}\}$

$\{\ \{loc\}\}$ $\{\ \{src\}\}$ $\{N_i\}$

$\{N_i\{def\}\}$ $\{N\}$

$\{ego\}$ $\{N;P\}$

my *ambition* *is* *to* *emigrate*

e.

```
                            {P//{top}}
        ┌───────────────────────────┐
    { {abs}}              {P/{abs}{loc{gol}/{P;N}}}
      │                       │
 { {loc{gol}}{top}/{P;N}}    { {abs}}
    ┌──┐                       │
      {P;N…}                 {N{def}}
         │
      { {src{abs}}}          {Nᵢ{def}}
         │                     │
       {Nᵢ}                  {ego}


     to   emigrate         is   my ambition
```

f.

```
                {P/{abs}{loc{gol}/{P;N}}}
         ┌───────┬────────┬──────────┐
     { {abs}}    { {abs}}       { {loc{gol}/{P;N}}}
       │           │            ┌───┐
     {Nⱼ}       {N{def}}          {P;Nⱼ}
                                   │
                   {Nᵢ{def}}     { {src{abs}}}
                     │             │
                   {ego}         {Nᵢ}


      it       is    my ambition   to   emigrate
```
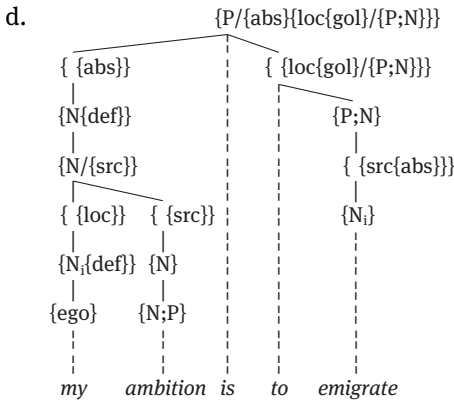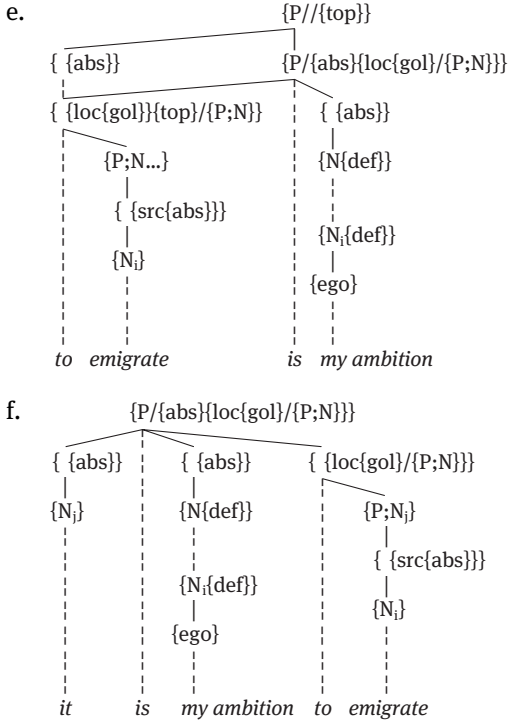
We might represent these, respectively, as in (125d–f), where the exact valency of the subordinate verb is ignored, and internal determiner phrase structure in (125e–f) is abbreviated, as mostly irrelevant here.

Ordinary equatives (*Her brother is the man over there*) show the alternation in (125a–b), where selection of the unmarked (topical, given) subject depends on the context. In both equatives and the predicative infinitive construction the arguments have coreferentiality asserted. And in (125f) the expletive is co-indexed with the infinitive. Now I turn to other distributional possibilities for infinitives.

Thus, there are agentive infinitives, where *to* realizes { {src}}, that appear in subject position, as in (126a), though (126b) is not a passive, but involves a copula plus predicative adjective, as confirmed by the presence of the specifier *too*.

(126) a. To contemplate the move terrified her
       b. She was (too) terrified to contemplate the move
       c. She was terrified by contemplating the move

d.

```
                                          {P}
        ┌──────────────────────────────────┴────────┐
     { {abs}}                               {P;N/{src}}
        │                        ┌───────────────────┴──────────┐
   { {src}/{P;N}}           {P;N/{ {{gol}}{abs}}        { {abs}}
        ┌───────┐          ┌────────┴───┐                  │
   {P;N/{abs}{src{loc}}}  { {abs}}              { {loc{gol}}}
     ┌──────┴────┐          │                       │
  { {src{loc}}} { {abs}}   {N}                     {Nᵢ}
     │           │          ┊                        ┊
   {Nᵢ}         {N}         ┊                        ┊
     ┊           ┊          ┊                        ┊
    to   contemplate   the move  terrified         her
```
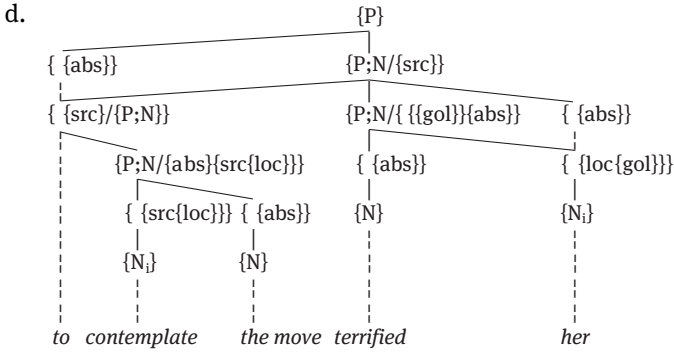
A ('more nominal') gerund 'equivalent' such as (126c) is possible as a passive subject, however. The place of the infinitive as subject of the causative verb in (126a), with agentive functor, is represented in (126d), again with no overt subject for the infinitive.

Indeed, in all of the examples we have looked at, the infinitives lack even the overt *him* subject of gerunds like that in (104b).

(104) b.

```
                                    {P/{abs/{N/{fact}}}{N}}
              ┌──────────────────────────┴──────────────────┐
          { {abs}}                                      {N/{src}}
              │                                      ┌───────┴──────┐
       {N/{loc/{int,e}}}                          { {src}}
          ┌───────┴──────────┐                         │
     {P;N{n}}..............{ {loc}}              {P.N/{src}}
     ┌────┴──────┐            │                     ┌────┴──────┐
  { {abs}} {P;N/{src}{abs}}  {N{int,e}}          { {src}}
     │    ┌────┴─────┐                                │
  { {src}}  { {abs}}                                {N}
     │         │                                     │
    {N}       {N}                                   {N;P}
     ┊         ┊  ┌──┘                                │
     ┊         ┊ {N;P}                              {P;N}
     ┊         ┊  ┊                                   ┊
 Fred/him building  his  house      was   a   great  achievement
```
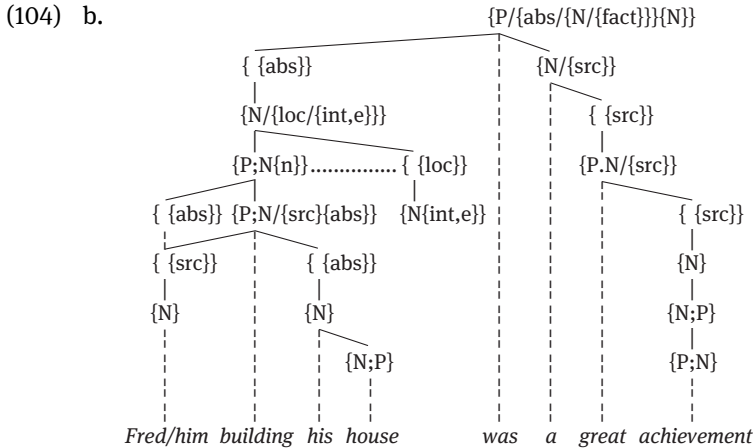
This lack of on overt subject, unless 'raised', is general with infinitives; there is no unshared overt 'subject'. And often the incorporated subject is non-definite, as with gerunds, and as exemplified in (127).

(127)   a.   To build a house is a great achievement

b.

```
                              {P/{abs}{N}}
           ┌──────────────────────┴─────────────┐
      { {abs}/{P;N}}                        {N/{src}}
      ┌────┴──────┐                         ┌───┴──────┐
   {P;N/{src}{abs}}                      {P.N/{src}}
   ┌────┴───┐                            ┌───┴─────┐
{ {src}} { {abs}}                    {P:N}      { {src}}
   │        │                          │            │
  {N}    {N/{src}}                                 {N}
          ┌──┴──┐                                   │
              { {src}}                            {N;P}
                 │
                {N}
                 │
               {N;P}
```

to   build   a   house   is   a   great   achievement

We have an absolutive infinitive subject and a predicative noun, as in (127b), but there is no overt subject of the infinitive.

But what is the nature of the pre-infinitival sequence, familiar elsewhere, in such as (128a), here with a main-clause contentive that is **emotive** or **evaluative** or **reproving**?

(128)   a   For Bill to be living with Gwen is disgraceful/I deplore

b.

```
                                                 {P/{abs}{N.P}}
                     ┌───────────────────────────────┴────────┐
              { {abs}/{P;N}}                                {N.P}
              ┌───┴────┐                                      │
                   {P;N}                                    {N:P}
                   ┌───┴───┐
{ {loc{gol}}\{P;N}} {P;N/{prog}}
    ┌──┴──┐            ┌───┴──────────┐
       {Nᵢ}         {P;N{prog}/{abs}{loc}}
                        ┌────┴─────┐
                     { {abs}}   { {loc}}
                        │        ┌──┴──┐
                       {Nᵢ}         {N}
```

for   Bill   to   be   living   with   Gwen   is   disgraceful

c.

```
                                                              {P}
    { {loc{gol}}\{P;N}}                                {P/{abs}{N.P}}
        {N₍ᵢ₎}   { {abs}/{P;N}}                              {N.P}
                    {P;N/{prog}}                              {N:P}
                      {P;N{prog}/{abs}{loc}}
                        { {abs}}  { {loc}}
                          {Nᵢ}        {N}

    for    Bill      to    be  living     with Gwen    is disgraceful
```

d.

```
                              {P}
    { {loc{gol}}\{P}}    {P/{N.P}{abs/{P;N}}}
        {N₍ᵢ₎} { {abs}}    {N.P}  { {abs}/{P;N}}
                  {N}       {N:P}    {P;N/{prog}}
                                       {P;N{prog}/{abs}{loc}}
                                         { {abs}}  { {loc}}
                                           {N₍ᵢ₎}       {N}

    for   Bill,    it    is   disgraceful  to   be  living    with Gwen
```

If we assume that *for* here behaves as elsewhere, i.e. as a functor, and typically circumstantial (with *She did it for you* as a prototype), then there are at least two possibilities for the structure containing the first phrase in (128a). In the relevant representations in (128b–c) the progressive and nominals are simplified.

In (128b), *for Bill* is a circumstantial in the lower, infinitival clause, and coreferential with the incorporated 'subject' of the infinitive. In varieties where we find emotive verbs as well as adjectives, as in (128a), in such constructions we have parallel structures such as *I deplore for Bill to be living with Gwen* and *For Bill to be living with Gwen is deplorable/It is deplorable for Bill to be living with Gwen*.

In (128c), however, the circumstantial belongs to the main clause, which may be given distinctive marking phonologically (or by a following comma in writing). In this representation, the referent of *Bill* of course is associated with the sense of 'disgracefulness' of the scene depicted by the infinitive. So too with (128d), where

subject selection fails; and there is an expletive. But in both instances the subject of the infinitive may be non-definite, rather than co-indexed with *Bill*.

There is, however, another possible combination of these components, where subject-selection fails in the main clause. Such is (129a), in which *for Bill* could be associated with either the main clause or the infinitive, and in either case there is coreference with the covert subject.

(129) a. It is disgraceful for Bill to be living with Gwen
       b. It's disgraceful for everybody for Bill to be living with Gwen

       c.
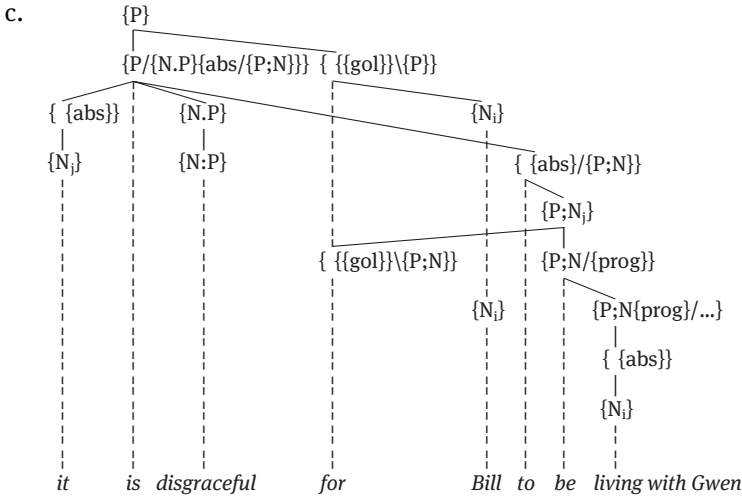
And in (129b) we have both an 'upper' and a 'lower' *for*-phrase. Could it be that in (129a) the *for*-phrase in (129a) fills both positions (i.e. involves 'overlap'), as well as either? The overlapping representation in (129c), indeed, suggests how *for Bill* in (129a) may belong to both clauses, as well as either. That is, (129c) is a **structural blend**: *for Bill* belongs to both clauses. The two occurrences of the specifier of the infinitive functor and the complement of the former are linked lexically. And there are yet further complexities involving combination of adjectival and infinitive structures.

However, before proceeding to these, it is perhaps worth observing that a similar analysis to that in the subordinates in (128–9) may be appropriate in those varieties of English that exhibit such expressions involving volitional verbs as those in (130a).

(130) a. She wants/prefers for (him) to leave

b.
```
                        {P}
 ┌──────────────────────┘
{ {abs}}      {P;N/{src{{src}}}{loc{gol}/{P;N}}}
  │      ┌────────┴──────────────────┐
{ {src{{src}}}}  { {abs}}        { {loc{gol}/{P;N}}}
  │         ┊      ┊                   │
 {N}        ┊      ┊                  {P;N}
            ┊      ┊              ┌─────┘
            ┊  { {loc{gol}}\{P;N}}  ┊  {P;N/{src{abs}}}
            ┊      ┌──┘          ┊       │
            ┊     {Nᵢ}           ┊   { {src{abs}}}
            ┊      ┊             ┊       │
            ┊      ┊             ┊      {Nᵢ}
            ┊      ┊             ┊       ┊
  she     wants  for  him      to     leave
```

c.
```
                        {P}
 ┌──────────────────────┘
{ {abs}}      {P;N/{src{{src}}}{loc{gol}/{P;N}}}
  │      ┌────────┴─────────────────────┐
{ {src{{src}}}{abs}}  ┊          { {{gol}}/{P;N}}
  │                   ┊              ┊   │
  ┊                   ┊              ┊  {P;N}
  ┊                   ┊          ┌────┘
  ┊        { {loc{gol}}\{P;N}}  ┊  {P;N/{src{abs}}}
{ {src{abs}}}     │             ┊       ┊
  │              {Nᵢ}           ┊       ┊
 {Nᵢ}            ┊              ┊       ┊
  ┊              ┊              ┊       ┊
  she          wants  for      to     leave
```
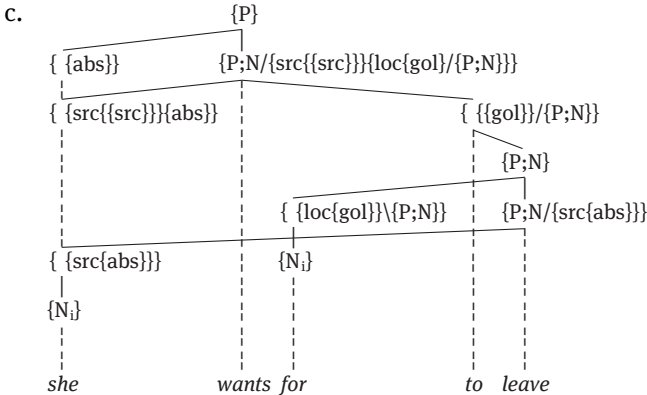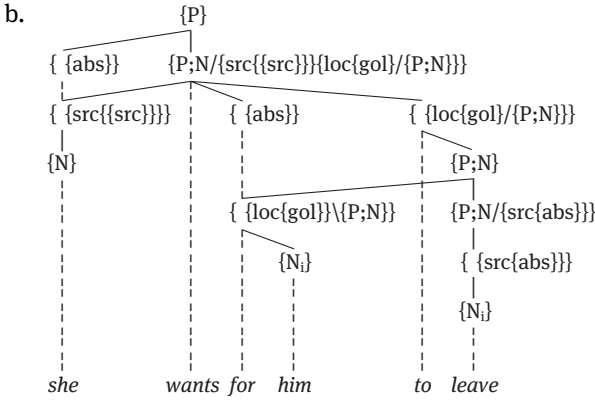
The goal of the infinitive verb in (130b) is hosted by the free absolute of the main verb. But the free absolute is attached to the subject of the main verb in (130c), and the infinitive 'subject' is hosted by this free absolute and the goal {N} is co-indexed with the subject.

We are now concerned with the variety of infinitive-containing structures exemplified in (131), again involving, and more crucially, adjectives and the role of presence and absence of subject placement in the main clause.

(131) a. To please John is easy (for Mary)
      b. It is easy (for Mary) to please John
      c. John is easy (for Mary) to please

For Mary is again a circumstantial, here with respect to the main clause. *Mary*, if present, is coreferential with the incorporated subject of the infinitive. But crucial to the understanding of the unbracketed structures in (131) is the observation that the infinitive in (131c), in the absence of *for Mary*, is not associated with the transitive verb *please* but with the middle diathesis based on it: *John* in such examples is {abs{src}}, and the adjective corresponds to a manner circumstantial such as we find in middle constructions.

Middles were mentioned in Chapters 26–7, for instance, from the latter of which the following examples in (II.144a–b) are drawn.

(II.144)   a.

```
                 {P}
         ┌────────┘
 { {abs}} {P;N/{abs}{src}}
   ┌───────┘      └─────┐
 { {src}}  ┊        { {abs}}
    │      ┊           │
   {N}     ┊          {N}
    ┊      ┊           ┊
   they   read      the book
```

   b.

```
                      {P}
           ┌───────────┘
 { {abs}}      {P;N}
    ┊        ┌──┘
    ┊    {P;N/{abs{src}}}      { {loc}\{P;N}}
    ┊      ┌────┘              │
 { {abs{src}}}  {P;N/{abs}{src}}  {N}   { {abs{src}}}
    │          ┌──┘                       │
   {Nᵢ}    { {abs}} …. { {src}}  ┊       {Nᵢ}
    ┊         │         │         ┊        ┊
    ┊        {Nᵢ}      {Nᵢ}       ┊        ┊
    ┊                              ┊        ┊
 the book     reads            well
```
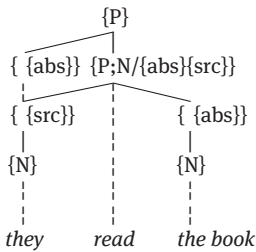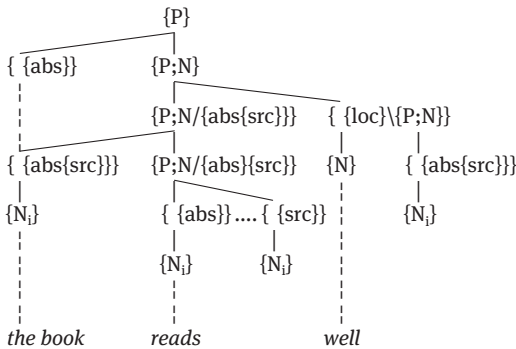
(II.144b) illustrates the middle construction, and in (II.144a) there is the transitive verb that corresponds to the base in the middle construction.

On this basis, I suggest for the respective sentences in (131a–c) the representations in (132a–c), which greatly simplify the valency of the causative-directional *please*, and, more relevantly, attribute an absolutive feature here to the infinitive functor, given its apparent subject position in (132a).

(132) a.

    b.

    c.
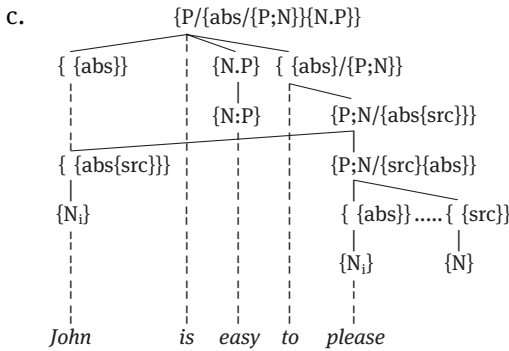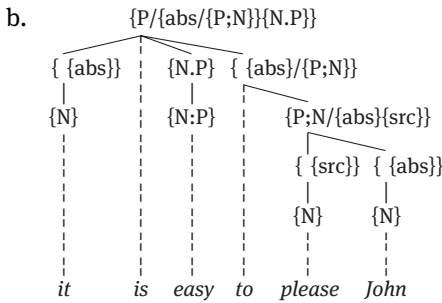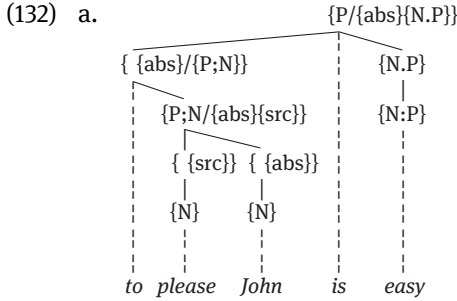
    d. John pleases easily

The infinitive in both (132a) and (132b) has an indefinite subject. The infinitive itself in (132a), as observed, is the subject of the main clause; and there is no main-clause subject-selection with the infinitive in (132b). In (132c), however, the infinitive and the main clause, via 'raising' to the free absolute, share *John*, which is the 'subject' of the middle infinitive. If the latter is not 'middle', the 'raising' of *John* would be notionally inappropriate. As a reminder of this, the finite middle construction corresponding to (132c) is shown in (132d).

Often such a cognate finite middle + adverb is not obvious, however, as with *Bill is tough to convince*; and, where there is a cognate finite middle, the circumstantial is not necessarily an *-ly*-adverb: *The articles are difficult to classify/?The articles classify with difficulty*. The finite middle construction is perhaps still volatile, developing. It is well-established with *well*, as in *This fish grills well*, or *The book reads well*. However, the finite middle + adverb is notionally more primitive than the adjective + infinitive: in both instances we are concerned with manner of undergoing an action. Thus, once such cognates as (132d) and (131c)/(132c) are established, it clarifies that what we have here is indeed a synchronic backformation: the adverb is more basic notionally than the adjective. Expression of manner of an action is proper to the former. Recall here the discussion of *slow(ly)* and *fast* in Chapter 24.

There I suggested that speed of motion adjectives are based on adverbs modifying verbs. I contrasted the measure adjective in (II.119a) with the speed one in (II.119b).

(II.119) a.

```
                  {P/{abs}{P.N}}
        ┌──────────┴────────────────────┐
   { {abs}}                          {P.N}
        │                    ┌──────────┴──────┐
      {N}              { {loc}\{P.N}}      {P.N}
        ┊                    │                │
        ┊              {P.N{itf}}      {P:N{LENGTH::↑}}
        ┊                    ┊                ┊
   the train is           very             long
```

b.

```
                  {P/{abs}{P.N}}
        ┌──────────┴────────────────────┐
   { {abs}}                          {P.N}
        │                    ┌──────────┴──────┐
      {N}              { {loc}\{P.N}}      {P.Nⱼ/{src}}
        ┊                    │           ┌──────┴──────────────┐
        ┊              {P.N{itf}}     {P:N} ················· { {src}}
        ┊                    ┊                                {Nᵢ}
        ┊                    ┊                                {P;N}
        ┊                    ┊                  ┌──────────────┴──────┐
        ┊                    ┊            { {loc}\{P;N}} .... {P;N/{abs...}}
        ┊                    ┊                  │                  {abs...}
        ┊                    ┊            {P.Nⱼ/{src}}
        ┊                    ┊            ┌──────┴──────────┐
        ┊                    ┊        {P:N{↓}} .... { {src}}  {Nᵢ}
        ┊                    ┊                              {N}
        ┊                    ┊                          {N;P{speed}}
   the train is           very                          slow
```
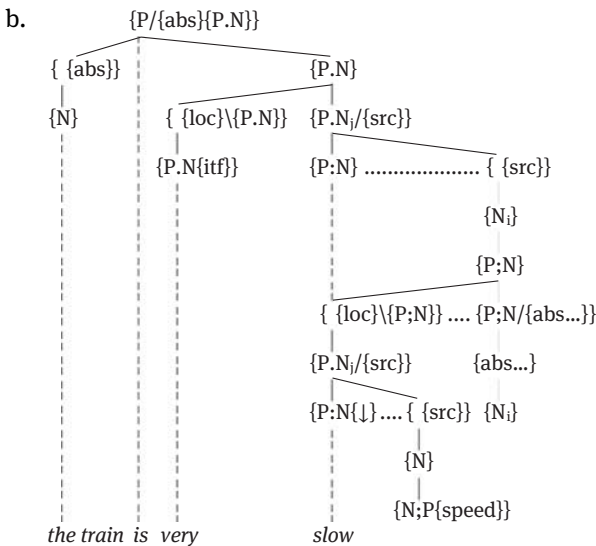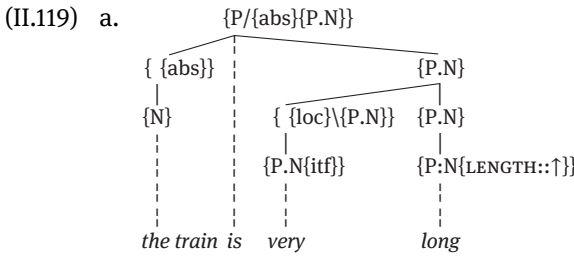
Long describes the size of a dimension of an entity; *slow* describes its motion.

Similarly, (132c) might be expanded to allow for the adverb basis of the adjective, along these lines, so acknowledging the notional primacy of (132d).

(133) a.

$$\{P/\{abs\}/\{P;N\}\}\{N.P\}\}$$

{ {abs}}	{N.P}	{ {abs}/{P;N}}
	{N:P}	{P;N/{abs{src}}}
{ {abs{src}}}	{ {loc}}	{P;N/{src}{abs}}
{N$_i$}	{N{manner}}	{ {abs}} ...... { {src}}
		{N$_i$} {N}

John   is   easy   to please

b.

$$\{P/\{abs/\{P;N\}\}\{N.P\}\}$$

{ {abs}}	{N.P$_i$}	{ {abs}/{P;N}}
	{N:P{GRAD}}	{P;N}
	{ {loc}\{P;N}}	{P;N/{abs{src}}}
{ {abs{src}}}	{N.P$_i$/{src}}	{P;N/{src}{abs}}
{N$_i$}	{N:P} ... { {src}}	{ {abs}} ...... { {src}}
	{N}	{N$_i$} {N}

John   is   easy   to please

c.

$$\{P\}$$

{ {abs}}	{P;N}	
	{P;N/{abs{src}}}	{ {loc}\{P;N}}
{ {abs{src}}}	{P;N/{abs}{src}}	{N.P/{src}}
{N$_i$}	{ {abs}} ... { {src}}	{N:P} ... { {src}}
	{N$_i$} {N}	{N{manner}}

John   pleases   easi- ly
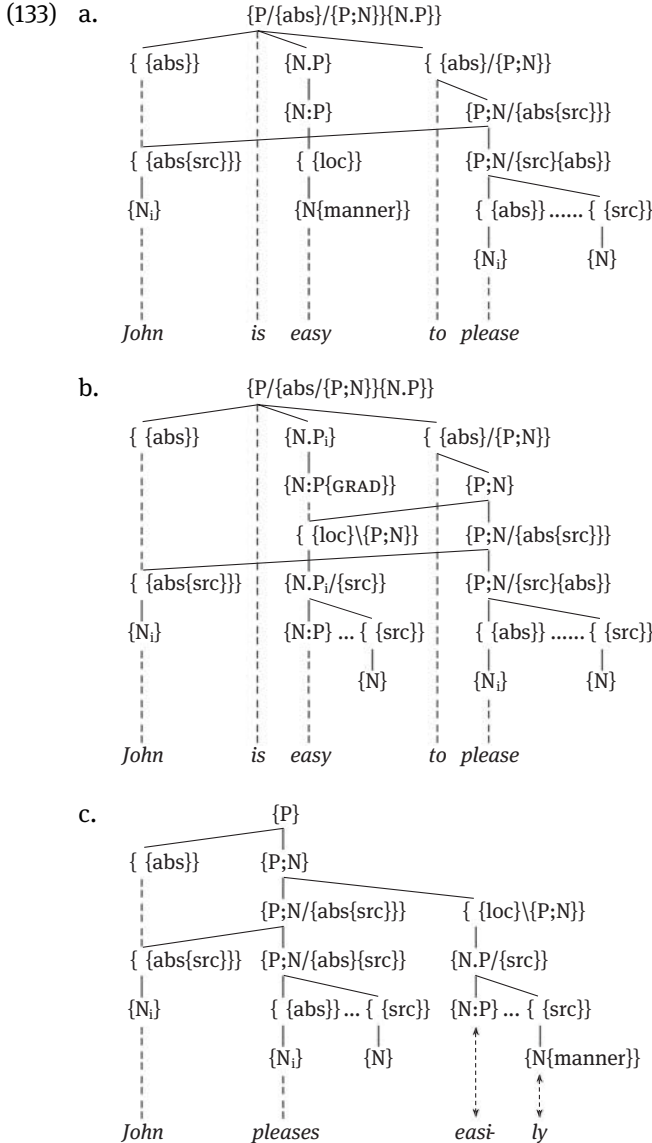
This recognition is done minimally in (133a), and more elaborately in (133b), and more like the *slow* example. Compare with (133b) the representation in (133c) of

the simple middle-verb sentence of (132d), which also indicates the morphological structure of *easily*.

We can contrast these middle infinitives with the would-be-agentive participation of infinitives dependent on predicative-adjective clauses with experiencer subjects such as that in (134a), as represented in (134b–c), respectively for the shorter and longer versions.

(134)   a.   Wilfred is eager (for her) to leave/be wise/be accepted

b.

{P/{N.P}}

{ {abs}}   {N.P}

{N:P}

{P;N/{src{{src}}}{loc{gol}/{P;N}}}

{ {src{{src}}}{abs}}   { {loc{gol}}/{P;N}}

{P;N/{src{abs}}}

{ {src{abs}}}

{N}

Wilfred   *is   eager   to   leave*

c.

{P/{N.P}}

{ {abs}}   {N.P}

{N:P}

{P;N/{src{{src}}}{loc{gol}/{P;N}}}

{ {src{{src}}}}   { {abs}}   { {loc{gol}}/{P;N}}

{N}   {P;N}

{ {{gol}}\{P;N}}   {P;N/{src{abs}}}

{N_i}   { {src{abs}}}

{N_i}

Wilfred   *is   eager   for   her   to   leave*
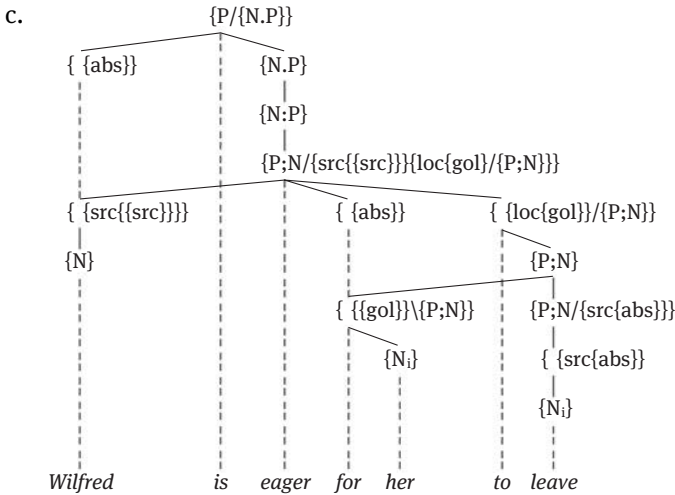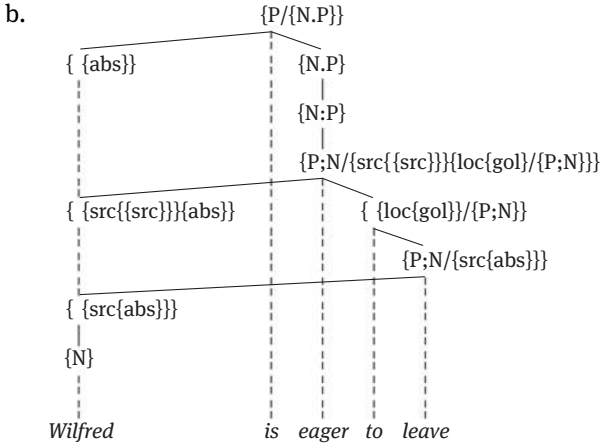
Here the crucial valencies are associated with an (opaque) verbal base for the adjective, following the pattern set by the discussions in Chapters 21 & 22. A more transparent (though abbreviated), verbal base is provided in (II.62a).

(II.62) a.


```
                        {P/{abs}{P.N}}
            ┌──────────────┴
      { {abs}}    ┊        {P.N}
         │        ┊          │
       {Nᵢ}       ┊     {P:N{state}/{abs}}
         ┊        ┊          │
         ┊        ┊    {P;N/{src}{src{loc{gol}}}}
         ┊        ┊       ┌────┴
         ┊        ┊    { {src}} .... { {src{loc}}}
         ┊        ┊       │            │
         ┊        ┊     {Nᵢ}          {N}
         ┊        ┊       ┊            ┊
       that trip  was  frightening
```
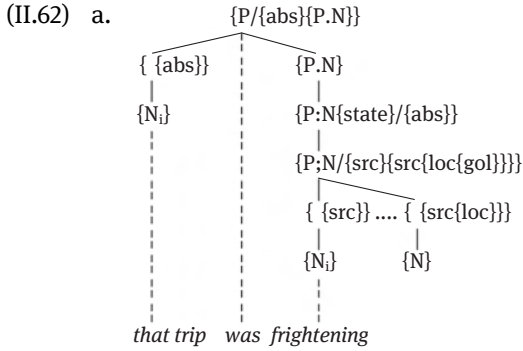
Verbs that show similar properties to adjectives such as *eager* are *desire* and *long (for)*. Compare with the construction of these last verbs, and with the agent-verbs that govern infinitives in (120), the similar involvement of the main clause subject in the coming about of the scene signified by the infinitive constructions in (134), which do not even necessarily have an agentive source participant.

(120) a. I tried to leave   {src{abs}} – {src{abs}}
     b. I tried to be wise   {src{abs}} – {src{loc}}
     c. I tried to be accepted   {src{abs}} – {abs}

Expect also allows a variety of infinitive types, with source subjects or not. But (120) and (134) differ from it in implying some 'willingness' or even 'cooperation' of the main verb subject in the event signified by the infinitive, even if the functor of the infinitive subject is passive, as in (120c) or *Wilfred longs/is eager to be accepted*.

Infinitives can also serve as circumstantials of copula + predicative-adjectival structures. Consider (135a), where we have a couple of (bracketed) alternative circumstantials, the representation of one of which is abbreviated in (135b).

(135) a. Bill is beautiful (to look at/to listen to)

b.

```
                    {P/{abs}{N.P}}
        ┌───────────────┴──────────┐
   { {abs}} ┊              {N.P}
      │                ┌────┴──────────┐
    {Nᵢ}            {N.P}      { {loc}/{P;N}\{N.P}}}
                      │                │
                    {N:P}          {P;N/{src}}
                      │                │
                    {N;P}      {P;N/{src{{src}}}{{gol}}}
                                   ┌───┴────┐
                              { {src}}  { {{gol}}}
                                   │        │
                                 {N}      {Nᵢ}


    Bill        is   beautiful  to   look      at
```
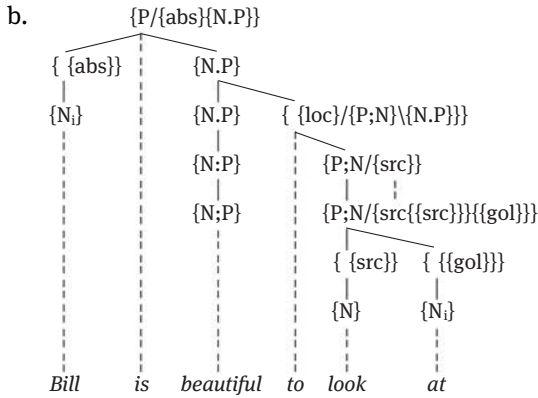
As with many other circumstantials, the infinitive functor is again locative.

The final instance of major infinitive roles we'll look at here is that of a relative construction, illustrated by (136).

(136) She is the woman to do it/to watch/to be sent

In considering the structure of such as (136) it may help to recall a finite relative clause such as (I.199a), which incorporates the relevant nominal features for a representation such as (137) for the first alternative in (136).

(I.199) a.

```
        {N{def}}
           │
          {N}
     ┌─────┴──────────────┐
  {Nᵢ/{src}}       {N/{P//{Nᵢ}}\{N/{src}}}
      │              ┌───────┴──────────────┐
  { {src}}                                 {P}
      │                          ┌──────────┴─────────┐
    {N}                      { {abs}}      {P;N/{src{loc}}{abs}}
      │                          │                    │
    {N;P}                    { {src{loc}}}        { {abs}}
                                 │                    │
                               {N}                {Nᵢ{def}}


    the  pipe          that   Bill          adores
```

(137)
```
                        {P/{abs}{abs}}
        { {abs}}    {  { {abs}}
          |              |
         {N}         {N{def}}
                          |
                         {N}
                          |
                     {N_i/{src}}   { {loc{gol}}/{P;N}\{N}}
                              { {src}}   {P;N/{abs}{src}}
                                 |
                                {N}      { {src}} { {abs}}
                                 |          |        |
                               {N;P}      {N_i}     {N}

      she      is     the   woman    to    do       it
```
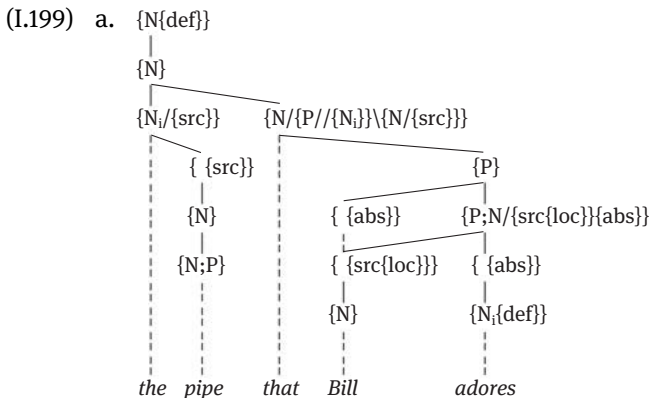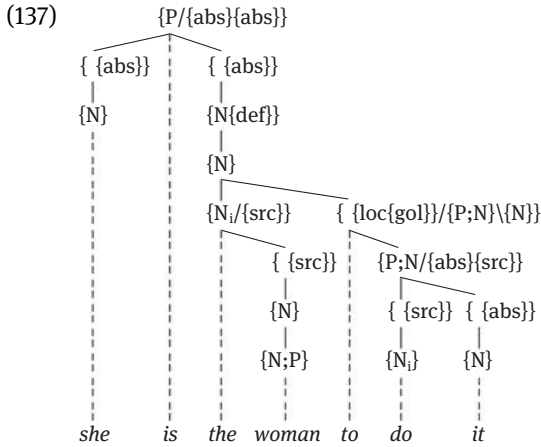
The {loc{gol}} infinitive functor is future-oriented and not necessarily to be realized; and it is thus, unlike the finite relative in (I.199a), not assumed to be factual.

Factuality is normally expected to be associated with attributives, including finite relatives; otherwise their role in identification is undermined, unless the intention is indeed mis-identification. Non-restrictive relatives are usually assumed to be factual, but may consist merely of a comment on the content of a phrase, as in (138).

(138)   The man who came yesterday, whom I didn't see/which is what you asked about, will phone tomorrow

And in general factuality can be withdrawn or supported by modality or tense/ aspect. Compare (128a), where the progressive infinitive has its factuality thereby strengthened, with the sentence with modal main clause in (139).

(128)   a.   For Bill to be living with Gwen is disgraceful/I deplore

(139)   It would be disgraceful for Bill to live with Gwen

Such considerations also apply to other types of subordinate – as emerged from our look at factivity in finite and gerundive subordinates in Chapters 27–38.

We began this chapter with observing the existence of both 'bare' and *to*-infinitives. We should not leave this area without acknowledging the variation associated with such verbals as *have*, *dare*, and *need*. The variations in (140) are familiar.

(140) a. Have you/Do you have a brother?
  b. Dare he/Does he dare to leave?

In (140a) the form of the minimal locative-subject verbal, which otherwise functions as both a grammatical and lexical periphrasis (*He had left/He had a walk*), is thus unsurprisingly hesitant about its main verb status, except when 'modal' or 'possessive' (*Do you have to leave/a garden?*). In (140b), on the other hand, a verbal that originated as a 'preterite-present' along with most of the present-day modals, hesitates about sharing their syntax and (non-)morphology rather than those of a straightforward verb, given that it does not share the semantics of the modals: its 'modal-like' manifestation is a relic. *Ought*, on yet another hand, is not a preterite present and commonly takes the *to*-infinite, but notionally belongs with the modals and inverts like them, as well as bearing the negative suffix (*oughtn't I (to) wait?*) What is initially of most interest here is the alternation between *to* and no-*to*.

At first glance, the *need* of (141) is similar to *dare*, and the absence of *to* is much more familiar in both cases with 'affective' contexts, with *He dares/needs leave* being recessive.

(141) Does he need to/Need he leave?

But its situation is rather more complex. Firstly, as we have seen, *need* plays a role in modal semantics and syntax that is particularly evident in a pair of structures offered in Chapter 15.

There it is observed, in the first place, that though other operatives are associated with a {P} subjoined to the existential {P}, modal operatives introduce a {P} superior to the existential, positive or negative, eventuative or not. This is more simply illustrated with the preliminary representations in Chapter 15 than with the fuller expansions suggested in Chapter 36. *Mustn't* in (I.172a) illustrates what seems to be the appropriate structure for an eventuative modal, but the modal *needn't* in (172b) involves subordination of the modal construction to a negative existential:

(I.172) a.

b.

$\{P/\{P\}\{loc\{src\}/\{N\{int,e\}\}\}\}$

$\{\ \{abs\}\}$ $\{P\{\text{MODAL}::nec\}/\{P;N\}\{loc\{gol\}/\{N\{e\}\}\}\}\ldots\ldots\{\ \{loc\{src\}\}\}$

$\{\ \{abs\}\}$ $\{\ \{loc\{gol\}\}\}$ $\{P;N/\{src\{abs\}\}\}$ $\{N\{int,e\}\}$

$\{\ \{src\{abs\}\}\}$ $\{N\{int,e\}\}$

$\{N\}$

Dolly   *needn't*   *leave*
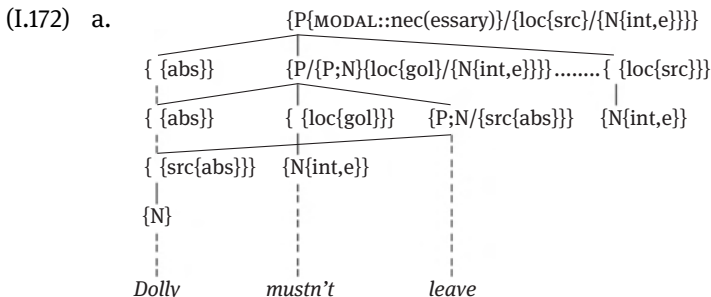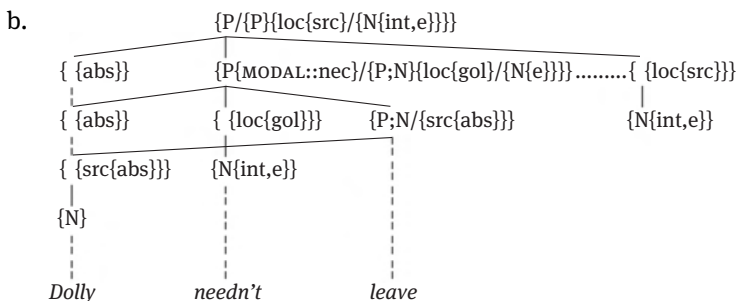
The relative scopes of the modal and simple existential are reversed between the two lexical representations. And, unlike with *dare*, there is obviously notional content shared between them, whereas the behaviour of *dare* is that of an isolated residual.

Nevertheless, since the variability of *need* might be taken as a sign of 'non-core' status, the verbal was not included in Table XV expressing the basic contrasts among the core modals.

Table XV: Core-modal contrasts

	Internal	External
Strong	volition ← Experiencer → requirement *will* ↗↘ prediction	↗ *must* necessity
	Epistemic	
Weak	potentiality *can* ↗↘ ability ← Experiencer → permission	possibility ↘ *may*

But where would *need* fit into this (perhaps deceptively) symmetrical pattern, which already ignores the complexity of the behaviour of *can* and *shall*?

Need shares with these other verbals the experiencer/epistemic ambivalence.

(142) a. Need she go somewhere else?

       b. Need it have happened?

And notionally it belongs with the strong division in Table XV, as suggested by the relationship between (I.172a) and (I.172b). And there, though there is an internal element with *need*, it is associated with a condition from the outside, and its variation between operative vs. finite verb status is associated with whether or not there are affective contexts constituted by the speaker's negation or questioning of the 'need'.

I suggest, then, an intermediate position on the internal/external dimension, as in the extension in Table XVI.

Table XVI: Core-modal contrasts

	Internal		External
	volition ←— Experiencer —→ requirement		
Strong	*will* ⟨	*need*	*must* ⟩
	prediction		necessity
		Epistemic	
	potentiality		possibility
Weak	*can* ⟨		*may* ⟩
	ability ←— Experiencer —→ permission		
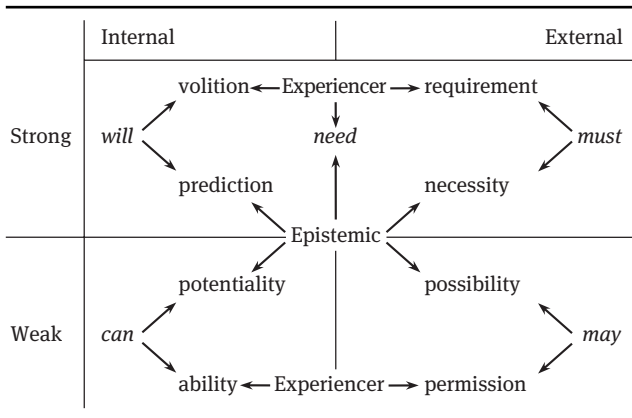
Perhaps this ambivalent position is associated with the variability between operative and verb status in this instance.

However, there are further complications, apart from the observation that operative *need* shares with *dare* this predilection for 'affective' contexts rather than appearing in a simple indicative clause: ?**They need/dare go* – if we ignore in the latter case such idioms as *I dare say*. The form *need*, in particular, appears in other idiosyncratic contexts, where even its verbality may be in question. This is not surprising, since of course, there is also a regular noun *need* as well as the transitive verb of *I need a screwdriver* that is in turn the etymological source of the infinitive-taking intermittent operative. However, the use of *have*, particularly the form *had*, is even more varied and idiosyncratic (and its nominal usage is in idioms – *the haves and have nots*).

Some of this variety of usage of the forms *need* and *have* is illustrated in (143a–b), and a sample of other notionally modal-like sequences is given in (143c).

(143) a. They needs must leave/They need not leave/They don't need to leave
       b. They had/'d need (to) be careful
       c. They/He had/would/'d better leave/They/He better leave

All of the post subject sequences, except the main verb in the last of (143a), do or can terminate in a 'bare' infinitive, and each of those sequences forms a notional unit. And it may be that the *had* sequences in (143c) originated in a false expansion of a contracted *would – they'd*; at any rate the *had* is a 'preterite subjunctive', conditional on something in the context. Whatever the status in various contexts of *better/rather/needs* (adverb?) and *need(s)* (noun? verb?), these sequences are lexical units, and seem, in some instances at least, to form one element in a **modal compound**.

We might very tentatively represent the first sentence in (143a) and that in (143b) as in the abbreviated (144a) and (144b), respectively, where the modals are both necessitatives, and particularly the latter, non-epistemic.

(144) a.

b.
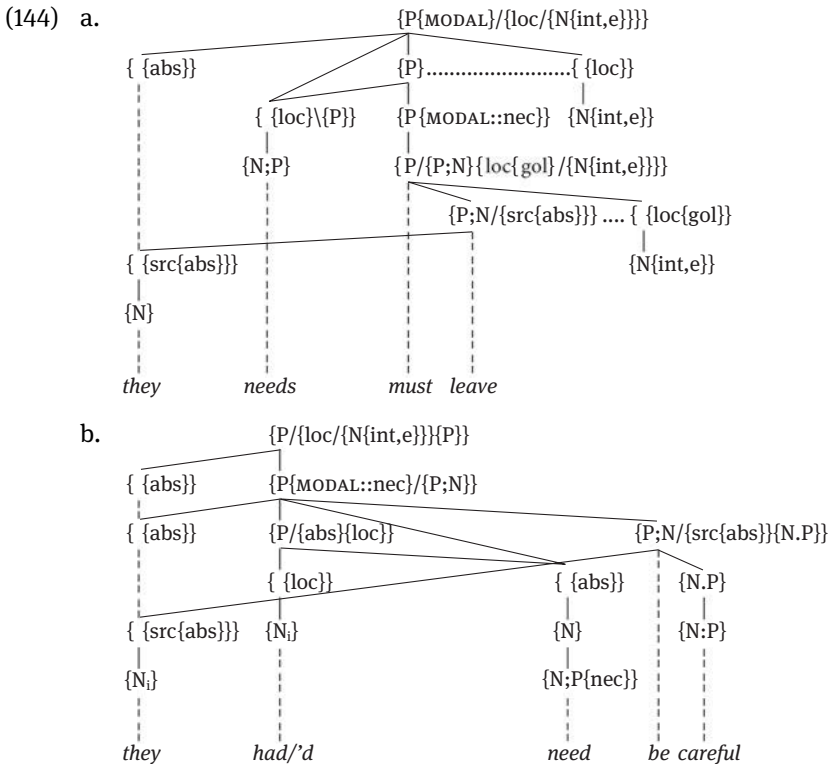
I have treated *needs* in (144a) as a ultimately deverbal noun-based adverb that modifies, and indeed intensifies, the modal operative component of the compound, whereas in (144b), though I omit any internal structure of the adjective and noun, *need* is interpreted as an absolute deverbal noun that satisfies the preceding *(ha)d*, but it fails to undergo subject formation and the lowest {P} has a free absolutive in subject position, while the locative is satisfied internally. The locative of *(ha)d* is coreferential with the subject of the compound – unless this is another blend, not implausible given the complex modal structure. Concerning (144a) again: is the final segment in *needs* a compositional affix, like the *s* in *yachtsman*?

As compounds, the syntax of these sequences, internal and/or external, does not conform to the normal generalizations concerning syntax; they are such compact binary idiomatizations as we expect of well-established compounds, which are the most difficult to penetrate, given the combination of notional and distributional oddity. It might be useful to experiment with the expanded modal structures in Chapter 36.

But what further support is there for such an analysis? Does (143a) involve simply an idiom consisting of a modal preceded by an intensifier, a very specific specifier. And the compound status of (143b) is also uncertain. It would have to have, like *not*, an affixal alternative, to allow for the *'d* variant, whether it is a weakening of the form *had* or *would*. The (verbal +) adverb + verb sequences here are at least idioms, lexical units, but the possible compound status of any of (143c) is perhaps even more tenuous than those represented in (144); and in *They/He better go* the *better* element seems to involve simply a distributionally defective modal.

And so, pursuit of the syntax of infinitives has brought us back to the possible role of compounds, and at another indication of the centrality of the lexicon in grammar – and how little it is understood or agreed upon. A rather different kind of potential compound is instantiated by (145).

(145)   I can't seem to finish it

The commentary offers some speculations concerning (145) and other unusual sequences, as well as 'double modals'.

Here we end our look at infinitives, and indeed non-finite verbals. In one respect, infinitives are closer to finite verbs than the derived verbs that are associated with participles and gerunds. But finite verbs require their subject to be expressed overtly, except where it is identifiable contextually, as with imperatives or some non-initial conjuncts. Infinitive structures lack subjects that are purely part of the infinitive clause; but they also prefer overt expression of their

'subjects' unless these are non-specific: hence their participation in 'raising' and 'control' and the *for … to* construct. Whereas, outside periphrases, the 'subjects' of gerunds and participles, along with other participants, are often non-overt, though they also often participate in coreferentiality. The relationality of verbs is manifested in a variety of ways, but not all verb forms are equal in the extent of it or of overt manifestation of it.

Fit the 3rd: **Placement, Alt-Placement, and Sub-Placement**

Chapter 40
The Syntax of Determiners

determiners and attributives – pre- and post-nominal attributives – the relative placements of prenominals – coordinate and compound attributives – emotive and emphatic attributives – post-nominals – determiner classes – adjective quantifiers – universal quantifiers and 'floating' – placement in relatives – 'parasitic gaps'

Thus far, verbal domains have dominated this Part of the discussion, devoted to syntax. This is not surprising, in view of the relationality of verbals, including 'main' verbs, as reflected in their valencies, contrasted with the typical leaf status of nouns, pronouns and names. Nouns can be attributive (*stone coffins*), but via conversion, of course. And all three of the leafy categories can be apposed (*that man, the culprit*; *your benefactors, us*; *our lawyer, Dunworthy*), or apposed to (*we Spartans*; *Dunworthy the lawyer*), but attribution, and the apposition relation of all three example-types, are mediated by a determiner, as has been acknowledged here. Determiners, as functional, are relational, and, particularly in Part I, we looked at some of the structures headed by different subtypes of determiner. But there is much more to say about their syntax –and, as always much that will not be. Determiners are, along with the partitive {src} devoted to them, the basic relational element now that we have moved, at the major functor/determiner boundary, from predicational syntax to entitative structures.

In the prelude to this Part we reviewed some of the refinements made in Chapters 23 & 24 to the redundancies allowing for the basic lexical structures that we can associate with determiner phrases. These fall into the sets in (II.95) and (II.96) (illustrated below), which build lexical structures headed by determiners.

(II.95) a. *DETERMINERIZATION*

$$\{N;P\} \quad \Rightarrow \quad \begin{array}{c} \{N\} \\ | \\ \{N;P\} \end{array}$$

b. *PARTIAL DETERMINERIZATION*

$$\{P:N\} \quad \Rightarrow \quad \begin{array}{c} \{P.N\} \\ | \\ \{P:N\} \end{array}$$

c. *DEFINITE DETERMINERIZATION*

$$\{<<N>.<<P>>>\} \quad \Leftrightarrow \quad \begin{array}{c} \{N\{def<\{pl>\}\} \\ | \\ \{<<N>.<<P>>>\} \end{array}$$

Let's recall firstly the contents of the first set, as given above. The (a) redundancy acknowledges that nouns depend on a determiner, the determiner that denote the entities associated with the noun; (b) does a similar task for adjectives in adding a governing comparator, which prototypically is conceived of as a 'property' rather than a 'discrete entity'; (c) needs a bit of dissection, in that it conflates the exclusive range of categories which can be subjoined in the lexicon to specifically definite determiners.

The angles around the plural beside **def** simply allows for optionality in some of these instances; the outer pair of angles on the lower level allows for a major category to be absent, i.e. the input is a name or pronoun; if just the lower **N** is present then the input, apart from indefinite or specific{N/{src}} (but not, of course, non-definites), is the denotational {N} of a {N;P}; and the redundancy makes the latter generic, as exemplified by *man* or *mud*; if both **N** and **P** are present then we are dealing with a comparator (as in generic *old people*); if only **P** is present on the left then it acquires by the redundancy a finiteness determiner, which cannot be plural: hence the pairs of coindexed angles whose interpretation is now incorporated in (II.95c). Contentives (as not simple combinations) are also not eligible for (II.95c).

The output of the last of these redundancies, (II.95c), specifies a possible word type that is based on another word-type. But the product of one-way (II.95a) is obligatory, and does not introduce a new part of speech; and it is used independently only in metalinguistic discourse unless it undergoes a further redundancy: if a particular noun is under discussion, it can be represented categorially simply as in (II.95a). The same goes for the output of (II.95b).

(II.96) extends further the range of lexical structures to be allowed for in which {N} plays a crucial role, introducing partitive and definite {N}s as head of the lexical structure.

(II.96)   a.   *SUPER-DETERMINERIZATION*
         PARTITIVE

                              {N/{src}}
                                 |
                              { {src}}
                                 |
        {N}   ⇔   {N}
         | |
        {N;P}   {N;P}

       b.   *GENERIC*

                              {N{def}}
                                 |
        {N}   ⇔   {N}
         | |
        {N;P}   {N;P}
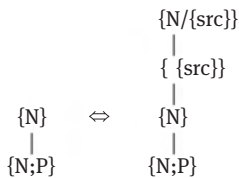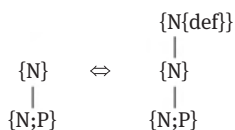
(II.96) build on the output of (II.95a).

All of the {N} heads of these lexical representations can satisfy the valency of a functor. This allows them to participate in verbal structures. But, via subjunction to a partitive source, nouns can also satisfy the valency of an independent indefinite or non-definite partitive determiner, thus extending the lexical structures into determiner phrases. The former is illustrated by the plural in (I.90a) from Chapter 8, where the optional tertiary singular feature introduces distributionality, while the latter (non-definite) lacks **spec**(ific), giving *any worker(s)*.

(I.90) a. {N{spec,pl}/{src}}

                    { {src}}
                      |
                   {N{pl<{sg}>}}
                      |
               {N;P}

            some   workers

(89) a. {N{def}}
             |
          {N{spec,sg}/{src}//{*pl*}}}

                    { {src}}
                      |
                   {N{*pl*}}
                      |
               {N;P{CNT}}

          the/that goat

      b. {N{def}}
             |
          {N{spec,pl}/{src}}

                    { {src}}
                      |
                   {N{pl}}
                      |
               {N;P{CNT}}

          the/those goats
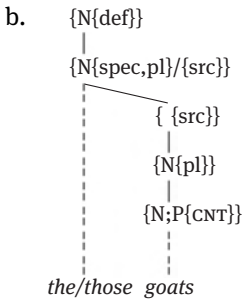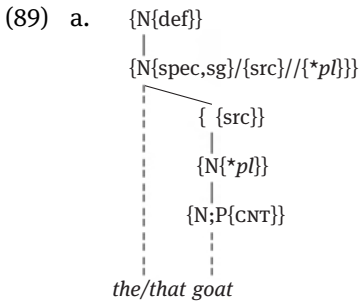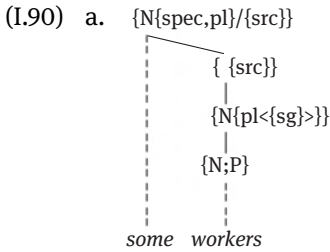
(I.89a–b) add definiteness above respectively singular and plural indefinites. Recall that count nouns are plural unless a governing determiner overrules this.

If a further partitive governs a definite, the dependent {src} functor of the upper partitive {N} is overt.

(I.90)   b.   {N{spec,pl}/{src}}
```
                 { {src}}
                         {N{def}}
                            |
                         {N{spec,pl}/{src}}
                                    { {src}}
                                       |
                                    {N{pl}}
                                       |
                                    {N;P}

              some    of    the  workers
```
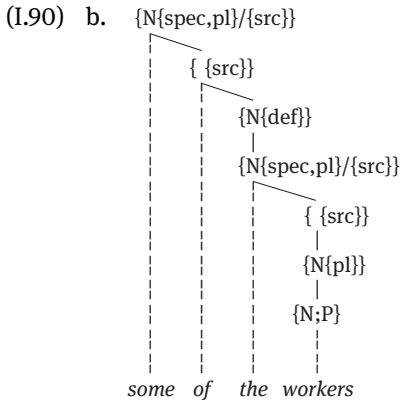
So too non-definites (non-specifics) must have an overt functor if governing a definite, as in (146b) – compare the non-definite in (146a), where the small zero, {0}, represents non-specificity.

(146)   a.   {N{0}/{src}}
```
                    { {src}}
                       |
                    {N{pl}}
                       |
                    {N;P}

              any    workers
```

        b.   {N{0}/{src}}
```
                 { {src}}
                         {N{def}}
                            |
                         {N{spec}/{src}}
                                    { {src}}
                                       |
                                    {N{pl}}
                                       |
                                    {N;P}

              any   of   the  workers
```
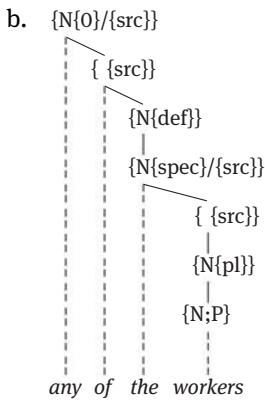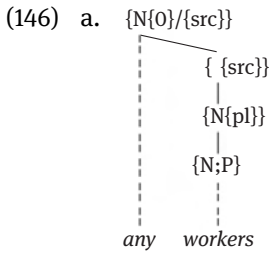
{N{0}} in (146b) is ambiguous between singular and plural, given that we have a count noun.

The preceding redundancies and representations are the basis for most determiner phrases. However, perhaps the most striking extension of determiner phrases depends on appeal to attributives.

Attributivization converts a range of categories to attributives, and was formulated as (I.93d–e), again from Chapter 8.

(I.93) d. *PRENOMINAL ATTRIBUTIVIZATION*

$$\{N/\{src\}\}$$
$$|$$
$$\{category\} \quad \Leftrightarrow \quad \{category\}$$

e. *POSTNOMINAL ATTRIBUTIVIZATION*
$$\{category\} \quad \Leftrightarrow \quad \{category\backslash\{N/\{src\}\}\}$$

The reader will recall that there are these two attributivization formulations, serving lexical structure. The latter in (I.93e), which follows a non-attributive noun, applies to categories with a following dependent in the structure that is being put together in the interface; such categories are rejected for (I.93d). Prenominal attributives in particular can be directly recursive, and introduce a familiar problem involving relative placement of types of attributive, one that involves interaction between the inherent semantics of different attributives as well as the nature of the context.

The bases of prenominal attributives include nouns (*stone wall*) and overtly non-finite verbs (*deposed dictator*, *drifting snow*), but the prototypical prenominal attributive is an adjective. An attributive adjective involves not (I.93d) but simply the addition of '/{src}' to the comparator, giving (147a).

(147) a. {P.N/{src}}
$$|$$
{P:N}

b. *PRENOMINAL ATTRIBUTIVIZATION*

$$\{P.N/\{src\}\}$$
$$|$$
$$\{simple\ category\} \quad \Leftrightarrow \quad \{simple\ category\}$$

And, given the typicality of adjectival pronominal attributives, I shall reformulate such general attributivization as in (147b), where in addition a 'simple (non-complemented) category' is invoked. This output in (147b) also clearly differentiates attributives ({P.N/{src}}) from determiners (N</{src}>). A prenominal attributive category may also be specified (*very long train*) and/or internally complex (compound), but must lack a following syntactic dependent. Such latter complex structures (*in*

a red hat) can be post-nominal, as attributives. I want now to try to extend what we have found so far concerning determiner phrases, including aspects not recalled here. We are particularly interested in their syntax, of course, but also the lexical bases for this, as usual.

It is not too uncommon to come upon strings of half-a-dozen attributives between the determiner root and the ultimate noun leaf of a determiner phrase, with most of these attributives being adjective-based. Prenominal attributives form a hierarchy based on inclusivity, with the leaf noun being the most inclusive. However, placement within the hierarchy also depends on the notional categorization of the attributive.

Prototypically the placement of prenominal attributives depends on their relative similarity to the root or a leaf of the determiner phrase. The prototypical leaf, {N/{N;P}}, is stable and discrete, denotational and classificatory; and the determiner root {N/} is particular and individuative, referential. Thus, such a sequence of attributives as in (148) is typical, other things (particularly contextual) being equal, such that the notional kinship to determiner diminishes as we move to the right in the sequence.

(148) a. the first two happy Scottish pensioners (he encountered)

   b. {N{def}}
   |
   {N/{src}}
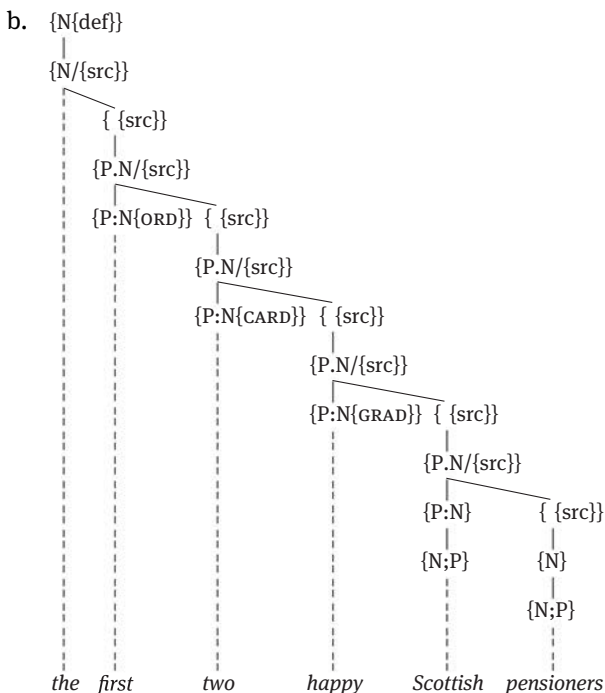
The ORD(inal) numeral is of direct benefit to referential identification, and even the CARD(inal) is close to partitive determiners such as *a(n)* and *some*. At the other end, the noun-based adjective *Scottish* is classificatory, denotational, noun-like. In the middle is a prototypical descriptive adjective, which is typically gradient. There is a tendency for physical descriptors of measure to appear in the sequence {SIZE}+{LENGTH}+{HEIGHT}+. There are, of course, further complications, however – though not unexpected, given the preceding remarks.

Thus, attributive nouns gravitate to the right of the prenominal sequence, as expected, and attributive verbs to their left, given that their relationality predominates over any ability to denote, though, as well as transitivity, again awareness of context may disrupt such general patterns. Even among simple adjective-based attributives there are further refinements to be made, apart from those due to sensitivity to context.

Derived descriptive adjectives (say *good-looking, feverish*) are likely to follow underived (*tall, pale*). But also, more strikingly, descriptive adjectives may be coordinated rather than independently attributive, as in (149a), which can, I suggest, be represented as in (149b), following the analysis of coordination suggested in Chapter 17 in Part I.

(149) a. a large, good-looking blonde boy

b. {N{spec}/{src}}

{ {src}}

{P.N}

{P.N}   { \{P.N/{P.N}}}

{P:N{SIZE}}   {P.N/{src}}

{P:N}   { {src}}

{P;N{n}} {P.N/{src}}

{P:N}   {P;N}   {N;P{COLOUR}} { {src}}

{N}

{N;P}

a   large   good   looking   blonde   boy
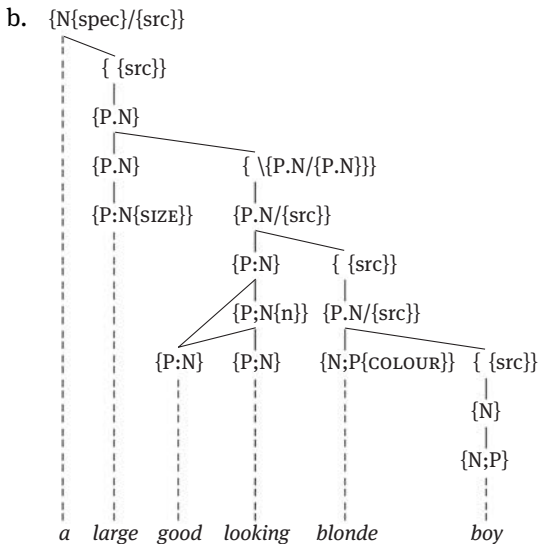
The first adjective is coordinated with a compound adjective, which, as a single uncomplemented word, does not count as syntactically complex. (149) also exem-

plifies that colour adjectives like the last pre-nominal attributive here are commonly late, given the ambivalent status of colour terms as nominal or adjectival.

But it is, indeed, often coordination that extends the series of attributives, as in the quotation by Ian Jack in the *London Review of Books* (38 [2016], 11: 33) of a comment of Isaiah Berlin's.

> 'Isaiah Berlin decided David Astor was "a neurotic, muddled, complicated, politically irresponsible, unhappy adventurer, permanently resentful of somebody or something ..." '

Here even the postnominal, on whose verbal base depends a complement, is extended by (disjunctive) coordination, and the last prenominal adjective looks like a back-formation from the manner adverb modifying the adventuring, given its particular placement.

Similarly, as well as by simple listing, as with (most) prenominals in this quotation, coordination may be made overt by the presence of *and*, as in (150a), and absence of and presence of *and* may, as elsewhere, be combined, as in (150b).

(150)   a.   this great and splendid city
         b.   a long, boring, and muddled resignation speech

A prenominal coordination may also be marked as alternative (151a) or adversative (151b).

(151)   a.   visual, auditory, or gustatory sensations
         b.   an epoch-making, but flawed contribution

(151a) also reminds us that the determiner head of the phrase may not always be overt.

The quotation from Isaiah Berlin illustrates some other factors operative in placement: there are the build up to the most complex expression (*politically irresponsible*, with a premodifying adverb) and the emphasis accorded to *unhappy* by its finality in the prenominal sequence. Such coordinated sequences may overrule one's normal expectations of the 'unmarked' sequence of the attributives concerned. And, incidentally, we have an example here of the postnominal position of the complex attributive – *somebody or something* being coreferential with the incorporated 'object' of the verbal base of *resentful*. (There is too a possible clausal post-nominal in (148a). I shall return to postnominals below.)

However, we should also note, concerning prenominal attributives, other factors still in the determining of placement. Such is 'emotional weight'. This is noticeable when an emotionally-charged descriptive adjective, even if derived, precedes other descriptors, as in (152a):

(152) a.   a <u>delightful</u> small well-planned formal garden
       b.   the <u>American</u> disappointing contributor

(152a) also contains a compound attributive in *well-planned*, which is less 'classificatory', more evaluative, than *formal*; this compound-type, with non-syntactic word order was described in Chapter 30 of Part III. When even a classificatory adjective is contrastive, it may immediately follow the determiner, as in (152b), as well as being phonologically marked as such.

Postnominal position is typically associated with attributives that involve complementation, as with *A man famous for his wit*, where *famous for his wit* is apparently not a complement of the preceding attributee, but is itself complex. Recall too the postnominal *(pensioners) he encountered* in (148a) above, where the attributee is the 'object' of *encountered*. There may also be an extended sequence of postnominal attributives, but the placement of such attributives relative to each other does not exhibit the same notional complexities as with prenominal, but shows other factors, particularly when the leaf noun is verb-based, as in the by-now-familiar (II.32) 'student from Italy' (no prize for the best limerick – even if successful critically, or even done very wittily).

(II.32)   {N/{src}}
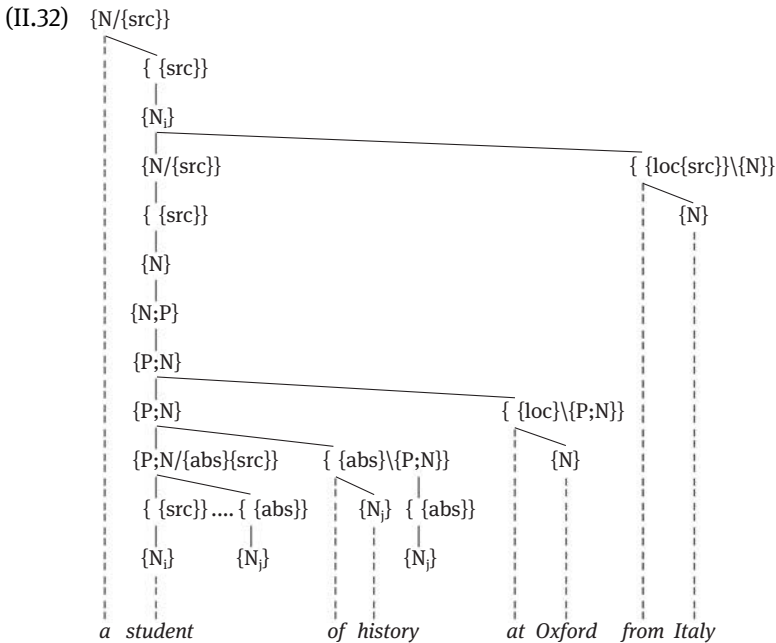
Here the hierarchy is determined by the functions of the attributives: the first (*of history*) is coreferential with a participant of the verbal base; the second (*at Oxford*) is coreferential with a circumstantial of the verb; and the last (*from Italy*) is a simple attributive of the noun. And this ensures no tangling. Prenominally, the reverse order is favoured: *an Italian Oxford history student*. The attributives are all classificatory and are ordered with respect to the noun attributee in terms of increasing generality, in this context. And, as we've also seen, various mixtures of pre- and post- are current, within these parameters. As in (II.32), I retain the {N/{src}} specification, rather than {P:N/{src}}, for simple postnominals of the noun, given that postnominal adjectives are by no means privileged.

The disjointedness of (I.98), updated as (153), resulting from the presence of unlicensed 'tangling', contrasts with (II.32) above:

(153)   {N{sg}/{src}}

{ {src}}

{N}

{N/{src}}   { {loc{src}}\{N/{src}}}

{ {src}}   {N}

{N$_i$}

{N;P}

{P;N}

{P;N}   { {loc}\{P;N}}

{P;N/{...}}   {N}   { {abs}\{P;N}}

{ {src}} .... { {abs}}   {N$_j$}

{N$_i$}   {N$_j$}

a   student   at Oxford   from Italy of   history
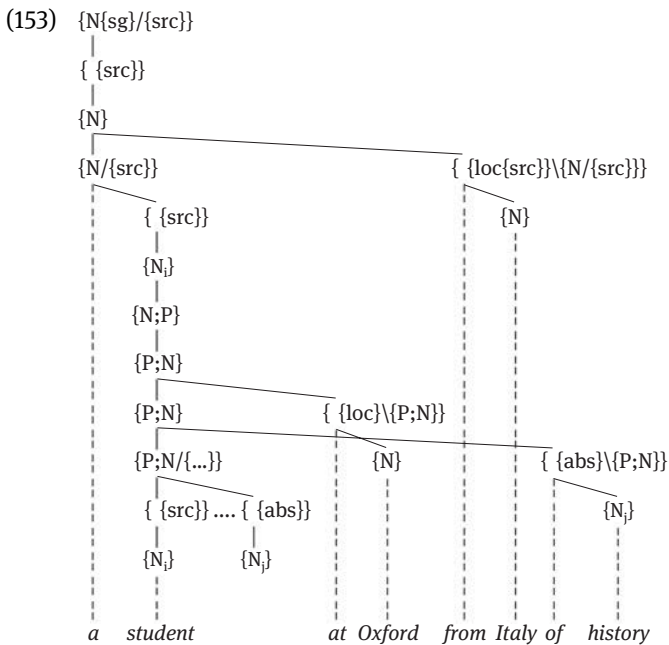
The modifier co-indexed with the absolute participant of the verbal base is, anomalously, furthest from the governing noun.

Such hierarchies as (II.32) create trees that are characterized by a type of centre-embedding: the hierarchically highest attributive is increasingly remote from what it modifies as the number of intervening attributives increases; and post-nominal attributives are typically more complex than prenominal, given that that is why they are postposed to the noun. The same hierarchization arises

where all of the postnominals are attributives like *from Italy*, rather than attributives coreferential with verbal participants or circumstantials: placement reflects the hierarchy of subjunctions where the lowest attributive is also the closest.

But sequences of postnominal attributives are nevertheless, given their typical complexity and centre-embedding, less likely to be as extended as those consisting of prenominal attributives. For these reasons, including particularly ease of parsing, less complex attributives and the less incidental typically come earlier, as in *the girl with red hair you saw who was driving that old car with the purple top*, represented in the two parts of (154).

(154) a. {N{def}}

the girl   with red hair   that you-saw   who   was driving that old   car

b.

```
      { {abs}}
         |
     {N{def}}
         |
     {N/{src}}
         |
      { {src}}
         |
       {N}
        /————————————
 {N/{src}}          { {loc}\{N{src}}}
    /——                /——
   { {src}}          {N{def}}
      |                 |
  {P.N/{src}}        {N/{src}}
    /——                /——
 {P:N} { {src}}        { {src}}
         |               |
        {N}          {P.N/{src}}
         |              /——
       {N;P}          {P:N}  { {src}}
                                |
                               {N}
                                |
                              {N;P}
```

...that   old   car   with   the   purple   top

For simplicity, as well as space limitations, both (154a) and (154b) ignore much of the structure intervening between the {N}s and other details. The final postnominal attributive, of course, is normally taken to be attributive to *car*, as shown in (154b), which has both pre- and postnominal attribution – though as a belated attribute of the student it has some attractions, despite the introduction of 'tangling' that would be involved. Overall, as presented, the structure has much centre-embedding but lacks 'tangling'.

I want to focus now on determiners and determiner-like attributives such as those initiating (148a).

(148) a.   the first two happy Scottish pensioners (he encountered)

Thus far we have distinguished at various points the types of determiner laid out more explicitly in Table XVII, which, while supplementing the referential hierarchy (I.91f) of Chapter 4, again ignores names, as not inherently functional, and genitive forms (*my* etc.), as covered elsewhere, and their derived pronouns (*mine* etc.).

(I.91) f. *REFERENTIALITY HIERARCHY*

{N{def}}	<	{N{spec}/{src}}	<	{N/{src}}	<	{N/{N;P}}	<	{N;P}
definite		indefinite		non-specific		bare		noun
		reference				*denotation*		*sense*

Table XVII: Determiners

	definite	**indefinite (specific)**	**nondefinite (non-spec)**	**negative**	
article	*the* {N{def}/{N}}	*a*(*n*) (sg) {N{sg, spec}}	*a*(*n*) (sg) {N{sg}}	*no* {N{neg}}	determiner
pronominal	*this*/*those* *that*/*those* {N{def}} | { {DEIXIS}}	*some* {N{spec}</{src}>}	*any* {N/{0}</{src}>}	*none* {N{neg}</{src}>}	
pronoun	*I*, *you*, (*s*)*he*, *it*, *they* {N{def}} | { {ego}} etc.	*someone* *something* {N/{src}} | { {src}} | { {GENDER}}	*anybody* *anything* {N} | { {GENDER}}	*nobody* *nothing* {N{neg}} | { {GENDER}}	pronoun

As concerns the contents of Table XVII, the two basic determiner types – simple determiner vs. pronoun – are distinguishable distributionally, in a rough way, by whether or not they are necessarily followed immediately by a noun or attributive (whatever their relation to the noun or attributive): the articles are necessarily 'transitive' in this respect in contrast with the (in)transitive pronominals, which are not necessarily so followed, but can occur alone or requiring a partitive (overt or not). However, *none*, unlike the other (in)transitive pronominals, cannot be immediately followed by a noun, which is reserved for the article *no*. Thus, the pronominal determiners as a whole can occur without an overt dependent, they can be intransitive, and simple deictic pronouns (*I*, *they*, etc.) are normally without overt dependent.

In order to be partitive the definite determiners must have a subjoined {N/{src}}, as in {I.89a}, cited above. Indefinite, non-definite, and negative determiners themselves require a {src}-headed complement, and can be said to be quantitative (though I have much simplified negative quantitativity, for instance, by characterizing it as bearing the simple feature {neg}, as we shall return to). Table XVII lacks the other, 'universal', or double-negative, quantitative determiners: *every*

(article), *each* (singular pronominal determiner), *both* (dual pronominal determiner), *all* (non-singular pronominal determiner), and *everyone/everybody* and *everything* (pronouns, human and non-human).

And there are also to be recognized the adjectival quantifiers discussed in the Conclusion to Part III. These last may be both predicative and non-restrictive attributive, as in (III.130b) and (155).

(III.130)   b.   The absentees were (very) many

(155)   The many absentees regretted their action

(III.130b) suggested an adjectival status for such forms, consonant with the optionally preceding *very*. But this quantifier and the mass antonym, for instance, were represented there as in (III.130e–f), as a conversion to determiner.

(III.130)   e.

```
          {N/{src}}
           |
   {P.N{pl}}              { {src}}
      |                      |
{P:N{QUANT::pos}}        {N{def}}
      ¦                      |
      ¦                  {N/{src}}
      ¦                      |
      ¦                   { {src}}
      ¦                      |
      ¦                   {N{pl}}
      ¦                      |
      ¦                  {N;P{CNT}}
      ¦                      ¦
  (very) many           of  the  violins
```

f.

```
          {N/{src}}
           |
      {P.N}              { {src}}
        |                   |
{P:N{QUANT::pos}}        {N}
        ¦                   |
        ¦              {N;P{MASS}}
        ¦                   ¦
   (very) much            dirt
```
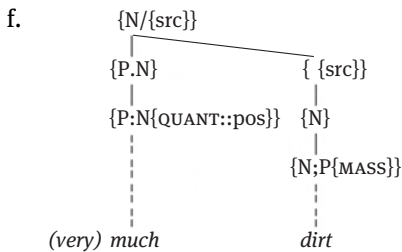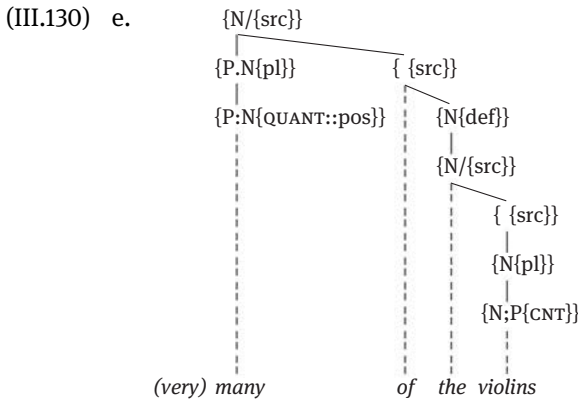
Here they show themselves as having been converted into pronominal determiners. *Many* and *much* differ as requiring a plural or a mass noun; and their antonymic quantity forms are *few* and *little*.

The lexical structure of such quantifiers was further deconstructed as (III.136), which, among other things, provides a localist interpretation of antonymy, so that the negative value in the present instance is interpreted as being close to the non-existence of the dimension involved, whereas *many* would be far from it.

(III.136)

```
          {N/{src}}
          ┌──────────────────────────────────────┐
      {P.N/{loc}}                            { {src}}
      ┌──────────────┐                           │
  {P:N{GRAD}}....{ {loc}}                       {N}
                      │                           │
                  {N{prox}}                   {N;P{CNT}}
                      │                           ┊
                  { {loc}}                        ┊
                      │                           ┊
            {N{QUANT::{{src}/{N{int,e}}}}}         ┊
       ┊                                          ┊
       ┊                                          ┊
      *few*                                    *violins*
```
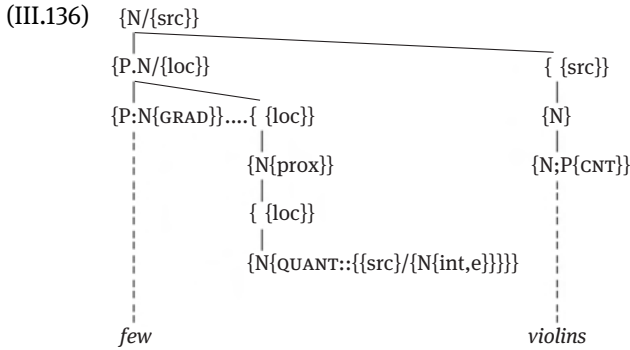
But I shall not pursue, repetitively, the further, localistic complexities associated with these forms discussed in that Conclusion.

Cardinal numerals are the non-gradient equivalents of these quantificational adjectives, but they also include a contrast simply between plural and singular rather than plural vs. mass; *one* rather than all the others. They do after all, as count forms, enable counting. But, as with the quantifiers, we have adjectival manifestations in *the five victims* and *the victims were five in number/in age* and *the number/age of the victims was five*, and pronominal determiner in *three of the victims who survived*, and *three little girls arrived*. As determiners they are indefinite. Along with the ordinal numerals, the cardinals are by principle rather than contingency uniquely not lexicalizable as a whole, even in terms of combinatorial regulations.

The ordinals are adjectives that are more or less overtly derived from the cardinals in present-day English. But the relation may be expressed by suppletion (with a loanword) with *second*, or by a mixture of suppletion and morphology in *first*, and morphologically elsewhere, distinctively (with 'frotting') in *third*, more generally by *-th* (*tenth, sixth*), sometimes with some modification of the base (*fifth, twelfth*). But the result of diachronic metathesis in the formation *third* is less transparent (but compare earlier *thrid(e)*; but earlier *fift*, also with a final plosive, is even more opaque.

First has a superlative suffix with the historical source of the base being what is now (except for golfers and sailors) obsolete *fore* 'in front', but also in *before*,

foreleg, *foremost*, etc.: *first* is the earliest (another superlative) in numerical ranking along various dimensions (such as time, status, etc.). The marked comparators (comparative and superlative) are overtly ordinal, and even the positive comparator is notionally ordinal. *The best* is *the first* in ranking with respect to some quality; cf. suppletive *worst*.

The ordinals from *third* upwards (in number) can be converted to nouns denoting fractions of a whole entity; but etymologically the fraction *half* is 'one of two sides of an entity'; and it shows synchronic idiosyncrasies – cf. *half a ton* vs. *(a) quarter of a ton*. The role of ordinals and even that of the cardinals in aiding identification, and thus their typical position at the front of sequences of attributives is notionally unsurprising. But the ordinals are typically preceded by a determiner, typically definite, as with superlatives, particularly.

Thus far in this Chapter I have been trying to re-focus us on determiners and their syntax, after a number of chapters concerned primarily with things verbal and contentive. I hope that the attempt has mainly steered between the 'clashing rocks' of repetitiveness and obscurity, as a springboard to considering some of the more complex aspects of determiners and their phrases. But I'll have to start here with a complication that we again have already looked at, the complex structure of quantifiers, and particularly universals.

Quantifiers, including cardinals and the articles *a*, *no*, and *every*, are assumed here to be associated with what I have called **argument existentials**. Universal quantifiers such as that in (156a) have been analysed, in Chapter 35, and as anticipated above, as double negations: they are determiners but realize a configuration involving two negative existentials, one of an argument or entity, the other of a proposition.

(156) a. All of the guests liked the dishes
      b. The guests all liked the dishes

Before we were concerned with their role in scope relations. What we're going to look at now is how the 'double-negative' analysis helps us to account for the 'displacement' of *all* that seems to have occurred in (156b), a phenomenon shared with the other universal quantifiers *each* and *both* – but not *every*, which, though 'double negative', is an article and not a pronominal determiner, as in Table XVII above, and so, like *a(n)*, *the*, and *no* has a 'fixed position' in a determiner phrase.

(33c) from Chapter 35 has a subject referring to a negated argument, or entity type, whose negative existential {P} is subordinated to the basic propositional existential (whose covert structure, indicated by the valency, is omitted), and whose absolutive {N} is co-indexed with (in this case) the subject of the sentence, where the negative is expounded.

(33) c.

{P/{loc/{N{int,e}}}}

{ {abs}}   {P/{{src}/{N{int,e}}}{abs/{Nᵢ}}}

{P;N/{src{abs}}} .... { {abs}}

{ {src{abs}}}   {Nᵢ}

{Nᵢ{sg}}

{ {human}}

nobody   *left*
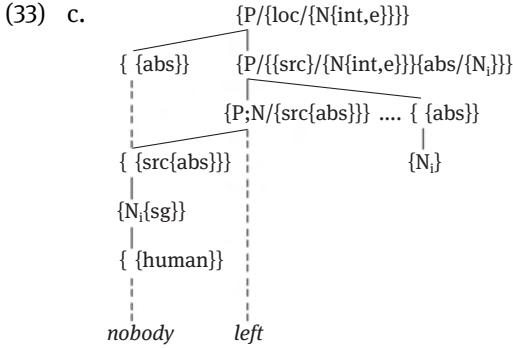
And in (33a) a lower propositional negation is present (whose covert structure is also omitted), and the resulting 'double-negative' configuration is reflected in the presence of a universal quantifier rather than a simple negative, again the co-indexed subject in this particular example.

(33) a.

{P/{loc/{N{int,e}}}}

{ {abs}}   {P/{{src}/{N{int,e}}}{abs/{Nᵢ}}}

{P/{{src}/{N{int,e}}}} ..... { {abs}}

{ {abs}}   {P;N/{src{abs}}}   {Nᵢ}

{ {src{abs}}}

{Nᵢ{sg}}

{ {human}}

everybody   *left*
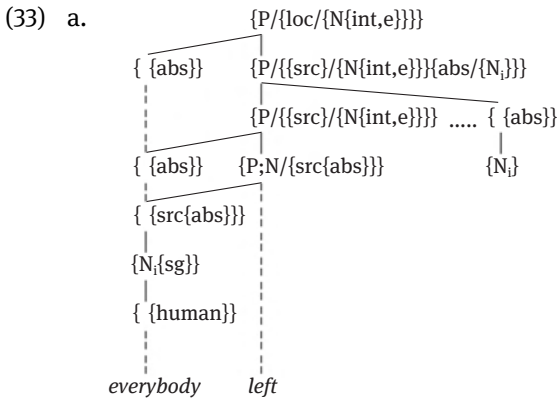
Universal quantifiers are associated with the lexical redundancy in (35b), which creates the lexical complex that must be satisfied in the syntax and which enables the displacement that we are about to look at.

(35) a.

{P/{loc/{N{int,e}}}{abs/{Nᵢ/{src}}}}
↓
{Nᵢ/{src}} ⇔ {Nᵢ/{src}}

b.

{P/{{src}/{N{int,e}}}{abs/{Nᵢ/{src}}}}
|
{P/{{src}/{N{int,e}}}}
↓
{Nᵢ/{src}} ⇔ {Nᵢ/{src}}
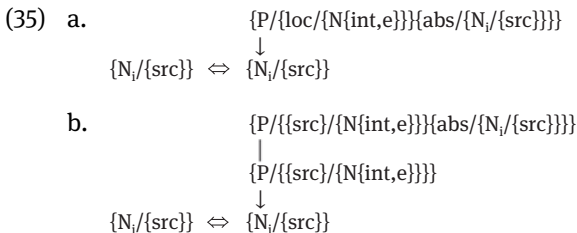
(35a), where the downward-pointing arrow indicates subordination, is associated with simple positive quantifiers such as *some*, while (33b) above requires a double-negative version thereof, as in (35b). The basic existential is attached above these configurations at the interface. As anticipated, we now look at an apparent 'displacement', or rather 'alternative placement' phenomenon that depends on this 'double-negation' characterization of the universal quantifiers, and thus provides some further support for it. The 'displacement' is exemplified in (156b) above.

The analysis of (156b) is suggested in (157a), which omits overt expression of the propositional existential arguments required by the {P}s:

(157) a.

$$\{P/\{loc/\{N\{int,e\}\}\}\}$$

$$\{ \{abs\}\} \qquad \{P/\{\{src\}/\{N\{int,e\}\}\}\{abs/\{N_i\}\}\}$$

$$\{ \{abs\}\} \quad \{P/\{\{src\}/\{N\{int,e\}\}\}\}$$

$$\{ \{abs\}\} \quad \{N_i\{pl\}\} \quad \{P;N/\{src\{loc\}\}\{abs\}\}$$

$$\{ \{src\{loc\}\}\} \qquad\qquad \{ \{abs\}\}$$

$$\{N\{def\}\} \qquad\qquad\qquad \{N\{def\}\}$$

$$\{N_i\{pl\}/\{src\}\} \qquad\qquad \{N\{pl\}/\{src\}\}$$

$$\{ \{src\}\} \qquad\qquad\qquad \{ \{src\}\}$$

$$\{N\} \qquad\qquad\qquad\qquad \{N\{pl\}\}$$

$$\{N;P\} \qquad\qquad\qquad\qquad \{N;P\}$$

the guests   all   liked   the   dishes

b. $\{N/\{src\}\}$

$\{ \{src\}\}$

$\{N<.P>\}$

(I.86) k. $\{N/\{src\}\}$

$\{ \{src\}\}$

$\{N<;P>\}$
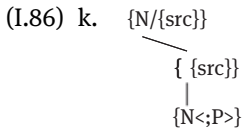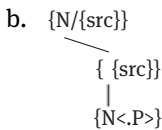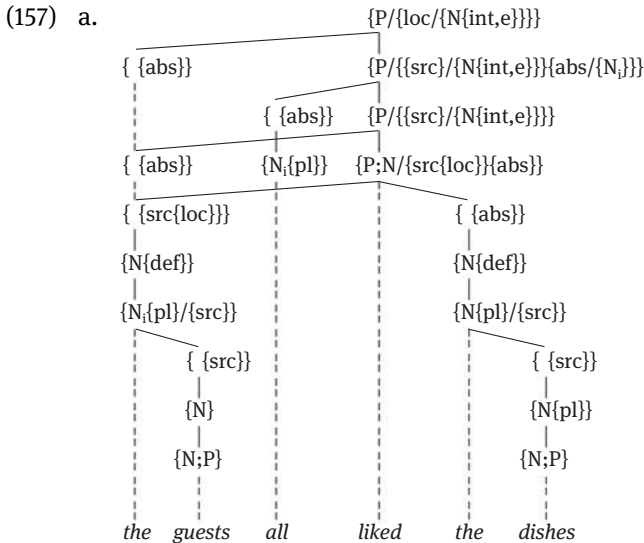
The absolutive that depends on the negation of the entity is expressed overtly, and separately from the free absolutive of the subject, but the two {N}s are coreferential, and their heads both belong to the path of {P}s realized ultimately as *liked*. This splitting depends on the double negation configuration given by (35b)

above: the quantifier and its complement can occur in two different places while retaining their identity via coreference, as well as their being connected via the double-negative complex.

As I've observed, such 'displacement' is not possible with the universal *every*, which, as an article, is tied to its complement: **Guest every liked the dishes*. Given various changes since Part I we can formulate the restrictive skeleton of articles as in (157b) rather than (I.86k), repeated below it. They take a covert partitive that may have subjoined {P} or {P.N}, and this structure may be extended by subjunction to a definitizing article, realized as *the*, or by co-indexing with existentials, giving *a(n)*, *no*, and *every*. Likewise, the intransitive compound pronoun *everybody*, its components being inseparable, is excluded from the 'displacement' phenomenon. But, as again observed, the *both* of (158a) behaves like *all*.

(158) a. The guests both liked the dishes
       b. The guests each liked the dishes

And distributive (158b) shows that availability for 'displacement' is not necessarily associated with non-singularity.

Depending on the notional focus, the displaced quantifier realization can appear to the left of any of a continuous sequence of non-finites, with (159) representing one possibility, though the representations of modality and the periphrastic elements are much simplified.

(159)
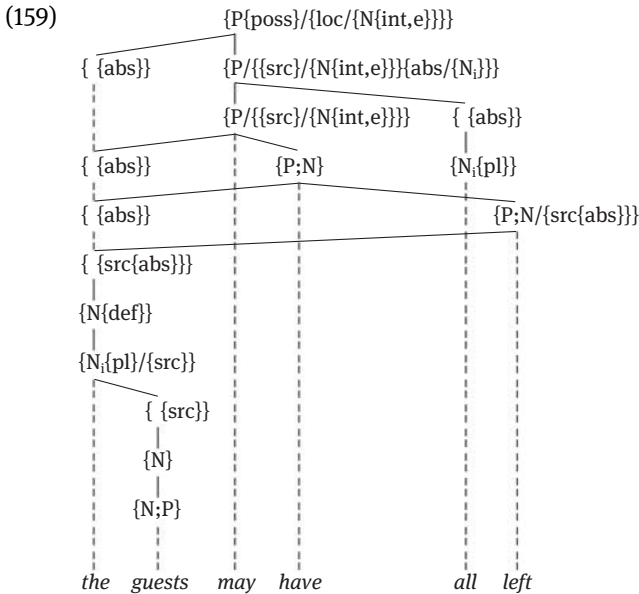
The same factors are involved in what we now turn to, though it looks like a rather different area of 'displacement', apart from still involving crucially determiners, specifically again universal items.

For reciprocals involve an extension of universal quantifier 'displacement', again dependent on the deconstruction of such quantifiers as double negatives. Here the simplified structure in (160a) introduces a representation of a classic example, involving the universal quantifier *each* in this case, and, in my speech, the reciprocal relationship is assumed to be binary (as indicated by the '{2}' in the appended condition on the coindexing), unlike in (160b).

(160) a.

$$\{P/\{loc/\{N\{int,e\}\}\}\}$$

$$\{\ \{abs\}\} \quad \{P/\{\{src\}/\{N\{int,e\}\}\}\{abs/\{N_j\}\}\}$$

$$\{P/\{\{src\}/\{N\{int,e\}\}\}\} \quad \{\ \{abs\}\}$$

$$\{\ \{abs\}\} \quad \{P;N/\{src\{loc\}\}\{abs/\{N_k\}\}\} \quad \{N_j\{sg\}\}$$

$$\{\ \{src\{loc\}\}\} \qquad \qquad \{\ \{abs\}\}$$

$$\{N_i\{def,pl\}\} \qquad \qquad \{N_k\{def,sg\}\}$$

they   *liked*   *each*   *other*

where i = j.k = {2}

b.

$$\{P/\{loc/\{N\{int,e\}\}\}\}$$

$$\{\ \{abs\}\} \quad \{P/\{\{src\}/\{N\{int,e\}\}\}\{abs/\{N_j\}\}\}$$

$$\{P/\{\{src\}/\{N\{int,e\}\}\}\} \quad \{\ \{abs\}\}$$

$$\{\ \{abs\}\} \quad \{P;N/\{src\{loc\}\}\{abs\}\} \quad \{N_j\{0,sg\}\}$$

$$\{\ \{src\{loc\}\}\} \qquad \qquad \{\ \{abs\}\}$$

$$\{N_i\{def,\{pl\}\}\} \qquad \qquad \{N_k\{0,sg\}\}$$

they   *liked*   *one*   *another*

where j.k ⊂ i = {pl}
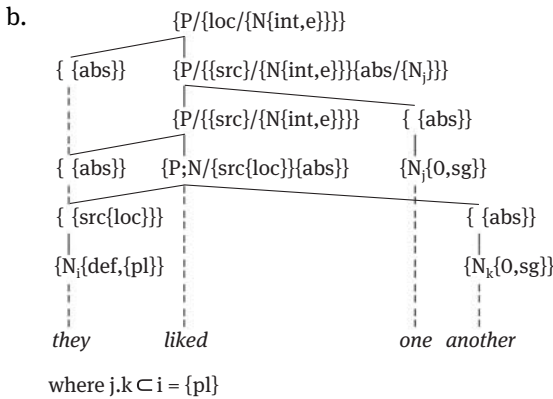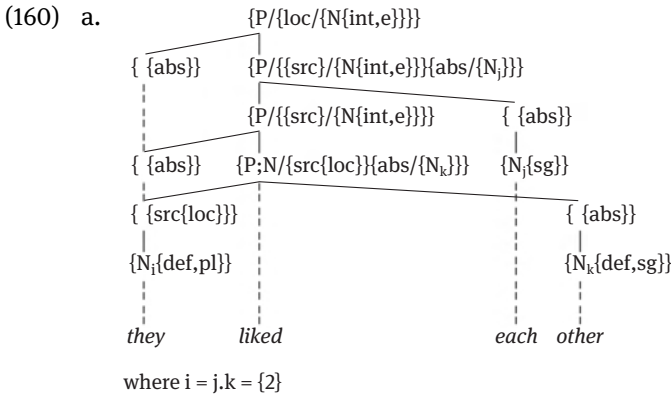
c. Each of them liked the other (one)
d. Any (one) of them liked any other

These reciprocals are associated with a more severe 'displacement' of the negative absolutive to post-verbal, pre-'object' position. The same double-negation configuration is involved, but there is a distinctive interpretation of the subscripts: the

stipulation that 'i' includes j and k either exclusively (160a) or as members of a larger set (160b). And in (160b) instead of a 'displaced' quantifier and a definite object we have a non-definite numeral and a non-definite object. Contrast with (160a–b) the respective 'non-displaced' structures realized as (160c–d).

Alternative to (160a–b) we can also have (161a), with the usual 'displacement'.

(161) a. They (may) each/both like the other

  b. They (may) each/all like one another

  c.

where j.k ⊂ i
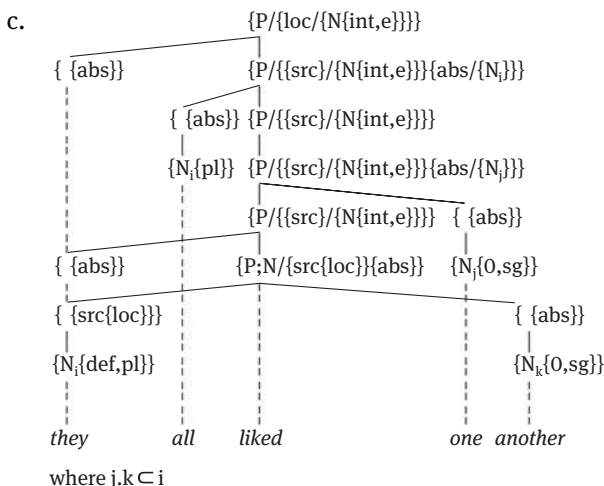
  d. All of them like one another

But (161b) is a sort of combination of the two 'displacement' types, which I've represented as in (161c), where *all* realizes overtly the whole set, as too in (161d), without 'displacement' of *all*.

It has often been observed that '*wh*-forms' also show variable placement, both in interrogatives, where they are referentially empty, of unknown value, and in relatives, where they are definite. Incidentally, this semantic difference is not as odd as it might appear: the relative is definite by virtue of coreference with the {N} it is attributive to, and the interrogative is anticipating a definite based on the response to the question, definiteness again being assigned cotextually. The placement variables shared by both constructions are exemplified in (162) and (163a–b), while in (163c) placement is as for non-interrogatives, though there is phonological marking of the interrogative.

(162) a. the man (to) whom Bill gave it

  b. the man who(m) Bill gave it (to)

(163)   a.   (To) whom did Bill give it?
    b.   Who(m) did Bill give it (to)?
    c.   Bill gave it to whom?

The questioned determiner phrase occupies a routinized 'topic' position marked by a free absolutive, where it may or may not be accompanied by an appropriate functor (here *to*). The optionality of *to* might be seen as reflecting the different exponence of the two constructions involving forms of *give*.

(164)   a.   Bill gave it to him
    b.   Bill gave him it

Contrast (165a–b), with the verb *present*, where the goal functor must be overt, or the *with* of the more marked alternative valency.

(165)   a.   the man *(to) whom Bill presented it
    b.   the man whom Bill presented it *(to)
    c.   the book *(with) which Bill presented him
    d.   the book that Bill presented him *(with)

With either valency the functor associated with the relative form must be present, unless no receiver is expressed, as in *The book which Bill presented*.

In all of (162) and (163) the topic is a functor phrase, as in (I.200) from Chapter 16:

(I.200)   {N{def}}
    {N}
    {N$_i$\{src\}}   {N/{P//{top}}\\{N/{src}}}
      { {src}}   {P//{top}}
      {N} { {abs}}   {P}
      {N;P}   { {abs}} {P;N/{src{loc}}{abs}}
        { {abs}} { {src{loc}}}
        {N$_i$\{top,def\}} {N}

      the pipe   *which*   *Bill*   *adores*
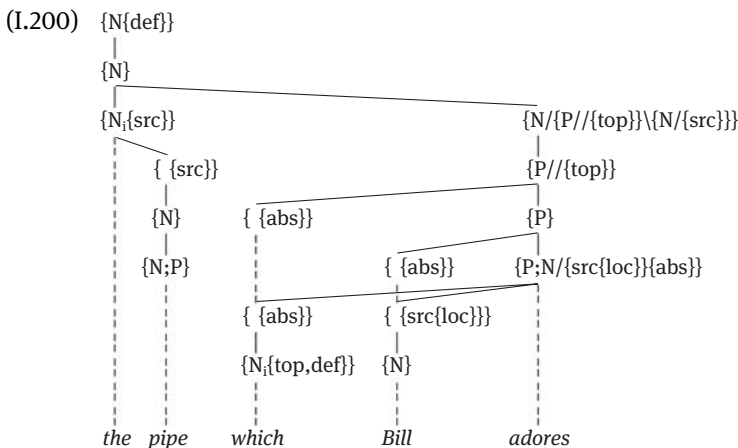
This is true of (162/163) whatever the position of the relative and whether the functor is overt or not. An overt functor can appear either in topic position, as in (166a), or left 'stranded' (as it is often described), as in (166b), where there is apparently a rather different kind of 'sharing' from that in (166a).

(166) a. {N{def}}

{N}

{N_i{src}}   {N/{P//{top}}\{N/{src}}}

{ {src}}   {P//{top}}

{N}   { {abs}}   {P}

{N;P}   { {abs}}   {P;N/{src}}

                                   { {src}}   {P;N/{{src}}{abs}{{gol}}}

           { {loc{gol}}}   { {loc{src}}}   { {abs}}

              {N_i{top}} {N}   {N}

the girl   to whom   Bill   gave   it

  b. {N{def}}

{N}

{N_i{src}}   {N/{P//{top}}\{N/{src}}}

{ {src}}   {P//{top}}

{N}   { {abs}}   {P}

{N;P}   { {abs}}   {P;N/{src}}

                               { {src}}   {P;N/{{src}}{abs}{{gol}}}

                        { {loc{src}}}   { {abs}} { {loc{gol}}}

           {N_i{top}} {N}   {N}

the girl   whom   Bill   gave   it   to
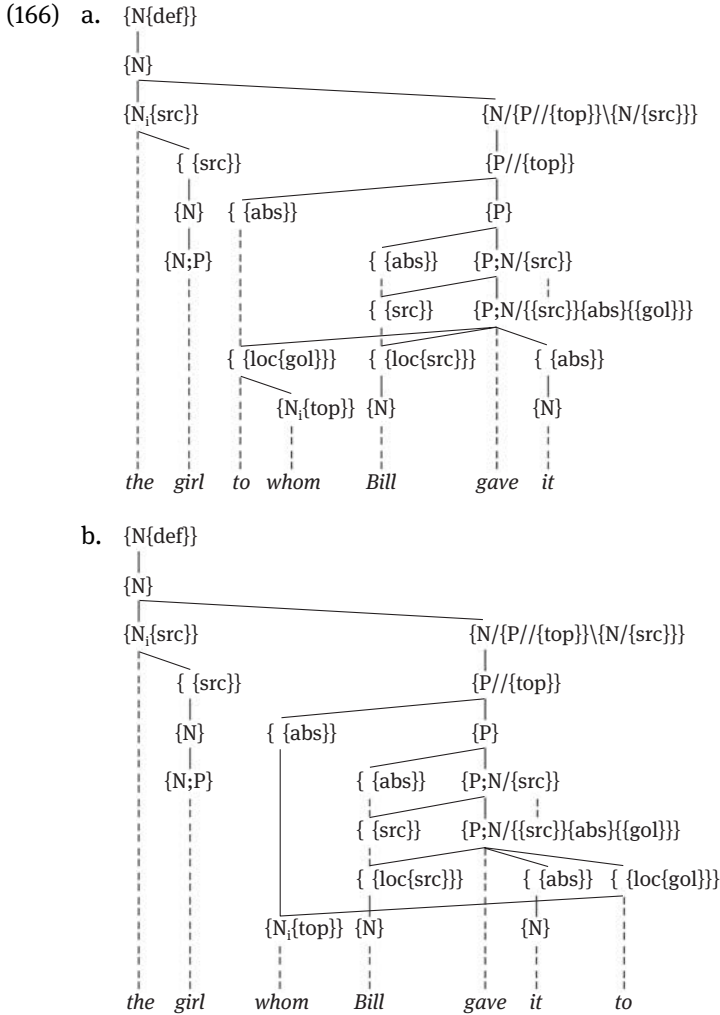
In (166b) only the *whom* satisfies the free absolute of the topic {P}, thus having two mothers, one of them free, whereas *to whom* in (166a) is the topic. However, the tendency to drop the inflectional coda of the relative in (166b) might suggest a rather different scenario, with a distinct topic, as presented in (167b) below,

without the 'double-mother' – and anticipating both the paragraphs and the chapter that follow, concerned with apparent 'gaps'.

All of the above relatives are specific as well as definite, which is the unmarked possibility. However, we have encountered in Chapter 35 overtly signalled non-specific definites, illustrated by the compacted pronominal determiner structure in (39c).

(39)   c.   Whoever punched him was very strong

What is of particular interest in this area, however, are relatives with apparently no implementation of the relative pronoun.

(I.199)   a.

```
        {N{def}}
           |
          {N}
           |_____
          |                 |
    {Nᵢ/{src}}      {N/{P//{Nᵢ}}\{N/{src}}}
     |                |
  { {src}}           {P}
     |                |_____
   {N}          { {abs}}      {P;N/{src{loc}}{abs}}
     |                |_____|
  {N;P}         { {src{loc}}}    { {abs}}
                     |              |
                    {N}         {Nᵢ{def}}

   the   pipe    that   Bill         adores
```

b.

```
        {N{def}}
           |
          {N}
           |_____
          |                     |
    {Nᵢ/{src}}          {N/{P//{Nᵢ}}\{N/{src}}}
     |                       |
  { {src}}                  {P}
     |                       |_____
   {N}       { {abs}}    {P;N/{src{loc}}{abs}}
     |          |_____|
  {N;P}   { {src{loc}}}    { {abs}}
              |                |
             {N}          {Nᵢ{def}}

   the   pipe    Bill         adores
```
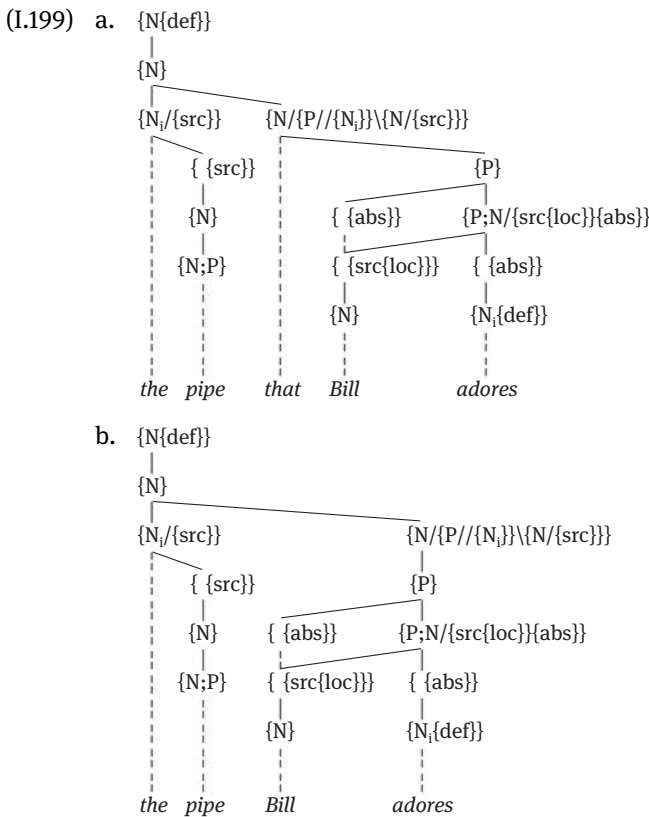
The representations in (I.199) assume that the 'missing' argument that satisfies the valency of verb is subjoined to it. This notionally appropriate point of view derives some support from those varieties of English that provide an overt

pronoun instead, though this is, for obvious reasons, an option that is commoner with relative clauses that lack relative pronouns, as in (I.199), and an option whose likelihood increases with the depth of embedding of the potentially unexpressed relative argument, as indicated in (167a).

(167) a. the man (that) she says (that) Freddie told her … you gave it (to) (him)

b.
```
{N{def}}
  |
{N}
  |‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾
{N_i{src}}                              {N/{P/{abs}}\{N/{src}}}
   ⌐‾‾                                            |
   { {src}}                                 {P/{abs/N{top}}}
      |                                           |‾‾‾‾‾‾‾‾
     {N}      { {abs}}                            {P}
      |          |                                 |‾‾‾‾‾‾
    {N;P}     {N_i{top}}  { {abs}}              {P;N/{src}}
                             |                      |‾‾‾‾‾‾‾‾
                          { {src}}            {P;N/{{src}}{abs}{{gol}}}
                             |                      |‾‾‾‾‾‾‾‾‾‾‾‾‾‾
                         { {loc{src}}}     { {abs}}   { {loc{gol}}}
                             |                |           |
                            {N}              {N}         {N_i}

     the    girl      whom     Bill         gave  it        to
```

c.
```
{N{def}}
  |
{N}
  |‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾
{N_i{src}}                              {N/{P/{abs}}\{N/{src}}}
   ⌐‾                                             |
   { {src}}                                   {P/{abs/{top}}}
      |                                           |‾‾‾‾‾‾
     {N}  { {abs}}                                {P}
      |      |                                     |‾‾‾‾‾‾
    {N;P}  {N_i{top}}  { {abs}}                 {P;N/{src}}
                          |                         |‾‾‾‾‾
                       { {src}}              {P;N/{{src}}{abs}{{gol}}}
                          |                         |‾‾‾‾‾‾‾‾‾‾‾‾‾‾
                      { {loc{src}}}     { {loc{gol}}}   { {abs}}
                          |                  |              |
                         {N}                {N_i}          {N}

    the  girl  whom      Bill             gave           it
```

d. the girl Bill gave it

The argument concerned is notionally necessary, indeed required by the verbal valency; and it may be present either internally, as in (167c) or externally, as in (167b), to the verb. (167b) thus replaces (166b), avoiding the curious 'double-mother', and (167c) takes this even further. And the uninflected topic variant in (162a) may be even more abbreviated, as in (167d).

(162) b. the man who(m) Bill gave it (to)

Absence of the inflection suggests the functor and the overt pronoun are not related structurally but only by co-indexing.

I suggest that we have a similar situation with the related phenomenon of so-called 'parasitic gaps'. (168a) is a classic example, where the objects of both *dismissed* and *reading* are coreferential with the head of the determiner phrase, as shown in (168b).

(168) a. The book (that) Jack dismissed without reading

b.

c. The book that Jack dismissed without reading it

As well as the usual coreference involving the 'subjects' of *dismissed* and the gerund *reading* and that linking the determiner head and the 'object' of *dismissed*, we have an addition to the latter link in the shape of the 'object' of *reading*: we have a 'chain of coreference'. The relevant linked {N}s in (168b) are co-subscripted by 'i'; in each instance their functor satisfies a valency; and the extra, more distant coreferring {N} may be overt, as in (168c), or not, as in (168a–b).

So too in (169a), involving the coreferential construction in Chapter 39 illustrated by (130c).

(130) c. John is easy (for Mary) to please

(169) a. The novel is hard to close before finishing (it)

b.

the novel   is hard to close   before finishing
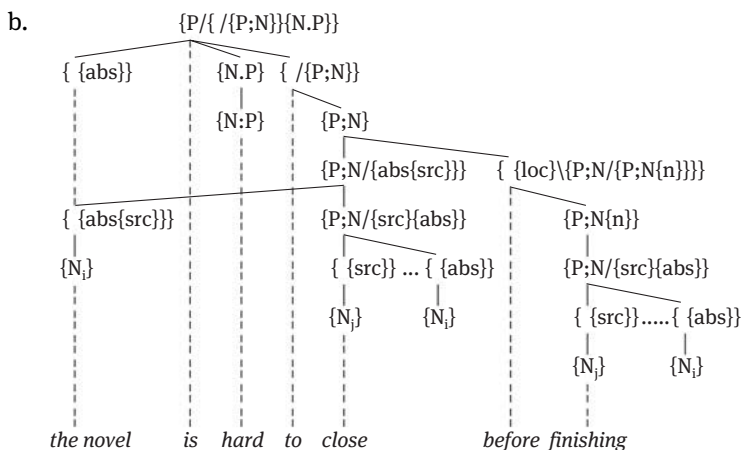
This is represented in (169b), where, for simplicity, I have omitted the internal (lexical) structure of the circumstantial locative suggested in Chapter 39, as well as nominal structure.

In (168) and (169) the 'parasitic' gap is the second one. But sometimes the coreference chain doubles back, as in (170a), with the 'parasite' at the end of the chain of arrows.

(170) a. It's Joe that everyone who meets instantly dislikes
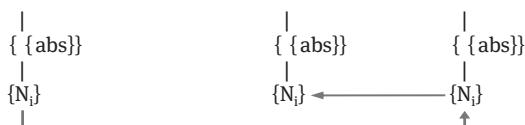
b. It's Joe that everyone who meets (him) instantly dislikes (him)

For many speakers neither of the coreference targets can be an overt pronoun, but others, those who favour (168c) in particular, allow any of (170b).

Both the relative constructions and the 'parasitic' phenomenon are thus not regarded here as 'movements' creating or licensing 'gaps', but as constructions requiring or permitting the internal satisfaction of a coreferentiality link between

participants: there are no 'gaps'. The so-called 'gaps' are coreferential pronominals which may be alternatively overt and which, even if not, are expected by the valency of the verbs whose arguments are involved.

The apparent displacement involved in the satisfaction of a simple free absolutive, as in 'raising', does not in itself introduce coreferentiality; and thus there is no scope for 'parasitism', as illustrated by the example of 'raising' in (III.162) from Chapter 33 (or (96a)), and the same applies to cases of 'control', like (96c).

(III.105) b.

```
                         {P}
         { {abs}}     {P;N/{src{loc}}{ /{P;N}}}

         { {src{loc}}}        { {abs}}        { /{P;N}}

           {N}                              {P;N/{src{abs}}}

                             { {src{abs}}}

                               {N}


            I           saw   them          leave
```

(96) c.

```
                        {P}
        { {abs}}      {P;N/{src{P;N}}}

        { {src}{abs}}    {P;N/{loc{src}/{N/{P;N}}}}

                            { {loc{src}}/{N}}

                               {N}

                            {P;N{n}}

                            {P;N}

                        {P;N/{src{abs}}}   { {loc}\{P;N}}

        { {src{abs}}}                          {N}

          {N}


          I           avoided  leaving      before  them
```
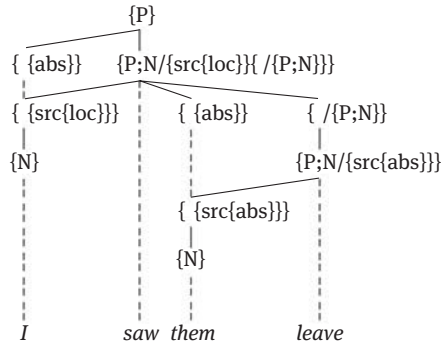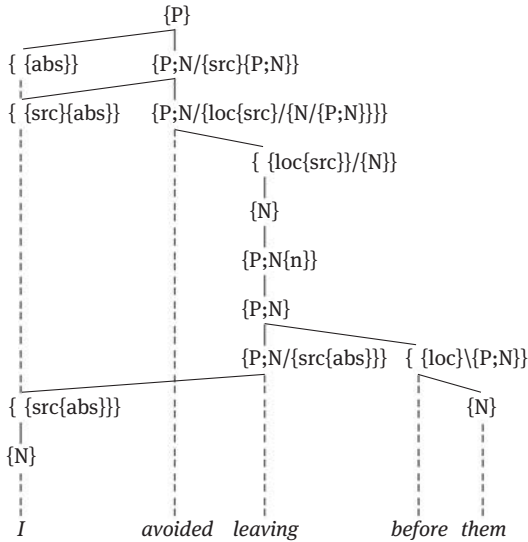
What is important in (III.105b) and (96a, c) is argument-sharing, and there is again no 'gap' or mere 'trace', but the presence of standard categories. In the examples preceding this, the 'gaps' correlate with the presence of an internal

coreferential functor-determiner unit, or an alternative expression exhibiting an overt pronoun.

Finally, let me recall to us that there is another aspect of the syntactic behaviour of the quantifiers looked at above that is relevant here and was observed in the Conclusion to Part III, but which has not been addressed in this chapter. This concerns the placements in (III.131c).

(III.131)   c.   (very) many a violin

This was analysed as in (III.133c).

(III.133)   c.

```
                              {N}
              ┌───────────────┘ └──────┐
      {P.N{itf}\{N{sg}}}      {N{sg}(*spec)/{src}}
             │                    ┊  └──────┐
      {P.N{pl}}                   ┊     { {src}}
             │                    ┊        │
      {P:N{QUANT::pos}}           ┊     {N{*pl}}
             ┊                    ┊        │
             ┊                    ┊     {N;P{CNT}}
             ┊                    ┊        ┊
           many                   a     violin
```
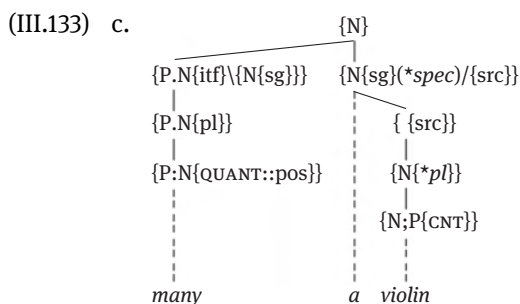
That is, *many* here functions as an intensifier of the non-specific article, i.e., more explicitly, the {N{sg,0}} article, which, like any {N{sg}}, cancels the default number expressed by count nouns subordinate to it. This also clarifies why the {sg} of the article does not cancel the overall plurality notionally insisted on by the intensifier. Likewise, notionally *A violin is a popular instrument* denotes any non-specific violin(s). This is an appropriate starting-place for the next chapter, which begins with a brief survey of specifiers and their placements.

Given their relationality, much of syntax is dominated by verbals. The semantic character of nouns, on the other hand, is conducive to hierarchical classificatory notions involving inclusivity, particularly hyponymy, or exclusivity, antonymity, and the associated identification of different notional domains – space, time, mind, emotion, etc. – and their contents and what is shared by these. Only the functional category of determiners, amongst nominals, exhibits syntactically-expressed relationality, much of which we have already encountered in previous chapters, in looking at various aspects of determiner-phrase structure, particularly as concerns the external syntax of the determiner phrase.

In this respect, we have looked at it as the prototypical satisfier of the valency of functors. But also salient has been the determiner's role in introducing (a possible chain of) attributives. Also, coreferential {N}s play a crucial part in both

lexical and syntactic structure, as well as reflecting pragmatic distinctions to do with reference, number, and quantification. And these considerations have been the starting-point for the present chapter. The determiners have also manifested a range of accompanying specifiers/intensifiers. And this, as I have observed, provides a starting point for the next chapter. But I want to emphasize finally here the role of {N} in coreference. We shall in the chapter that follows encounter other categories, indeed contentives, that participate in co-indexing; but this co-indexing does not indicate coreferentiality but rather co-denotation or co-signification.

Chapter 41
Co-indices: Mobility and Ellipsis

specifiers/intensifiers – correlatives – generalized intensifiers – active modifiers and
co-indexing – the relative placements of adverbs, moodal, modal, and full-verbal – adverbs
and active modifiers and co-indexing – types of ellipsis – ellipsis and co-indexing

In these final chapters we focus on variability in expression, variations which
are more or less closely associated with the communicative role of the utterance
involved; but we stop short of looking at (variation in) actual motor implementa-
tion, which lies outside the scope of grammar. Our starting point in this chapter,
however, is the brief mention of intensifiers in the immediately preceding chapter.
Thus far I have introduced intensifiers as modifiers that select some subset of a
category for some kind of intensification. These were first introduced with respect
to both syntax and phonology in Chapter 11 and further exemplified in the Con-
clusion to Part I. And in syntax they were limited to modification of functional
categories. There I made a distinction between **specifiers**, which merely modify
a subset of some category, and **intensifiers**, 'active', intensifying specifiers.

In that Conclusion I introduced (I.243) as a template for the syntactic intensi-
fier, where 'F' is a variable over functional categories.

(I.243)   { {loc}\{F}}
                |
            {P.N{itf}}

If we particularize 'F' (functional category) as 'positive comparator', then we got
(I.240b), where the positive itself places the value of the adjective below ('↓') the
norm in some domain and the specifier *very* intensifies this placement.

(I.240)   b.
                                        { {loc}}
                                            |
                                        {P.N}
                           _____|
            { {LOC}\{P.N/{GRAD}}}   {P.N{POS}/{GRAD}}}
                    | |
            {P.N{itf}}   {P:N{GRAD::size{↓}}}
                    ┊   ┊
                  very   *small*
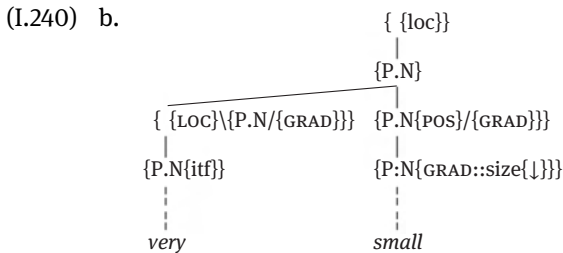
(I.243) involves one kind of non-mutative 'mobility', expressed by the variability
embodied in 'F': different specifiers can appear in different places in structure,

modifying different categories. However, what we shall be concerned with here are **generalized intensifiers**, particular intensifying specifiers that can appear in different places in structure, with the same specifier modifying different categories.

We encountered a special variety of these in Chapter 17, in the form of correlative specifiers that intensify the disjunctiveness or the inclusiveness of a coordination. These correlative intensifiers do not quite conform to (I.243), but intensify by anticipation of a coordination, as in (I.226a) and (I.225b), where {2{sg}} is a subtype of a type of complex specifier, the **coordinative**, which is a functor that depends on and governs the same category, and is 'active', in specifying content for the category, indeed its valency, as introduced by the modifier – introduced by '+', which replicates its own (non-specifier) determiner content, {2{g}}, as instantiated in *Either man was capable of it*.

(I.226) a.

```
                                                        {P{past}}
                       { {abs}}                         {P;N/{...}}
                       { {src{abs}}}
                       {N//{2{sg}}}
    {\{N+//{2{sg}}}}   {N}
    {N{2{sg}}}         {N}    { {{sg}}/{N}\{N}}
                                        {N}

      either          John    or   Mary          escaped
```

(I.229) b.

```
                       {P//{2{sg}}}
    {\{P+//{2{sg}}}}   {P}
    {N{2{sg}}}         {P{past}}  { {{sg}}/{P}\{P}}
                                          {P{past,neg}}

      either          John lied   or    Mary didn't leave
```
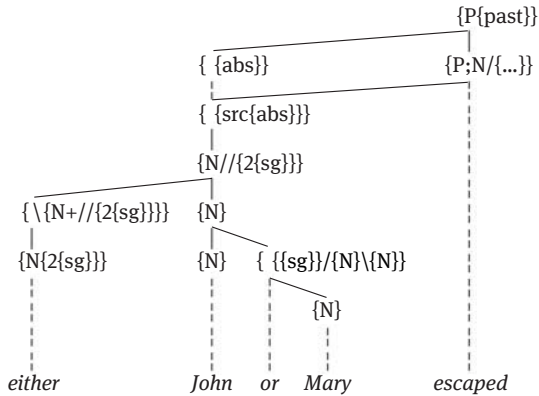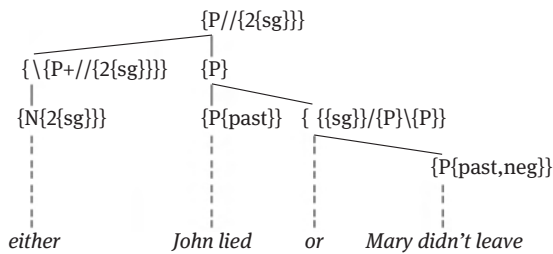
The complex specifier in the above examples is not limited to simple selecting sub-types of functional categories but to coordinative structures involving different coordinators. However, the interest of these at this point is that the same spec-

ifier applies to the range of different categories that can be coordinated, including {P} in (229b).

Moreover, the correlative intensifier can intensify the complex specifier of contentives, as illustrated in (I.231b).

(I.231) b.

```
                                 {P}
       ┌──────────────────────────┼───────────────────┐
  { {abs}}                                      {P;N//{2{sg}}}
                                       ┌──────────────┤
                               {\{P;N+//{2{sg}}}}    {P;N}
                                       │              │
                                   {N{2{sg}}}        {P;N}    { {sg}/{P;N}\{P;N}}
                                                      │              │
  { {src{abs}}}                                              {P;N/...}
       │                                                          │
     {Nᵢ}                                                    { {src{abs}}}
                                                                  │
                                                                {Nᵢ}

     John            is    either              raving    or     lying
```
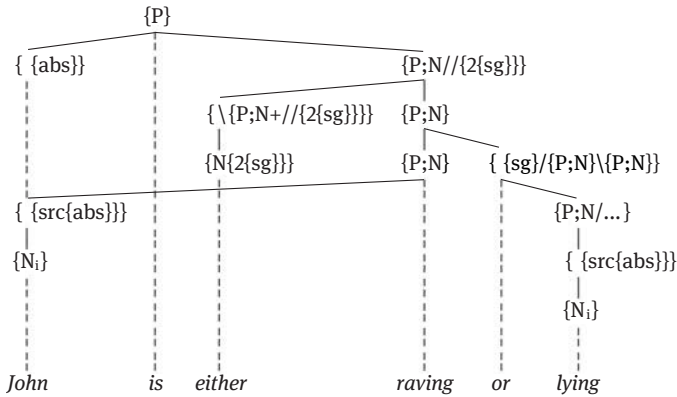
Here the main verbs are specified, and the disjunction intensified by the correlative *either*. The absence of a limitation to specifying only functional categories is characteristic of more conventional generalized intensifiers, as we shall see.

Also in common with other generalized intensifiers is a contrast between **exclusive** and **inclusive specification**. In all of the above correlative structures we have exclusive specification. Moreover, for many speakers *either* is binary (as marked by {2} in the representations), while *or* is not, but merely exclusive, disjunctive, {{sg}}.

(171) a. John or Mary or the dog is responsible
       b. John or Mary or both will be leaving

And we can even weaken the exclusiveness by including the inclusive correlative, as in (171b). But the binarism is threatened in some earlier and recent usage, whereby *either* can initiate such sequences as those in (171).

The central use of the inclusive binary *both* is illustrated by (I.227), where inclusivity rather than exclusivity is shown by the stipulation of {pl}, but binarism is shared with the above representations of *either* structures.

(227)

```
                                                    {P{past}}
                                                  ┌─────┘
                          { {abs}}          {P;N/{src{abs}}}
                             ┆                      ┆
                          { {src{abs}}}             ┆
                             ┆                      ┆
                          {N{2}}                    ┆
                        ┌────┘                      ┆
          { \{N+{2}}}      {N{pl}}                  ┆
              ┆              ┆                      ┆
          {N{2}}           {N}    { {N}\{N+{pl}}}   ┆
              ┆              ┆        ┌──┘          ┆
              ┆              ┆       {N}            ┆
              ┆              ┆        ┆             ┆
              ┆              ┆        ┆             ┆
             both          John    and  Mary     escaped
```
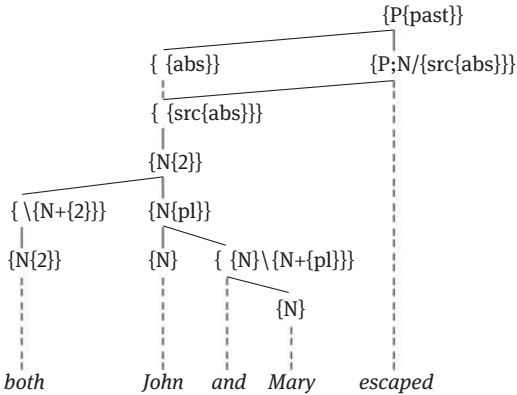
The specifier and the conjunction *and* are both 'active' with respect to {pl} on their heads.

We can now begin to introduce other generalized intensifiers via simple **adversative** coordinations such as those in (172a–b) which can interact with multiple negation to intensify correction of a potential misunderstanding, as illustrated in (172c–d), involving respectively conjunction of names and gerunds in which the negative exclusive correlative anticipates not just an adversative but also, in this instance, an intensifying inclusive.

(172) a. John but not Mary is leaving
   b. John is leaving but Mary is not/staying
   c. Not only John but also Mary will leave
   d. John is not only leaving but also not coming back

e.

```
                                              {P{MODAL::pred}}
                  { {abs}}                     {P/{loc{gol}/{N{int,e}}}}
                  { {abs}}                     {P/{{src}/{N{int,e}}}}
                                               {P/{loc/{N{int,e}}}}...................{ {abs}}
                                                {P;N/{src{abs}}}.....{ {abs}   {Nᵢ}
                                                                         {Nⱼ}
                  { {src{abs}}}
                  {N}
    {Nᵢ\{N}}   {N}
    {P.N{{sg}}}        {N{adv}/{N\{N}}}
                                {N}
                         { {Nⱼ}\{N}} {N}
                          {P.N{ {*sg}}}


       not-only      John  but  also      Mary will leave
```
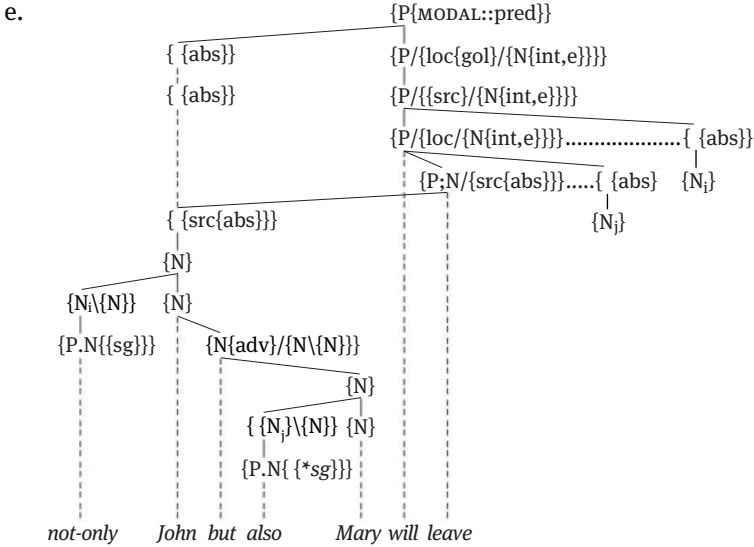
(172e) offers a rather speculative representation of the structure of (172c) as an instance of the kind of structure that might be appropriate for such correlatives, given the precedents explored in this Part in particular. It contains two entity-existentials below the sub-modal eventuative one, and the upper, negative existential, realized by *not*, has an absolutive {N} coreferential with the {N} intensified by the first (exclusive) intensifier, represented again as a tertiary singular, the former of which needs to be satisfied by (or implies) an adversative. *Not-only* is treated here as a compound, like *nothing*, *nobody*, *no-one*, and *nothing*, but it may be stored more generally by speakers as a phrase. The lowest existential is positive and its absolutive is co-indexed with *also*, which confirms the negation of the singulative. These 'correlatives' can specify a range of categories, not just functional; and they begin our look at co-indexing. Rather than dwelling on them, or even deconstructing different manifestations of *but* (not but what its diversity of roles warrants a manual to itself), however, our focus now changes to the likes of non-correlated *only* and *also* themselves.

The term 'generalized intensifiers' is an overgeneralization, I confess. There are restrictions on what can be modified by each of them, but (optional) presence vs. absence does not coincide with the divide between functional and contentive. Let us look at some examples. This first batch involves the exclusive *only* and arguments.

(173) a. He relaxes only at home
       b. He goes only to France

c.   Only Mary likes him

d   ?*He relaxes at only home

e.   ?*He goes to only France

f.   He meets them only in Bradford/?*in only Bradford

g.   She meets him only <u>outside</u> the town

(173a,b) show specification of a circumstantial and a participant functor, and (173c) of the subject of a finite verbal. (173c) raises the question of whether the subject functor or the determiner is being modified, but the dubiousness of (173d–e) suggests that, as far as placement is concerned, the determiner is not an exclusivity target in this case either. And (173f) confirms that placement with a circumstantial is not just a peculiarity of the idiom *at home*. All of (173a–c) seem to illustrate exclusive intensification of the singularity of a functor phrase.

Notionally, associating the intensification with the phrase as a whole is important: the nominal falls within the scope of the exclusiveness: compare the rough paraphrase of (173b) *He goes (to) nowhere but France* (*but* again!), which confirms that exclusivity also has crucially to do with the nominal. Preferable in the case of the idiom in (173a) is perhaps the paraphrase *He relaxes nowhere but at home*, where the functor follows. But the nominal falls within the scope of the *only*, even if stress is laid on the functor, as in *at home rather than near home*. But the crucial functor is normally not foregrounded in expression except in direct contradiction of another functor. Emphasis on the functor, however, is most likely with complex functors, such as that in (173g), which contain a nominal in their internal structure.

We might thus represent (173a) as abbreviated in (174a), with specification of a functor phrase, given the **head convention** of Chapter 5.

(I.63)   *HEAD CONVENTION*

Any regularity mentioning category X is to be interpreted as applying to a construction headed by X unless a subordinate of X is mentioned in the same regularity, in which case the element manifesting X is referred to.

(174)   a.

b.

```
                              {P}
            ┌──────────────────┤
        { {abs}}        {P;N/{src{loc}}{abs}}
           ┊          ┌────────────┤
          { }         ┊      { {abs}}
      ┌─────┤         ┊         ┊
 {\{ /}}  { {src{loc}}}  ┊      {N}
     ┊        ┊         ┊        ┊
{P.N{{sg}}}  {N}        ┊        ┊
     ┊        ┊         ┊        ┊
    only     Mary      likes    him
```

c.

```
                    { }
         ┌───────────┤
    {\{ i}}       { i{loc}/{N}}
       ┊             ┊
 {P.N{{sg}}}   {N{external}/{loc}}
       ┊             ┊
       ┊          { {loc}/{N}}
       ┊          ┌────┤
       ┊          ┊   {N}
       ┊          ┊    ┊
      only     outside the town
```
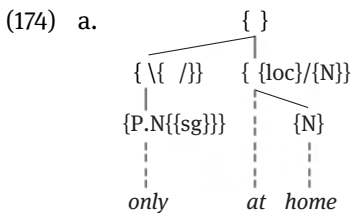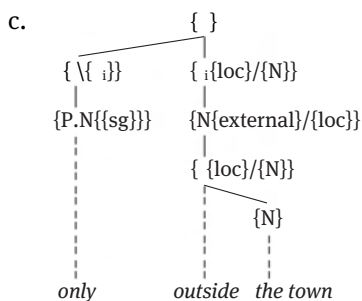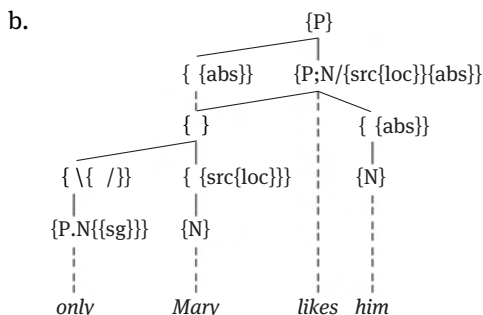
And similar structures are appropriate for (173b) and (173f), but with (173c) I have included in (174b) the verbal structure. This larger picture shows that, as usual, the 'replica' functor introduced by the exclusive modifier of the *Mary* argument conforms to requirements on what is modified, here a functor phrase with a valency-satisfying though covert head.

That the scope of exclusive intensification includes the subordinates of the functor is the unmarked situation. In (174c), however, *only* inserts a co-index on its head; the co-indexed functor itself is thereby marked as the focus of the exclusive intensifying, and this is expressed by accentuation of the functor. *Only* can thus be a further kind of **active modifier** (recall the discussion of *either* and *both* in Chapter 17, and briefly above). The examples in (173) involve modification that intensifies the exclusivity of functor phrases and individual functors. Unsurprisingly, the arguments are entitatives.

But *only* can also intensify verbs as exclusive. This alternative is illustrated simply in (175a), with insistence on the identity of a specific verb.

(175) a. He only grins
     b. He is only grinning
     c. He only <u>might</u> leave
     d. He only painted his face
     e. He only <u>borrowed</u> her key

But there are also variations in scope. (175a) might seem to raise the question of whether *only* specifies {P} or its subjoined {P;N}. The latter is specified in (175b). And again when the governing category is independently present, this {P} is itself modified in (175c), but to mark violation of the head convention it is accompanied by intonational marking expressing the co-indexing, even though a reading where *leave* is also in the scope of *only* is perhaps less obvious (but might be exemplified by *He only might leave – it's not certain*).

I take *only* in (175a) to be intensifying the sense of the (potential head of a phrase) main verb, as shown in (176a), but this includes its agentive valency.

(176) a.

```
                                {P}
     ┌────────────────────────────┐
  { {abs}}                    {P;N}
     ┊              ┌─────────────┐
     ┊          { \{P;N}}   {P;N/{src{abs}}}
     ┊              ┊              ┊
  { {src{abs}}}  {P.N{{sg}}}       ┊
     ┊              ┊              ┊
    {N}             ┊              ┊
     ┊              ┊              ┊
     he           only          grins
```

b.

```
                              {P}
     ┌──────────────────────────┐
  { {abs}}                   {P;N}
     ┊           ┌──────────────┐
     ┊        { \{P;Nᵢ}}   {P;Nᵢ/{src}{abs}}
     ┊           ┊              ┊          ┌──┐
  { {src}}   {P.N{{sg}}}        ┊        { {abs}}
     ┊           ┊              ┊           ┊
    {N}          ┊              ┊          {N}
     ┊           ┊              ┊           ┊
     he        only         borrowed    her key
```

c.

```
                              {P}
     ┌──────────────────────────┐
  { {abs}}                   {P;N}
     ┊           ┌──────────────┐
     ┊        { \{P;N}}   {P;N/{src}{abs{loc}}}
     ┊           ┊              ┊        ┌───┐
  { {src}}   {P.N{{sg}}}        ┊      { {abs{loc}}}
     ┊           ┊              ┊           ┊
    {N}          ┊              ┊          {N}
     ┊           ┊              ┊           ┊
     he        only         painted    his face
```
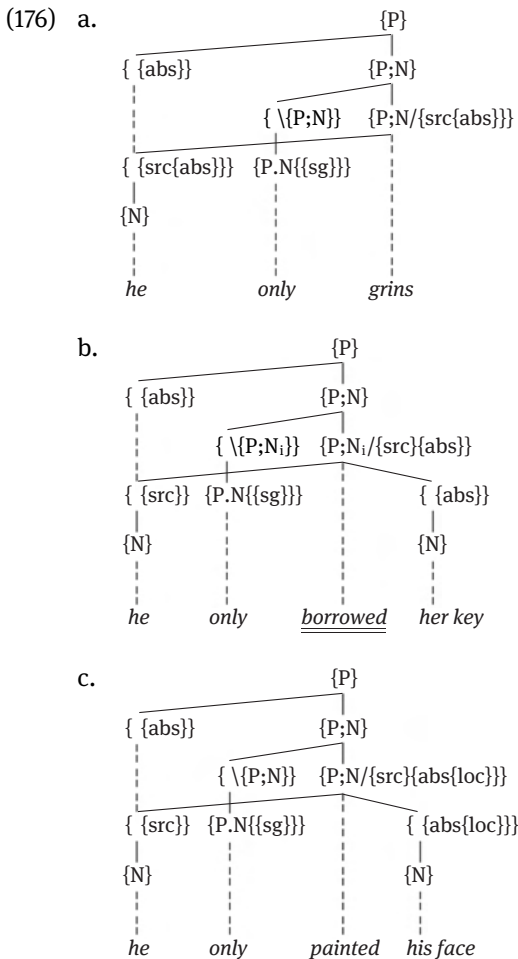
(175b) differs only in that the finite verb is realized independently, and (175d) only in having a post-verbal participant, so that the whole phrase is intensified. In (175c) and (175e) the intensification is more narrowly focused, and, as observed, this is expressed by tonal prominence of the focused item. This is expressed in (176b) (which omits the internal structure of {P;N} as well as the {N}s), while in (176c) the whole verb phrase is intensified.

Differing class meanings among parts of speech have the consequence that different aspects of exclusivity may be prominent in the interpretation of *only* when intensifying verbs (highly relational contentives) rather than functors. An intensified verb phrase can often be interpreted as deprecatory, with a sense of 'no more than'. But verbs also display a rather more striking interaction with *only* and its insistently inclusive congener *even*. But let us continue to focus on *only* in examining this phenomenon.

The pre-verb slot in (176) is also the place for what I've called elsewhere a 'vicarious' modifier of other elements. (177a–b) illustrate alternative intensifications with, as expected, the specifier immediately preceding the intensifiee, complement or circumstantial; but the specifier in (177c) can, despite the 'purists', be interpreted as involving intensification of either of these, as well as of the whole upper verb phrase (and for some speakers the equivalent of *They alone* ...).

(177) a. They visit only her mother on Tuesdays (, nobody else)
      b. They visit her mother only on Tuesdays (, not on other days)
      c. They only visit her mother on Tuesdays (, not doing anything else)
      d. They only <u>call</u> her mother on Tuesdays (, they don't visit (her))
      e. They only visit <u>her</u> mother on Tuesdays (, not his)

Such a sentence structure also allows, via tonal marking, interpretations, as in (177d), in which *call* is in focus (as with <u>borrowed</u> in (176b)), or the genitive is in focus as expressed in (177e). But we are now concerned particularly with (177c).

The placement of *only* in (177c) when the intensification is on one of the following arguments (rather than, as the continuation suggests there, on the verb phrase) has indeed attracted much prescriptive disapproval, but is very common, despite the possibility of ambiguity. Let us see how we can accommodate the interpretation of (177c) corresponding to, say, (177b) and the like. I suggest that we have on two interpretations of (177c) the 'vicarious' focusings represented in (178a–b) (where the valency of the verb in each is much simplified), with vicarious status anticipated by the distant satisfaction of the subscript.

(178) a.

```
                                         {P}
            { {abs}}                    {P;N}
                      { \{P;N//{ ᵢ}}}   {P;N}
                         {P.N{{sg}}}    {P;N/{src}{abs}}   { ᵢ{loc}}
            { {src}}                          { {abs}}          {N}
              {N}                               {N}
             they        only            visit  her mother  on  Tuesdays
```

b.

```
                                         {P}
            { {abs}}                    {P;N}
                      { \{P;N//{ ᵢ}}}   {P;N}
                         {P.N{{sg}}}    {P;N/{src}{abs}}   { {loc}}
            { {src}}                          { ᵢ{abs}}        {N}
              {N}                               {N}
             they        only            visit  her mother  on  Tuesdays
```

c.

```
                                         {P}
            { {abs}}                    {P;N}
                      { \{P;N{ ᵢ}}}     {P;Nᵢ}
                         {P.N{{sg}}}    {P;N/{src}{abs}}   { {loc}}
            { {src}}                          { {abs}}          {N}
              {N}                               {N}
             they        only            visit  her mother  on  Tuesdays
```

d.

```
                                    {P}
         { {abs}}                  {P;N}
                 { \{P;N_i}}       {P;N}
                 {P.N{{sg}}}  {P;N/{src}{abs}}      { {loc}}
         { {src}}            { _i{abs}}            {N}
         {N}                  {N}

          they      only        visit    her mother   on  Tuesdays
```
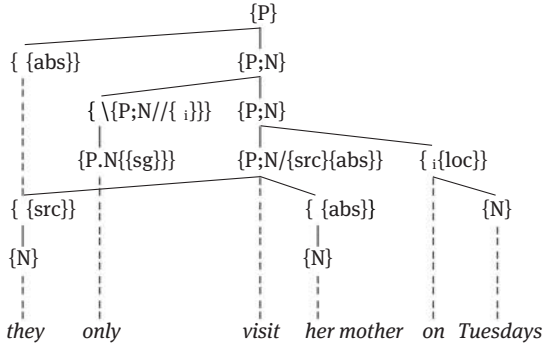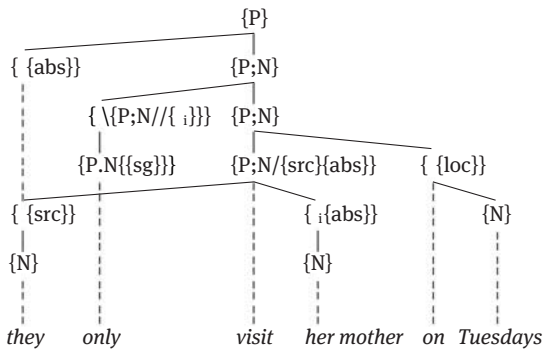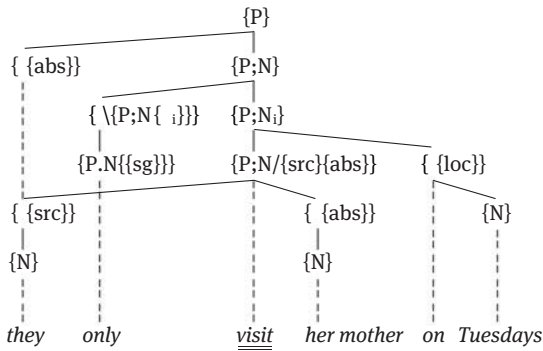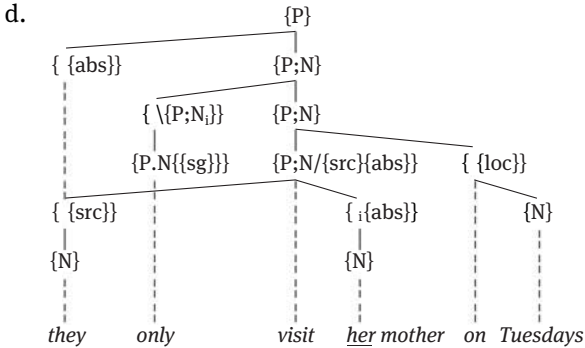
The specifier in (178a) inserts in the indirect valency of the circumstantial {P;N} a subscript that is co-indexed with the {N} of the circumstantial locative, and (178b) co-indexes the absolutive. The verb in the head-intensified interpretation shown in (178c) needs tonic support, marked by a double subscript, as is the genitive in (177e)/(178d); and the non-vicarious representation, which may be followed by the bracketed part of (177c), lacks the co-indexing.

Predicative adjectives and nouns – or rather {P.N}s and {N}s – can also be exclusively specified, as illustrated in (179a).

(179) a. It's only playful/mud/tinkers/a (small) fence
       b. There are only two of them
       c. There are only a few/*many
       d. She (only) left (only) yesterday/on Tuesday/a minute ago
       e. She is leaving tonight/on Tuesday/in (only) a minute

And, naturally, numeral determiners, as in (179b), are particularly susceptible, and others denoting measurables; but (179c) suggests that strongly positive quantifying determiners are, except figuratively, disfavoured – which is again notionally natural. Equally naturally, temporal expressions, such as those in (179d), allow exclusivity, with again a deprecatory sense, but the futures with the present progressive in (179e) are reluctant, except if deprecation is appropriate, as in the last example. In *a minute ago* in (179d) the last word is a past distance which is necessarily completed by a specifying time metric, and the phrase can be intensified.

The insistently inclusive intensifier *even* works in the same way, ceteris paribus, including the availability of 'vicarious' specification; and it is more commonly appended to the specifiee than present-day *only*, but marked off tonically if so: compare e.g. *John, even, was impressed* with ?*John, only, was impressed*.

'Generalized' specifiers/intensifiers such as *just*, *only*, *quite, also* differ in various other ways. But I shall not explore these here, as they add little, I suspect, to our understanding of the 'generalized' specifier. But I move on now to another, familiar, if rather different, area of variability in placement.

In Chapter 7 of Part I, in the course of a preliminary look at adverbs, I illustrated the typical positions in which the simplex adverbs modifying verbs and operatives in, respectively, (I.83a) and (I.85a).

(I.83)   a.   (Slowly) Mary (slowly) pushed the bottle (slowly) towards us (slowly)

(I.85)   a.   (Frankly/Actually,) Isabella (frankly/actually) performed the sonata (, frankly/actually,) outstandingly (, frankly/actually)

Circumstantials with overt functors (e.g. *in the evening*) are much more restricted in placement possibilities, and, unless signalled as an interpolation, tend to begin or terminate such sequences. At each of the positions in the above examples, if operative and verb modifiers co-occur, the operative modifier precedes that part of the structure that is being focused on, including verb modifiers – though, as illustrated in (I.85a), an operative modifier can occur in absolutely final position, as a comment on the content of the whole predication. Modifiers tend to attract phonological highlighting (such as by tempo-slowing or pre-tonic intonation, particularly if initial, which may indeed attract a full tone). The placement of the verbal modifiers is sensitive to a range of factors including collocational, cotextual, speech-situational, stylistic, rhythmic.

The two {P}-modifying adverbs in (I.85a) are **moodal** (*frankly*) vs. existential-modifying, which typically have a **modal** value (*actually*). There are also among the moodals **discourse** adverbs (such as *further/therefore/however*), but these too may focus on a particular verbal or argument (*He resigned, however*; *John, however, was the one who found it*). Different adverbial modifiers prefer different subsets of verbal to modify, and this is particular stark with moodals, most of which are very particular about which mood(s) they select. The declarative modifiers I have selected in the above examples can be very unhappy with other moods. They could be said to be 'very moody'.

In Chapter 23 co-occurrence of a moodal and a final verb modifier was represented as in (II.110a), showing both a mood {P} and an existential subjoined to it, but ignoring, for graphic clarity, the structures associated with the two non-adverb-introducing {P}s (as well as simplifying the verb valency).

(II.110) a.

```
                                              {P}
              _____|____
     { {loc}\{P{MOOD}}}              {P{decl}}
             |                            |
     {P.N/{src}}                         {P}
          ___|____                     ___|_____
   {P:N} ... { {src}} { {abs}}   {P;N}
             |            |       ___|_____
           {N}           |   {P;N/{src{abs}}}  { {loc}\{P;N}}
             |           |             |                |
          {N;P}   { {src{abs}}} |                 {P.N/{src}}
                      |         |                   ___|____
                    {N}         |            {P:N} ... { {src}}
                      |         |                        |
                      |         |                      {N}
                      |         |                        |
                      |         |                 {N;P{MANN}}
                      |         |                        |
        happily     Sheila    left                  happily
```
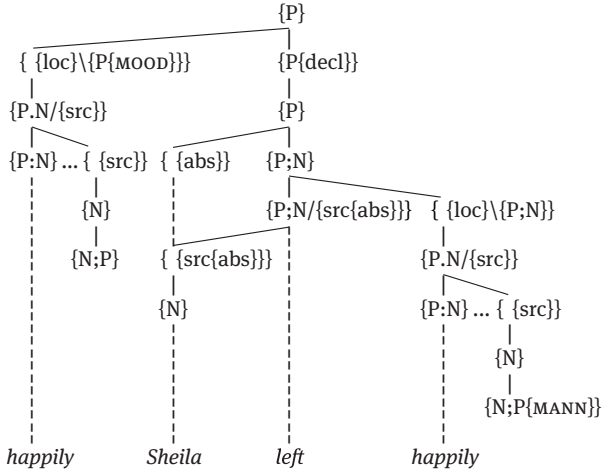
In the even more skeletal representation of (II.110b) the moodal modifier is in a medial position, preceding the modified {P{decl}}; it thus introduces the tangling that is permitted to such circumstantials.

(II.110) b.

```
                                              {P}
                     _____|____
           { {loc}\{P{MOOD}}}   {P{decl}}
                  |                    |
           {P.N/{src}}                 |
              ___|____                 |
       {P:N} ... { {src}}              |
                  |                    |
                {N}                    |
                  |                    |
                {N;P}                 {P}
          _____|_____             |
  { {abs}}        |             {P;N}
      |           |                ___|_____
      |           |       {P;N/{src{abs}}}  { {loc}\{P;N}}
      |           |             |                   |
 { {src{abs}}}    |             |              {P.N/{src}}
      |           |             |                ___|____
    {N}           |             |         {P:N} ... { {src}}
      |           |             |                     |
      |           |             |                   {N}
      |           |             |                     |
      |           |             |              {N;P{MANN}}
      |           |             |                     |
   Sheila      happily         left               happily
```
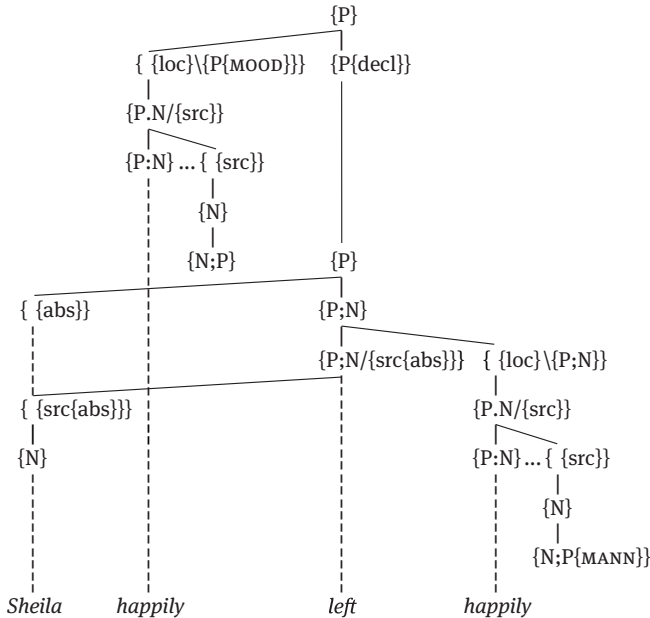
This is also the case in *Sheila happily left early* (though of course *early* will have a different lexical structure, whether the first adverb modifies {P}, as illustrated in

(II.110b), or it modifies the verb, with *early* still within its scope). Let's consider now, however, how we might represent the difference between moodal and existential along with focus by one of them on a subordinate element in the predication.

I suggest that at least (180e), which, for simplicity, prunes even further the internal structure of the adverbs, is necessary in the representation of (180a), where the moodal *frankly* focuses moodally on the following verb modifier, and there is also a pre-verbal existential adverb within its scope.

(180) a. She actually played the sonata, frankly, outstandingly
   b. Frankly, she actually played the sonata outstandingly
   c. She actually played the sonata outstandingly, frankly
   d. She, frankly, actually played the sonata outstandingly

   e.

$$\{P//\{loc/\{P.N_i\}\}\}$$

$$\{P\{decl\}\} \qquad \{ \{loc\}\backslash\{P\{decl//\{P.N_i\}\}\}\}$$

$$\{P\} \qquad \{P.N\}$$

$$\{ \{loc\}\backslash\{P/\{loc/\{N\{e\}\}\}\}\} \quad \{P/\{loc/\{N\{int,e\}\}\}\} \quad \{P:N\}$$

$$\{ \{abs\}\} \quad \{P.N\} \qquad \{P;N\}$$

$$\{P:N\} \qquad \{P;N/\{src\}\{abs\}\} \qquad \{ \{loc\}\backslash\{P\}\}$$

$$\{ \{src\}\} \qquad \{ \{abs\}\} \qquad \{P.N_i\}$$

$$\{N\} \qquad \{N\} \qquad \{P:N\}$$

she   *actually*   *played*   *the sonata*   *frankly*   *outstandingly*
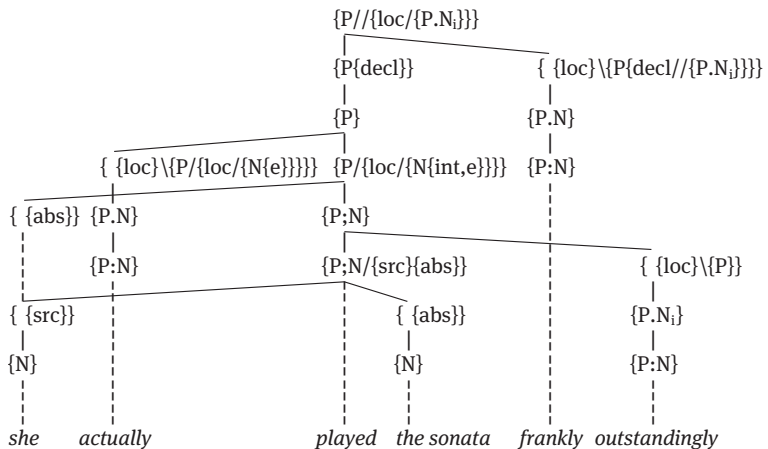
The moodal modifier is 'active': it attributes to its moodal {P} replica a distance valency that by coindexing ties it to the {P;N} modifier, and this determines the placement of *frankly*. The modifier of the mood is not necessarily always 'active' in this way: compare (180b–d), for instance.

We now return from placement and its variation to lack of placement, but not merely simply lack of distinctive overt placement, which applies to most categories in lexical structure. I shall be concerned with **grammatical ellipsis**. 'Ellipsis' has been applied, of course, to perceived omissions, in utterances in particular, but of different kinds even in this domain. One type that, as already indicated, we shall not occupy ourselves with in what follows is the application of the term, in a quite general way, to perceptions that there is insufficient content in an utterance for it to offer a coherent argument or a clear representation of a scene. This involves **pathological ellipsis**, ellipsis as a communicative failure. A more positively revealing type for the scholar of language is illustrated by (181a).

(181) a. *Speaker A:* Where is the new novel? *Speaker B:* On the hallstand, stupid!
b. *Speaker A:* Great Aunt Maud … *Speaker B:* … can't make it, I hope
c. Then they met and … guess what!

We have already encountered **elliptical responses** such as this. The response is **parasitic** upon the preceding utterance. Similar is (181b), where we have **elliptical supplanting**: Speaker B interrupts and finishes the other Speaker's utterance. We have another type of parasitic ellipsis. In both such cases, Speaker A and Speaker B may be identical. This would bring them closer to the suspense-creating ellipsis type in (181c), which is **figurative**. These can all be seen as instances of what I have called 'functional ellipsis', but I shall not be looking further at such as these. My interest here is in what I have called **grammatical ellipsis**, which is no less functional but does not involve such parasitism or figurativeness: what is apparently 'missing' in a sentence is readily recoverable within that sentence. Firstly, I need to try to clarify further the roles of **co-indexing** and **coreference**.

We have looked at instances, such as we find just above in (180e), where co-indexing of a valency and a subordinate element serves to link two elements, signal their necessary co-presence or, rather mutual incompatibility. But co-indexing, I have suggested, can in other circumstances, where {N}s are involved, indicate coreference. We have encountered many such instances as (165), where the definite determiner phrases *the man* and *whom* corefer.

(165) a. the man *(to) whom Bill presented it
b. the man whom Bill presented it *(to)

But both coreferents need not be overt. Recall again (I.231b), where coreference is associated with overt absence of a substructure, i.e. ellipsis.

(I.231) b.
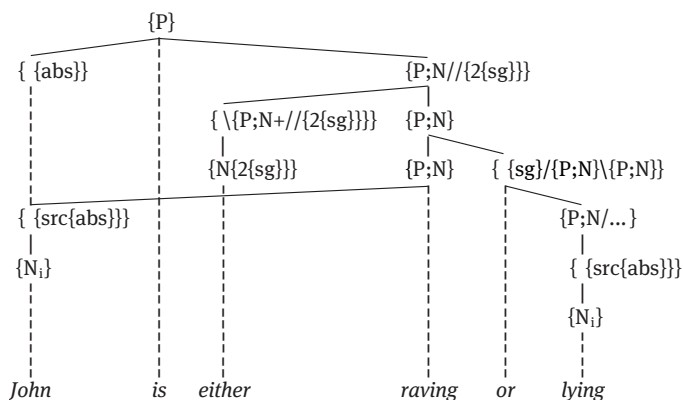
This is a natural characterization of the grammatical ellipsis, in such instances and in the 'gaps' discussed above, given the role of such pro-categories as {N} in overt coreference, where both {N}s are overt. This is illustrated, banally, in the schema in (182), where nominal structure and root structure is minimally represented and verbal is abbreviated.

(182)

```
                                {P}
              _____/‾‾‾|
         { {abs}}            {P;N/{src{loc}}{abs}}
            |              /‾‾‾|‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾‾\
       { {src{loc}}}       |            { {abs}}
            |              |               |
       {Nᵢ{sg}/{src}}      |             {N/{P}}
            ⁝              |               |
            ⁝              |              {P}
            ⁝              |         ___/‾‾‾|
            ⁝              |    { {abs}} {P;N/{src}{abs}}
            ⁝              |        |    /‾‾|‾‾‾‾‾‾‾\
            ⁝              |        |  { {src}}  { {abs}}
            ⁝              |        |     |         |
            ⁝              |        |  {N{def}}  {Nᵢ{def}}
            ⁝              |        |     |         |
            ⁝              |        |  { {fem}}  { {masc}}
            ⁝              |        |     ⁝         ⁝
            ⁝              ⁝        ⁝     ⁝         ⁝
   *a man in the next street regrets   she   left    him*
```
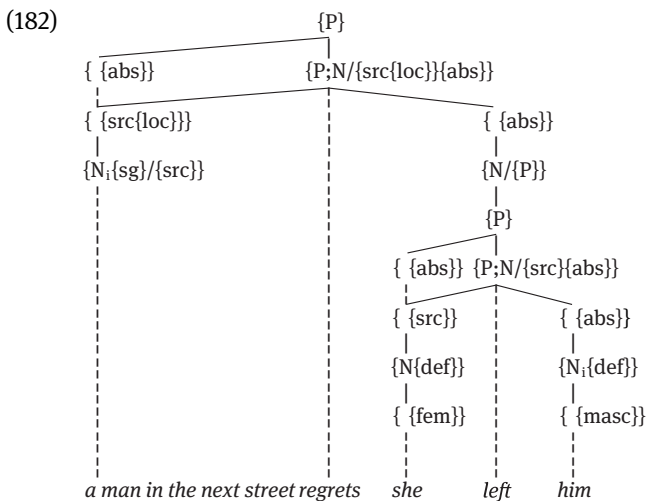
She in (182) may refer cotextually or contextually, as can *him*, but the latter can also be coreferential specifically within the predication, as indicated by the co-indexing. Coreference is, of course, asymmetrical: only the actively corefering pronoun *him* in (182) is normally necessarily definite; and it is it that looks for a compatible coreferent, normally in preceding or superordinate structure – or the context.

There are other such 'pro'-categories. I have already invoked covert 'pro-verb' in relation to lexical structure; and some dedicated pro-verbs can participate overtly; however, they are not coreferential, but co-indexing indicates agreement in signification. Such is illustrated in (183a–b), the former of which we might represent as in (183c), given that (183b) confirms that *did* here contains a {P}, – though with a covert subjoined pro-verb.

(183) a. They said it would rain and it did
       b. They said it would rain but it didn't

c.

d.

e.

```
                                                      {P{past}}
                                                         |
                                                      {P/{ {top}}}
                    _____|
          { {abs}}                                       {P}
                                         _____|
                                       { {abs}}    |   {P;N/{src{loc}}{{gol}}/{P;N}}
                                      _____|       _____|
                                   { {src{loc}}}|    |    { {loc{gol}}/{P;N}}
   {P;N_j{top}_i/{src}}              {N_i}       |  |        {P;N_j}
    _____|
   {P;N/{abs}{{src}}{loc}}    { {abs}}
    _____|
  { {abs}}  { {{src}}}    { {loc{gol}}}
     |          |             |
    {N}        {N_i}         {N}

   forgive      her          he   didn't want  to
```
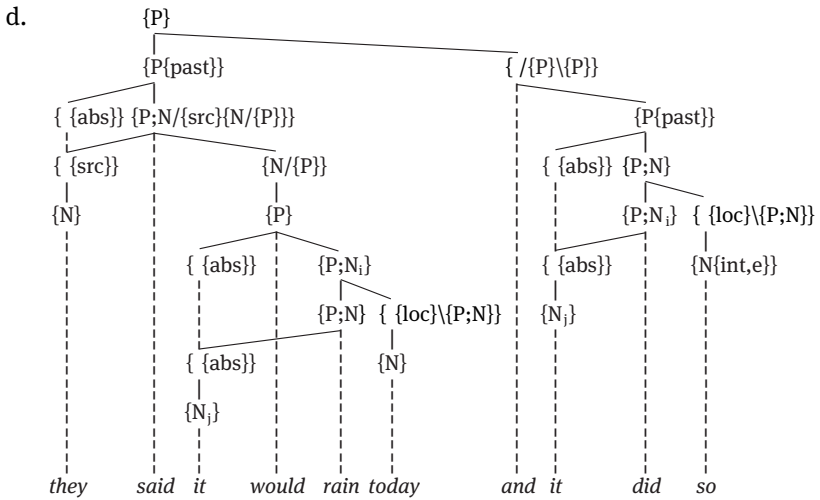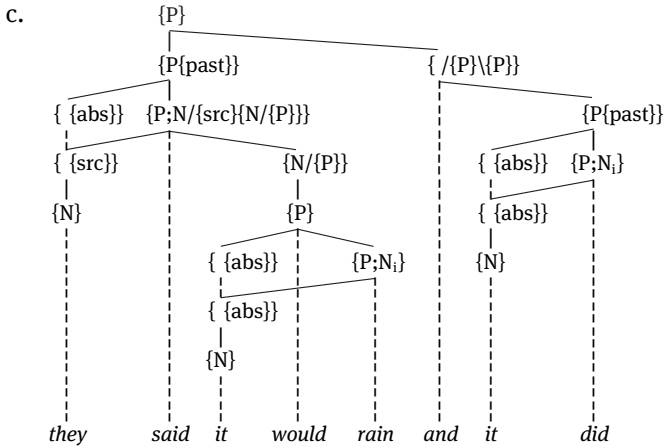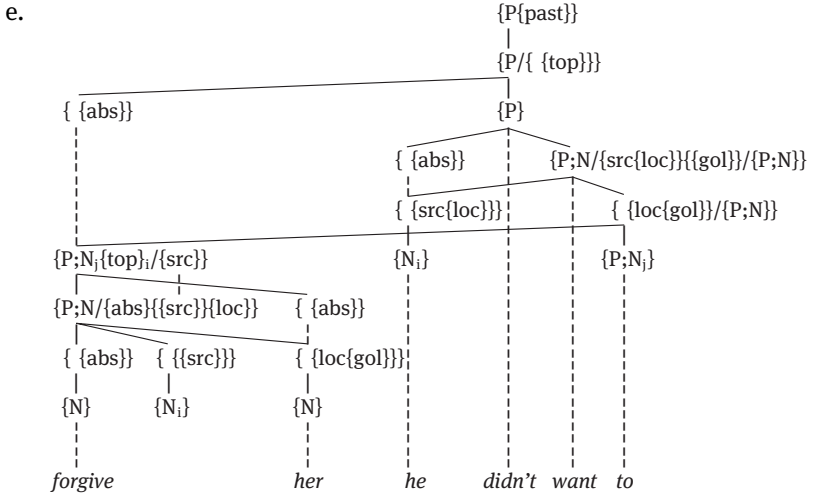
The structure in (183c) may be added to as in (183d), with an adverbial extension of the pro-verb. This extension is a circumstantial occurrence of the emphatic existential *so* of *It is/was so*. Finally, (183e) illustrates the role of co-indexing in topicalization, involving in this case a non-overt co-indexed non-finite pro-verb.

In (184a) the main-clause verb is co-indexed, and it also has the familiar extension *so*, but here the latter is simply the inclusivity-marking topic in a routinized topic ('verb-second') construction, as in (184e).

(184) a. They said it would rain and so did I
       b. They said it would rain and I did too
       c. They didn't say it would rain and I didn't either
       d. They didn't say it would rain and neither did I

e.

```
                        {P}
              {P{past}}              { /{P}\{P}}
        { {abs}} {P;Nᵢ/{src}{abs}}                      {P//{top}}
      { {src}}            { {abs}}      { {abs}}      {P{past}}
        |                   |              |             |
       {N}               {Nₖ/{P}}         |           {P;N}
                          {P{MODAL}}    { {loc{top}}\{P;Nᵢ}}  {P;Nᵢ/{src}{abs}}
                      { {abs}}  {P;N}      |            { {abs}}  { {src}}
                      { {abs}}             {N}            |         |
                        |                                {N}     {N{def}}
                       {N}                                          |
                                                                 { {ego}}

     they    said   it    would   rain  and   so              did      I
```

f.

```
                      {P}
            {P{past}{neg}}            { /{P}\{P}}
      { {abs}}        {P;Nᵢ/{src}{N/{P}}}              {P{past}{neg}}
    { {src}}                  { {abs}}      { {abs}} {P;N}
      |                         |            { {src}} { {abs}}
     {N}                      {N/{P}}      {P;Nᵢ/...}  { {loc}\{P;Nᵢ}}
                             {P{MODAL}}      { {src}} { {abs}}  {N{2{sg}}}
                         { {abs}}  {P;N}       |        |
                         { {abs}}             {N}      {N}
                           |                  |
                          {N}               {ego}

   they  didn't  say  it   would  rain  and   I    didn't    either
```
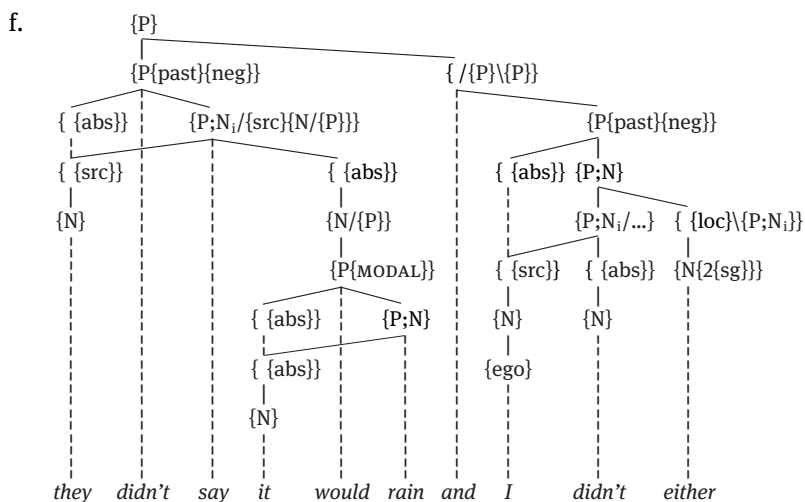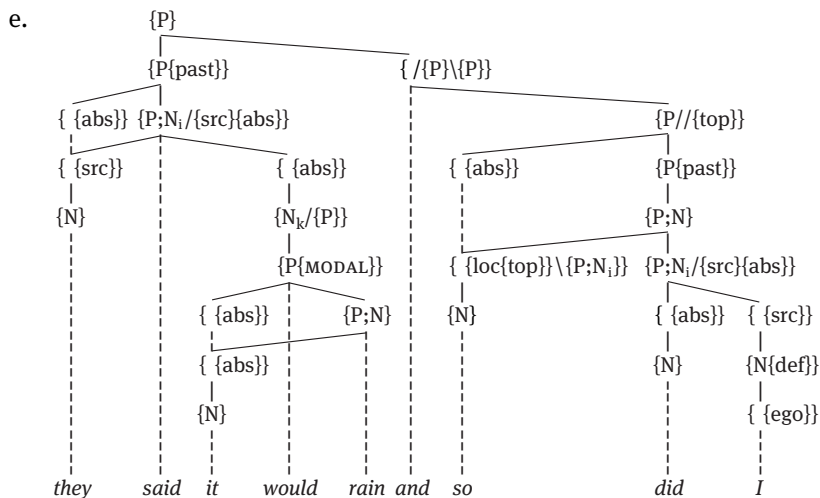
A post-verbal circumstantial occurs in (184b), an often emphatic inclusive *too*. And the equivalent of this where negation is involved is (184c), represented as in (184f). Here we have a disjunctive modifier of the negation that is coordinated with the preceding negation: it marks a joint (coordinated) exclusion of two alternatives. In (184d) the negative disjunctive is topical, like the inclusive in (184a). Both of (184e–f) involve active modifiers.

Compare such overt pro-verbs as those in (183a–b) and (184a–d) with the ellipsis in (185a), represented in outline as in (185c) – again with much abbreviated verbal valencies, internal structures, and existentials, as is even more so the representation of (185b) in (185d) for one type of 'tag-question'.

(185) a. I asked Bill to dance but he didn't want to
     b. Bill dances, doesn't he?

c.
```
                    {P}
                     |
        {P{past}}                    { {adv}/{P}\{P}}
                                              |
{ {abs}} {P;N/{src}{abs}{loc/{P;N}}}              {P{past}{neg}}

{ {src}}  :   { {abs}} { {loc}/{P;N}}   { {abs}}  :   {P;N/{src…}}{loc/{P;N}}}
    |     :       |          |             |      :
   {N}    :     {Nj}    {P;Ni/…}        { {src…}} :      { {loc}/{P;N}}
          :               |                |      :            |
          :            { {src…}}          {Nj}    :        {P;Ni/…}
          :               |                      :            |
          :             {Nj}                     :       { {src{abs}}}
          :                                       :            |
          :                                       :          {Nj}

    I       asked Bill    to  dance      but he   didn't want  to
```

d.
```
                    {P}
                     |
        {P{decl}}         {P/{P{q}//{0}}\{P{decl}}}}
            |                        |
           {P}                  {P{q}//{0}}
                                     |
   { {abs}}   {P;Ni/{src{abs}}}  {P{neg}{0}}

{ {src{abs}}} :              {P;Ni}   { {abs}}
    |         :                |         |
   {Nk}       :                :      {Nk{def}}
    |         :                :         |
   { B}       :                :      { {masc}}

  Bill        dances       doesn't  he
```
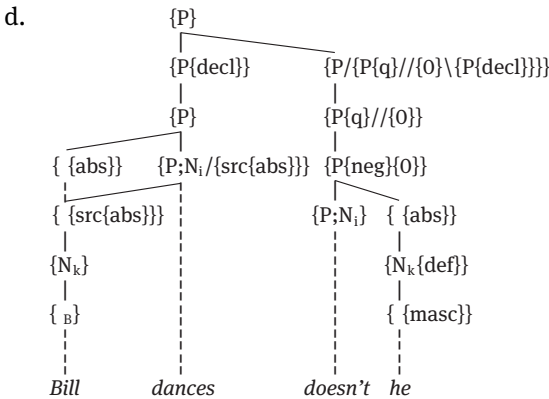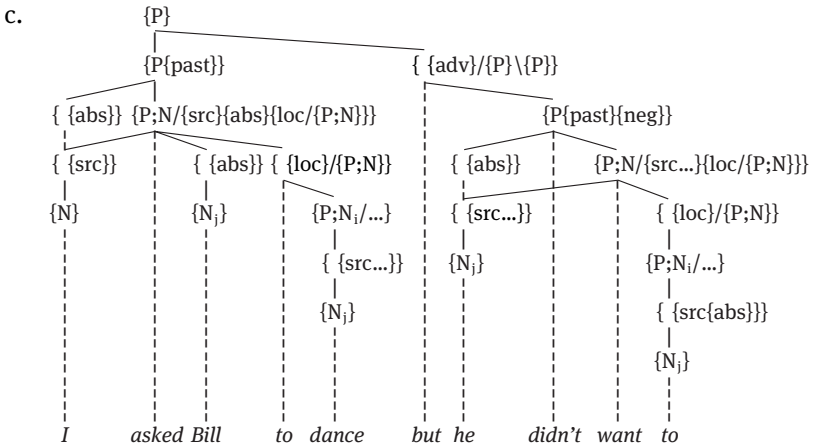
In (185c), as well as the co-indexed non-finite verbs, there are also both overt and covert coreferences to the reluctant Bill, whereas in the tagged (185d) there is both an covert pro-verb and an overt pronoun.

It behoves us to also exemplify covert co-indexed predicative pro-nouns and pro-adjectives, as illustrated in (186a–b), where I have also included within brackets the overt equivalents, though *such/so* are rather formal.

(186)   a.   They say Eddie is a winner and he certainly is (one/such)
      b.   They say Eddie is clever and he certainly is (so)

(187a), representing the longer version of (186a), provides a pronoun, though not a definite, so co-denotative rather than coreferential; and in (187b), representing the short variant of (186b), we find only covert co-indexing.

(187)   a.

```
                      {P}
         ┌─────────────┴──────────────────┐
        {P}                            { /{P}\{P}}
   ┌─────┴─────┐                             │
{ {abs}}  {P;N/{src}{abs}}                  {P}
   │      ┌────┴──────┐              ┌────────┴────────┐
{ {src}} ┆        { {abs}}      { {loc}\{P}}         {P}
   │     ┆           │              ┌──┴──┐       ┌───┴────┐
  {N}    ┆        {N/{P}}       { {abs}}  ┆     ┆      {Nᵢ{sg}}
   │     ┆           │             │      ┆     ┆         │
   ┆     ┆       {P/{abs}{N}}   {Nⱼ{def}} ┆     ┆       { }
   ┆     ┆      ┌────┴────┐        ┆      ┆     ┆
   ┆     ┆  { {abs}}  {N{sg}}      ┆      ┆     ┆
   ┆     ┆      │       ┌─┴─┐      ┆      ┆     ┆
   ┆     ┆    {Nⱼ}      ┆  {Nᵢ}    ┆      ┆     ┆
   ┆     ┆      │       ┆   │      ┆      ┆     ┆
   ┆     ┆    { ᴇ}      ┆ {N;P}    ┆      ┆     ┆
  they  say  Eddie  is  a  winner and  he  certainly   is   one
```

    b.

```
                      {P}
         ┌─────────────┴──────────────────┐
        {P}                            { /{P}\{P}}
   ┌─────┴─────┐                             │
{ {abs}}  {P;N/{src}{abs}}                  {P}
   │      ┌────┴──────┐              ┌────────┴────────┐
{ {src}} ┆        { {abs}}      { {loc}\{P}}         {P}
   │     ┆           │              ┌──┴──┐            │
  {N}    ┆        {N/{P}}       { {abs}}  ┆          {P.N}
   │     ┆           │             │      ┆            │
   ┆     ┆     {P/{abs}{P.N}}    {Nⱼ}    ┆         {P:Nᵢ}
   ┆     ┆      ┌────┴────┐        ┆      ┆
   ┆     ┆  { {abs}}   {P.N}       ┆      ┆
   ┆     ┆      │         │         ┆      ┆
   ┆     ┆    {Nⱼ}     {P:Nᵢ}       ┆      ┆
  they  say  Eddie   is  clever   and  he  certainly   is
```
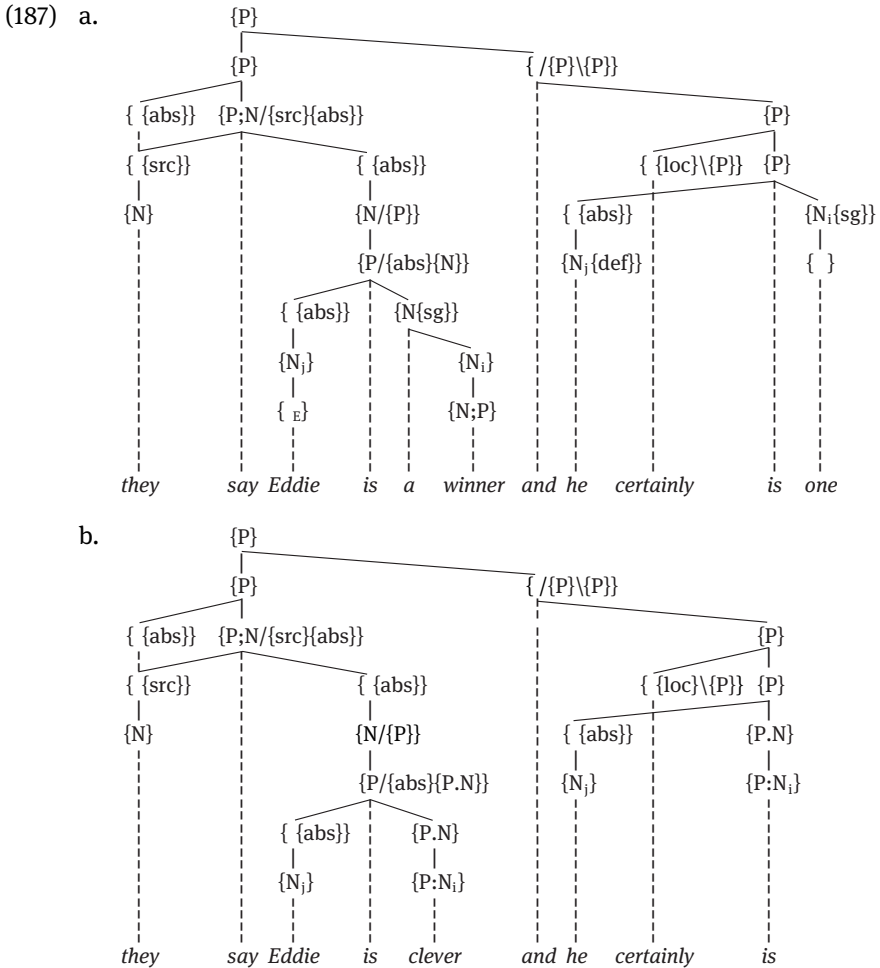
These also contain overt coreferential {N}s, of course.

    {N} is involved very generally as a coreferring pro-category in relative clauses, as we have already encountered in Part I. We find both covert and overt instances in (I.199a) and (I.200) respectively.

(I.199) a. {N{def}}
             |
             {N}
             ┌─────────────┐
             {N_i/{src}}   {N/{P//{N_i}}\{N/{src}}}
                  | { {src}} | {P}
                  | | | ┌──────────────────┐
                  | {N} | { {abs}}   {P;N/{src{loc}}{abs}}
                  | | | | |
                  | {N;P} | { {src{loc}}}   { {abs}}
                  | | | | |
                  | | | {N}   {N_i{def}}
                  | | | | |
                 the pipe *that   Bill*   *adores*

(I.200) {N{def}}
         |
         {N}
         ┌──┐
         {N_i{src}}   {N/{P//{top}}\{N/{src}}}
              | { {src}} |
              | | {P//{top}}
              | {N}   { {abs}} |
              | | | {P}
              | {N;P} | { {abs}}   ┌──────────────────┐
              | | | | { {src{loc}}} {P;N/{src{loc}}{abs}}
              | | { {abs}} | | |
              | | | | {N} |
              | | {N_i{top,def}}   {N} | |
              | | | | | |
            the pipe   *which*   *Bill*   *adores*
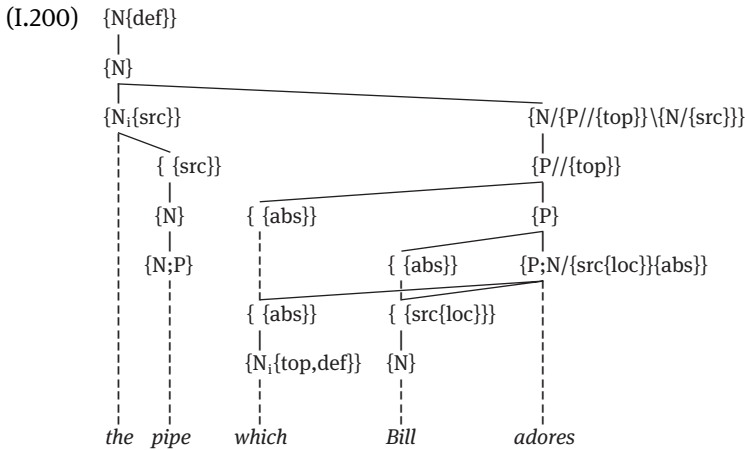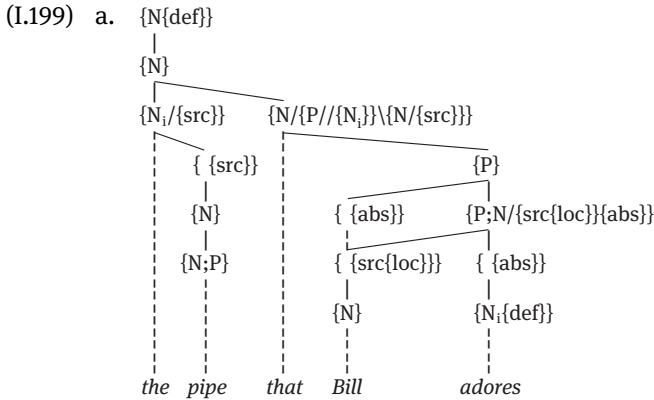
The finiteness determiner in (I.199a) may also be non-overt (as in structure (I.199b) of Chapter 16).

Relative-containing structures such as the above can appear on both or either side of the copula, as in the equatives in (188).

(188) a. The book I bought was the one Sheila mentioned
       b. John is the one who wrote the book
       c. The one who bought that book was Sophie

All of these predications assert coreference of the two arguments – in the same way as *Phosphorus is Hesperus* – and are symmetrical, barring difference in topicality, whereas within the relative clause argument itself we have presupposed coreferentiality. (188a) has the unmarked topic in subject position. The structural

difference between these co-indexings is illustrated in (189), a suggested representation of (188b), with marked topic, which attempts to capture the combination of asserted and presupposed coreferentiality that is in common among (188).

(189)

{P/{loc/{N{int,e}}}}

{P{j=i}/{abs/{def$_j$}}{abs/{def//$_i$}}} .... { {loc}}

{ {abs}}   { {abs}}   {N{int,e}}

{N$_j${def}}   {N{def}}

{ $_K$}   {N}

          {N$_i$/{src}}   {N/{P//{top}}\{N$_i$/{src}}}

          { {src}}   {P//{top}}

          {N} { {abs}}   {P}

          { } { {abs}}   {P;N/{src}{abs}}

               { {src}}   { {abs}}

               {N$_i${top,def}}   {N{def}}

               { {human}}   {N/{src}}

                                  { {src}}

                                  {N}

                                  {N;P}

John   is   the one who   wrote   the book
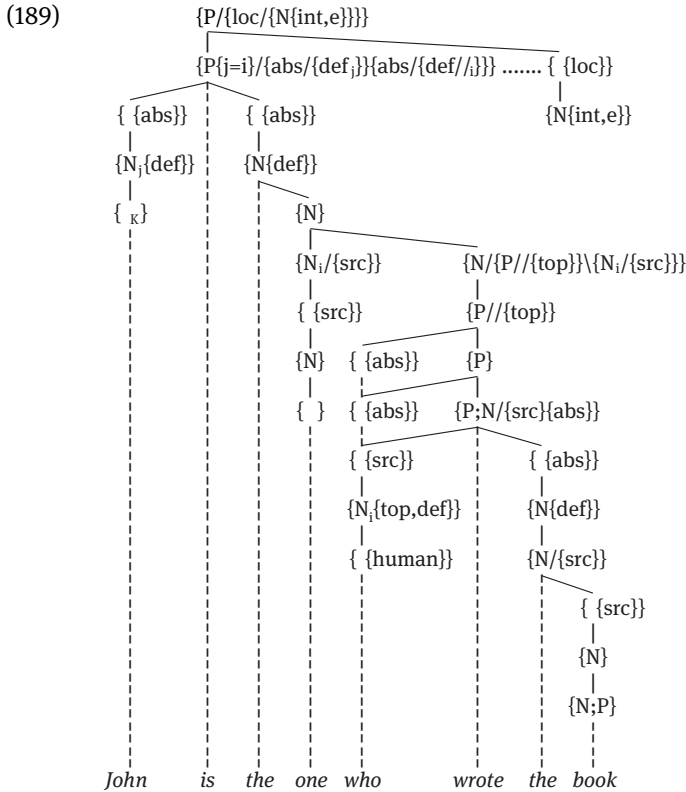
The acquired subscripting associated with *John*, which identifies him as the writer, is the asserted result of the copula equation. Such equatives throw, I suggest, some light on a different aspect of coreference.

What is of particular interest in this area is the so-called 'cleft' structure of (190a), where non-expletive subject formation and thus the usual copula construction seem to have failed, with the absence of a conventional antecedent for the relative pronoun, whose clause and *John* are thus juxtaposed on the same side of the copula, contributing to iconicity.

(190) a. It is John who wrote that book
      b. It is John wrote that book

Further, many speakers are familiar with the variant in (190b), where the status of *John* looks rather ambivalent. I suggest, however, that these sentences, (190a) and (190b), again differ simply in whether a coreferent is overt or covert.

Compare the proposed configurations in (191), in which the topic has been post-posed to the comment, and which abbreviate even the existential details and, as usual, omit other irrelevant details, including mood and tense.

(191) a.
```
                    {P/{loc/{N{int,e}}}}
             ┌──────────┘
        { {abs}}   {P{j=i}/{abs/{def_j}}{abs//{def_i}}}
          ┊     ┌────────┘
        { {abs}}  ┊   { {abs}}           { {abs}
          │       ┊     │                  │
        {N{def}}  ┊  {N_j{def}}        {N/{P//{top}}}
          │       ┊     │                  │
        { }       ┊   { κ}              {P//{top}}
          ┊       ┊     ┊        ┌──────────┘
          ┊       ┊     ┊   { {abs}}   {P}
          ┊       ┊     ┊     │      ┌──┘
          ┊       ┊     ┊   { {abs}}  {P;N/{src}{abs}}
          ┊       ┊     ┊     │        ┌────┘
          ┊       ┊     ┊   { {src}}  ┊   { {abs}}
          ┊       ┊     ┊     │        ┊     │
          ┊       ┊     ┊  {N_i{top,def}} ┊ {N{def}}
          ┊       ┊     ┊     ┊        ┊     ┊
          it      is  John  who      wrote that book
```

b.
```
                    {P/{loc/{N{int,e}}}}
             ┌──────────┘
        { {abs}}   {P{j=i}/{abs/{def_j}}{abs//{def_i}}}
          ┊     ┌────────┘
        { {abs}} ┊   { {abs}}  { {abs}
          │      ┊     │         │
        {N{def}} ┊  {N_j{def}} {N/{P//{top}}}
          │      ┊     │         │
        { }      ┊   { κ}     {P//{top}}
          ┊      ┊     ┊         │
          ┊      ┊     ┊        {P}
          ┊      ┊     ┊         │
          ┊      ┊     ┊     {P;N/{src}{abs}}
          ┊      ┊     ┊      ┌────┘
          ┊      ┊     ┊   { {src}}   { {abs}}
          ┊      ┊     ┊     │          │
          ┊      ┊     ┊  {N_i{top,def}} {N{def}}
          ┊      ┊     ┊     ┊          ┊
          it     is  John  wrote      that book
```
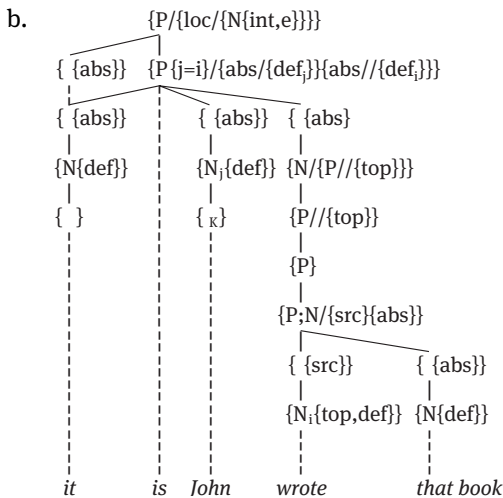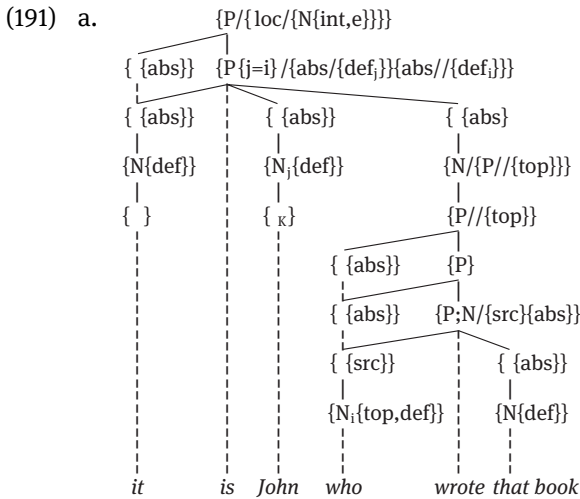
In these structures subject formation fails, and an expletive is introduced, subjoined to two free absolutes. As a result the equative relation is intensified by simple juxtaposition of coreferential arguments, with the fronting of the copula foregrounding the assertion of the truth of the equation. We have another form of iconicity.

We find a similar situation with the overt 'existential' examples discussed in Chapters 33 & 35, particularly (II.267b), an abbreviated version of which, namely (192a), is represented in (192b), since we're not interested in scope at this point, or the internal structure of *please*:

(II.267)   b.   There are some of the dishes (that) pleased every guest
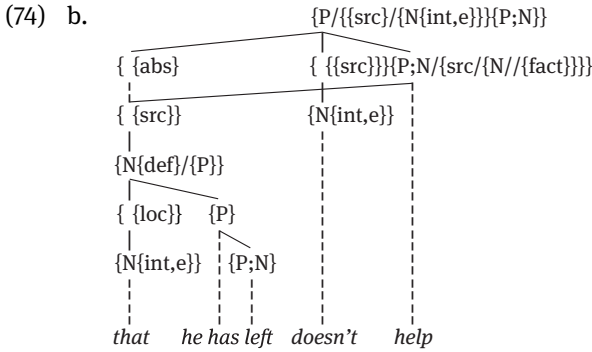
(192)   a.   There are some dishes pleased the guests

   b.

c.

```
                        {P//{top}}
        ┌──────────────────┘
    { {abs}}        {P/{loc/{N{int,e}}}}
        │    ┌──────────┘
    { {abs}}        {P/{abs/{N_i/{src}}}{loc/{N{int,e}{top}}}}
        │    ┌──────────┘
    { {loc}}  ┊   { {abs}}
        │     ┊     │
  {N{int,e}{top}} ┊  {N}
        ┊     ┊  ┌───┴────────┐
        ┊     ┊ {N_i/{src}}  {N/{P}\{N_i{src}}}
        ┊     ┊          ┌────┘
        ┊     ┊      { {src}}   {P}
        ┊     ┊         │        │
        ┊     ┊        {N}    {P;N/{src}{abs}}
        ┊     ┊         │     ┌────┘
        ┊     ┊       {N;P}  { {src}}  { {abs}}
        ┊     ┊              │         │
        ┊     ┊            {N_i}    {N{def}}
        ┊     ┊                       │
        ┊     ┊                   {N/{src}}
        ┊     ┊                        ┌──┘
        ┊     ┊                      { {src}}
        ┊     ┊                         │
        ┊     ┊                        {N}
        ┊     ┊                         │
        ┊     ┊                       {N;P}
        ┊     ┊
      there  are some  dishes  pleased  the  guests
```
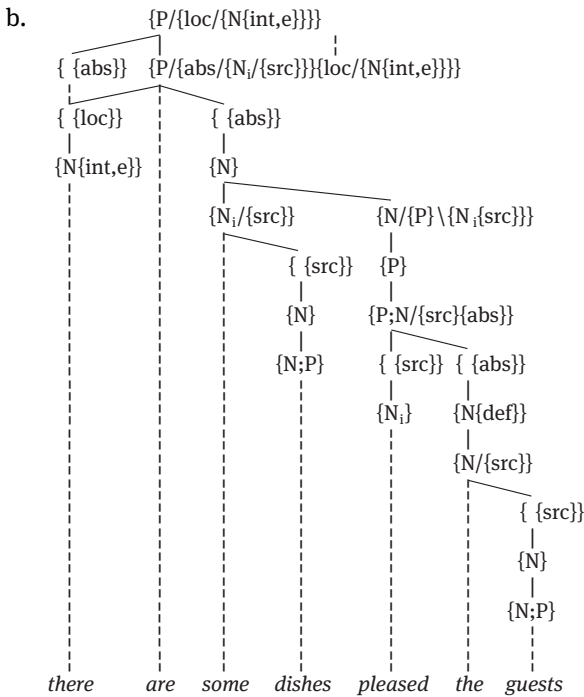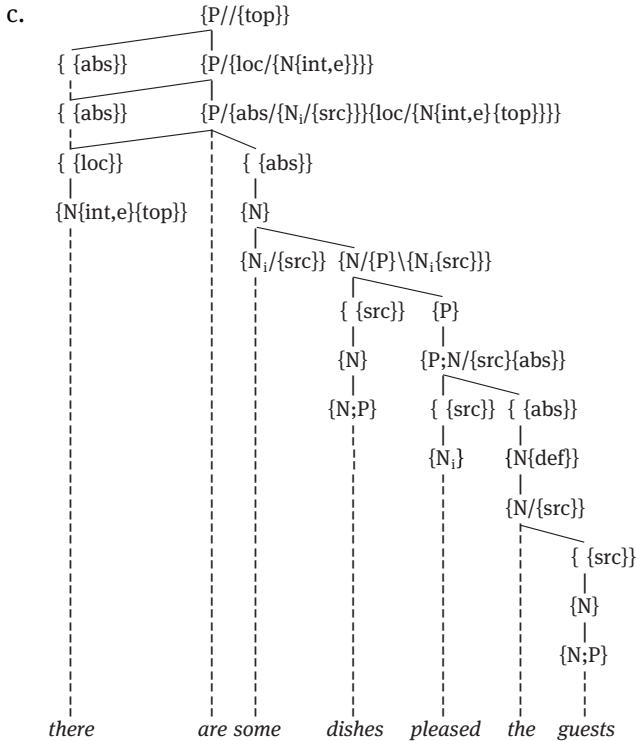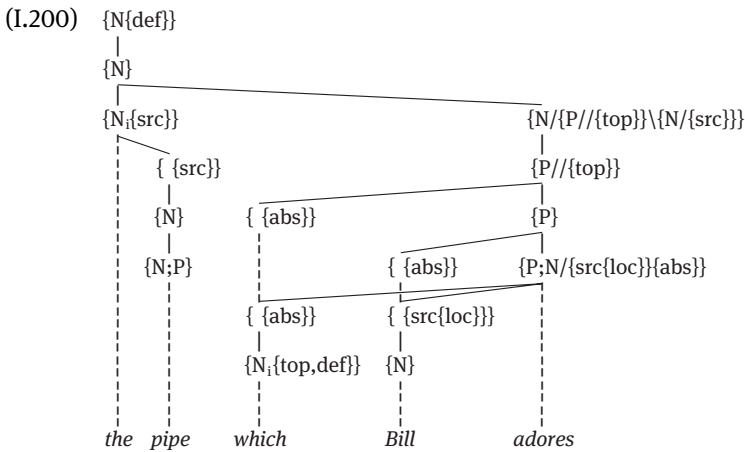
(192a/b) is the minimal version of this kind of *there*-existential, with neither overt relative pronoun nor overt finiteness determiner, but it asserts the existence of the correlation between 'some dishes' and 'guest pleasers', via the co-indices. However, if (191) 'foregrounds the truth of the equation' therein, (192a) might be said to place the existential phrase associated with a participant in topic position, by the same mechanism as in relatives. This is represented in (192c), which can also lack thus the lexical linking in (192b).

Both coreference and factuality can be asserted and presupposed, though involving different structural mechanisms. We saw that factual presupposition was associated with certain superordinate predicators, as in (74b), while normally any declarative is an assertion of factuality, even if over-assertive, indeed – as is perhaps the case in (180a–d).

(74) b.

```
                              {P/{{src}/{N{int,e}}}{P;N}}
                  _____|_____
              { {abs}                      { {{src}}}{P;N/{src/{N//{fact}}}}
                 |                                |
              { {src}}                        {N{int,e}}
                 |
              {N{def}/{P}}
             ____|____
          { {loc}}    {P}
             |         |
          {N{int,e}}  {P;N}

            that    he has left  doesn't    help
```

(180) a. She actually played the sonata, frankly, outstandingly
       b. Frankly, she actually played the sonata outstandingly
       c. She actually played the sonata outstandingly, frankly
       d. She, frankly, actually played the sonata outstandingly

And we have just been looking at the presupposition of coreferentiality associated with co-indexed definite {N}s, as represented in (I.200), and the assertion of coreferentiality typical of equatives, as exemplified by the determiner phrase represented in (188).

(I.200)

```
        {N{def}}
           |
          {N}
        ___|_____
     {N_i{src}}                                      {N/{P//{top}}\{N/{src}}}
        |                                                     |
     { {src}}                                             {P//{top}}
        |                                                     |
      {N}      { {abs}}                                      {P}
        |         |                                  _____|
     {N;P}        |                           { {abs}}   {P;N/{src{loc}}{abs}}
              { {abs}}                            |
                 |      { {src{loc}}}
            {N_i{top,def}}   {N}

      the  pipe   which       Bill        adores
```

(188) a. The book I bought was the one Sheila mentioned
       b. John is the one who wrote the book
       c. The one who bought that book was Sophie

This apparent parallelism between the expressions of factuality and identification is perhaps to be expected, given the roles of {N} as both referring to individuals and as the bearer of existentiality/factuality, thus both the crucial links between the complexities of grammar and the immediately perceived world.
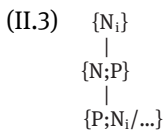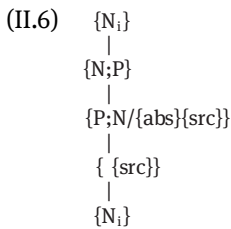
We conclude this Fit, and the whole work, with a final manifestation of co-indexing that is both remarkable and long-overdue for attention here. And it belongs to an extensive domain that has been neglected as a whole; my glimpse at it here will not much compensate for the neglect, I fear. We will be concerned in this final chapter with pre-utterance phonology as an expression of syntax, an anticipation to make any grammarian hesitate.

Chapter 42
Co-indices and Pre-utterance Phonology

co-indices again, in lexicon and syntax – co-indexing and coreference – contextual ellipsis – cliticization and morphology – pre-utterance phonology – intonation and co-indexing – coda on prosodies
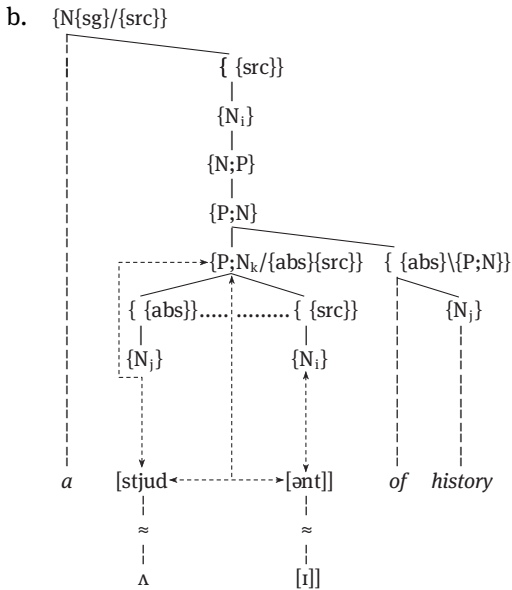
In various places in the preceding we have studied the role of co-indexing in both lexicon and syntax. In the lexicon, the co-indexing is typically covert. In (II.6) from Chapter 18 a noun is derived from a verb metonymically: the noun is co-indexed with a participant of the verb, but there is no overt signal of this in many of the derived nouns to which this formulation is appropriate, as with *cook,* the noun based on the verb *cook*, where the noun denotes an agent in a particular activity.

(II.6) $\{N_i\}$
             |
          $\{N;P\}$
             |
          $\{P;N/\{abs\}\{src\}\}$
             |
          $\{ \{src\}\}$
             |
          $\{N_i\}$

(II.3) $\{N_i\}$
             |
          $\{N;P\}$
             |
          $\{P;N_i/...\}$

In (II.3) the denotation of the noun is co-indexed with the verb itself: there is simply a change in the mode of signification, as in the action noun *walk* derived from the verb *walk*.

However, in such as (III.170a) from Chapter 27 the co-indexing is signalled by the suffix attached to the derived noun, as spelled out for the long-suffering student in (III.6b), which also indicates the alternations between source of the base and derived form.
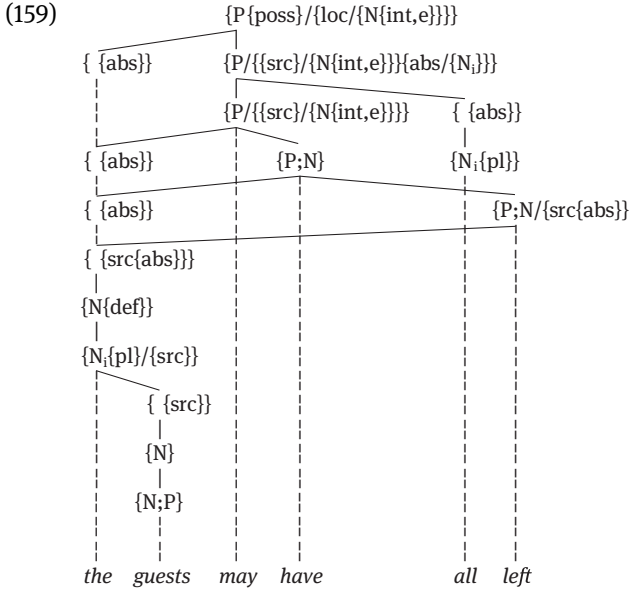
(III.6) a.   a student of history

b.   {N{sg}/{src}}

{ {src}}
|
{N$_i$}
|
{N;P}
|
{P;N}

{P;N$_k$/{abs}{src}}   { {abs}\{P;N}}

{ {abs}}.............{ {src}}   {N$_j$}
| |
{N$_j$}   {N$_i$}

a   [stjud◄--------►[ənt]]   *of   history*

≈   ≈
| |
Λ   [ɪ]]

Here the co-indexed agentive participant is expressed in the morphology by the substitution of the *-ent* suffix for the *-y* of the source and the change of class is also accompanied by a vowel alternation. More common and more regular as derived agentive markers are the suffixes *-er* and *-or*, of course.
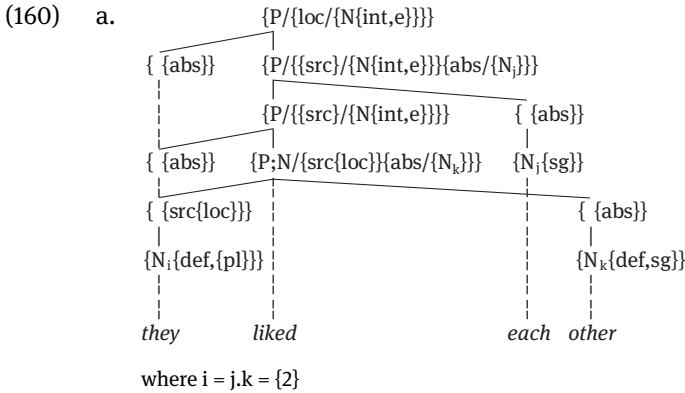
(III.6) also illustrates the role of co-indexing in linking the participant valencies of source verbs to the (optional) circumstantials that satisfy the valencies in the syntax. The establishing of these links is a phenomenon of the lexicosyntactic interface rather than of the lexicomorphological that was our concern in that Part. And this takes us in the direction of syntactic co-indexing, and particularly coreference, both overt and covert, an area that has been a major concern of this Fit.

Perhaps the most striking of coreferential links are those involving the 'mobile' universal quantifiers, as illustrated in the abbreviated (159) from Chapter 40.

(159)
{P{poss}/{loc/{N{int,e}}}}

{ {abs}} {P/{{src}/{N{int,e}}}{abs/{N$_i$}}}

{P/{{src}/{N{int,e}}}} { {abs}}

{ {abs}} {P;N} {N$_i${pl}}

{ {abs}} {P;N/{src{abs}}}

{ {src{abs}}}

{N{def}}

{N$_i${pl}/{src}}

{ {src}}

{N}

{N;P}

the   guests   may   have   all   left

The 'mobility' depends on the double-negative analysis of universal quantifiers.

Chapter 40 also illustrated more complex relations among coreferents than simple 1-to-1 correspondence, as in the reciprocal in (160a).

(160)   a.
{P/{loc/{N{int,e}}}}

{ {abs}} {P/{{src}/{N{int,e}}}{abs/{N$_j$}}}

{P/{{src}/{N{int,e}}}} { {abs}}

{ {abs}} {P;N/{src{loc}}{abs/{N$_k$}}} {N$_j${sg}}

{ {src{loc}}} { {abs}}

{N$_i${def,{pl}}} {N$_k${def,sg}}

they   liked   each   other

where i = j.k = {2}

Prominently illustrated too in Chapter 40 was the role of coreference in relative clauses, already familiar from Part I, particularly in the discussion of subordinating constructions – as well as being recalled in the chapter immediately preceding this one.

Chapter 40 introduced also the role of coreference in grammatical ellipsis, including so-called 'parasitic gaps', such as that in (168).

(168) a. The book that Jack dismissed without reading

b.
```
     {N{def}}
        |
      {N}
      ┌─────────────────────┐
  {Nᵢ/{src}}              {N/{P//{Nᵢ}}\{N/{src}}}
   ┌────┐                         |
   ┆  { {src}}                   {P}
   ┆    |                   ┌──────────┐
   ┆  {N}       { {abs}}  {P;N}
   ┆    |         ┆    ┌──────────────┐
   ┆  {N;P}       ┆  {P;N/{src}{abs}}  { {loc{src}}\{P;N/{P;N{n}}}}
   ┆    |     ┌───┆────┐          ┆            |
   ┆  {N;P} { {src}} { {abs}}     ┆      {P;N{n}/{src}{abs}}
   ┆    ┆     |        |          ┆        ┌────────┐
   ┆    ┆   {Nⱼ}    {Nᵢ{def}}     ┆   { {src}} ....{ {abs}}
   ┆    ┆     ┆        ┆          ┆        |          |
   ┆    ┆     ┆        ┆          ┆      {Nⱼ}       {Nᵢ}
   ┆    ┆     ┆        ┆          ┆        ┆          ┆
   ┆    ┆     ┆        ┆          ┆        ┆          ┆
  the  book  Jack   dismissed        without   reading
```
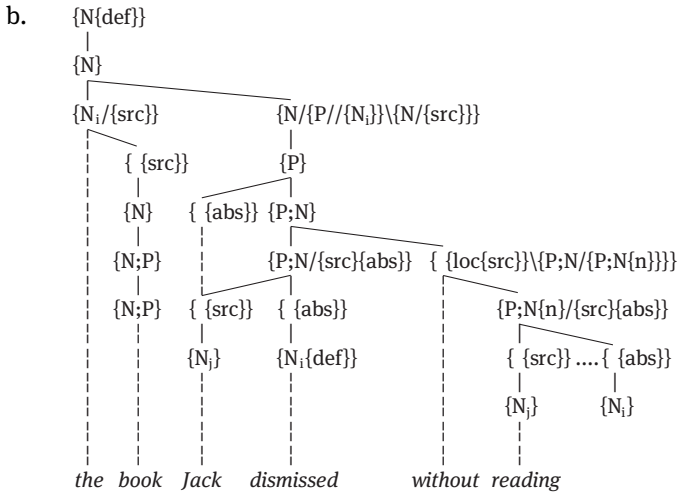
We can observe alternation between ellipsis and overt pro-form, such that (168a) could be replaced by *the book Jack dismissed without reading it*. This assumes that both covert (by ellipsis) and overt coreference involve co-indexed {N}s.

Chapter 41 pursues this theme, among other things, and introduces other categories that can participate in co-indexing, but involving shared significance rather than (co)reference. (183a) exemplifies a verbal pro-form, and (185) illustrates both ellipsis and verbal co-indexing (as well as coreference).
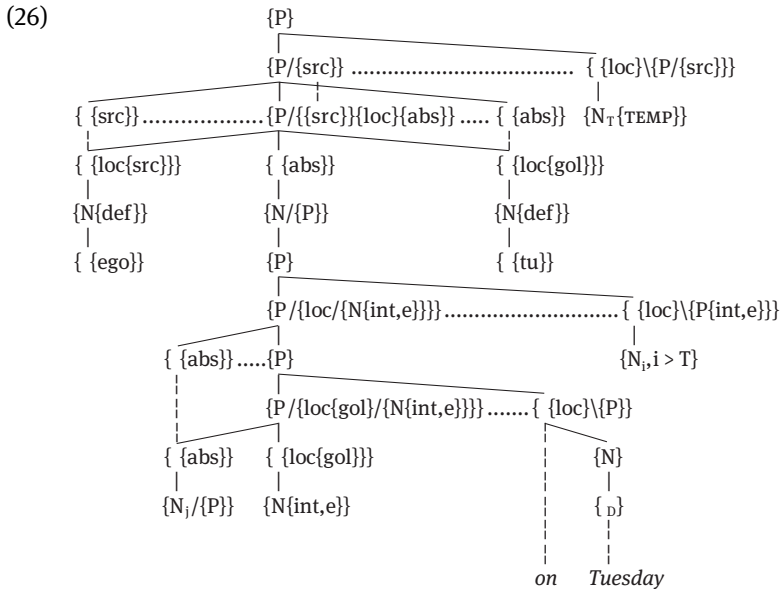
(183) a. They said it would rain and it did

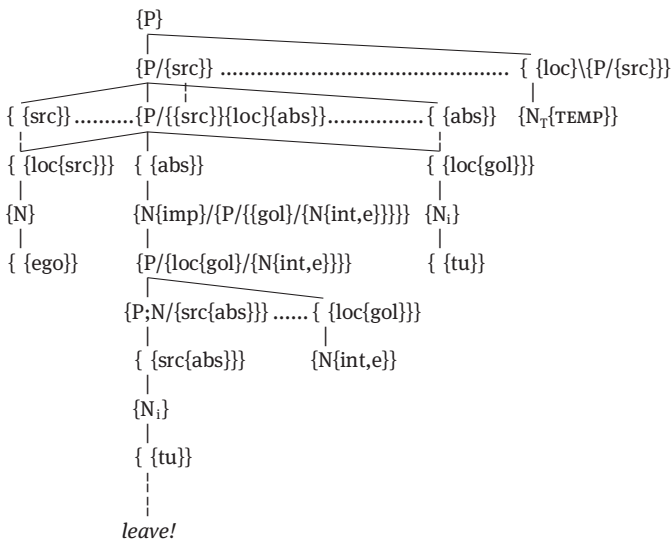(185) a. I asked Bill to dance but he didn't want to

b.

```
                        {P}
            {P{past}}              { {adv}/{P}\{P}}
   { {abs}} {P;N/{src}{abs}{loc/{P;N}}}        {P{past} {neg}}
  { {src}}   { {abs}} { {loc}/{P;N}}    { {abs}}  {P;N/{src...}{loc/{P;N}}}
   {N}         {Nj}    {P;Ni/...}      { {src...}}   { {loc}/{P;N}}
                       { {src...}}       {Nj}        {P;Ni/...}
                         {Nj}                        { {src{abs}}}
                                                        {Nj}

    I      asked Bill   to  dance    but he   didn't  want  to
```
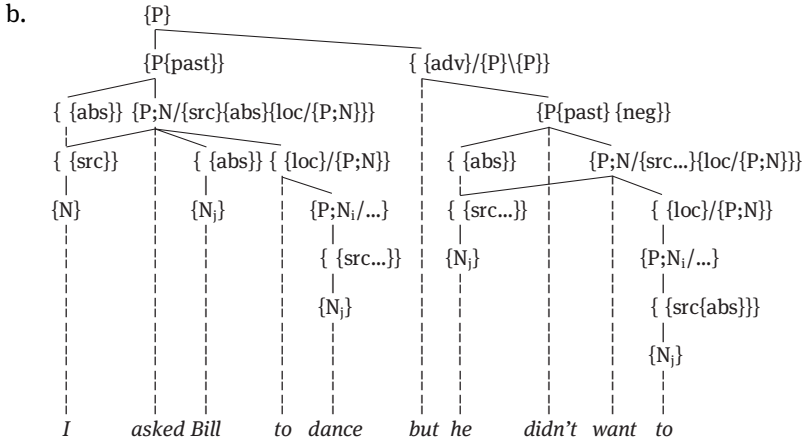
Also illustrated in that chapter are predicative adjectival and nounal overt and covert (elliptical) co-indexing.

We should also recall functional grammatical ellipsis that is resolved contextually, both by virtue of the utterance being an answer or by reference to a speech participant. The first is illustrated by (26) from Chapter 35, where the recipient of the utterance must retrieve a previous {N/P} that fits as a question that invited such an answer, and can be retrospectively co-indexed with the lower {P/N} in the answer, and the latter is illustrated by (14) from the same chapter.
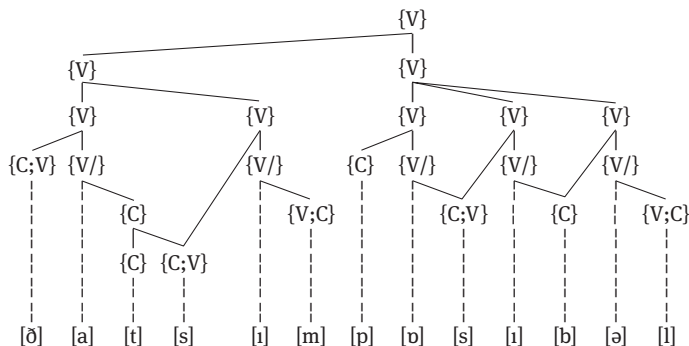
(26)

```
                              {P}
              {P/{src}} ................................. { {loc}\{P/{src}}}
 { {src}} ................{P/{{src}{loc}{abs}}} ..... { {abs}}  {N_T{TEMP}}
 { {loc{src}}}              { {abs}}              { {loc{gol}}}
  {N{def}}                  {N/{P}}               {N{def}}
  { {ego}}                    {P}                  { {tu}}
              {P /{loc/{N{int,e}}}}..........................{ {loc}\{P{int,e}}}
     { {abs}} .....{P}                                  {Ni, i > T}
            {P/{loc{gol}/{N{int,e}}}} .......{ {loc}\{P}}
       { {abs}}   { {loc{gol}}}              {N}
       {Nj/{P}}   {N{int,e}}                 { D}

                                          on      Tuesday
```

(14)
```
                        {P}
                         |
              {P/{src}} ............................................. { {loc}\{P/{src}}}
                 | |                                                    |
     { {src}} .........{P/{{src}}{loc}{abs}}................ { {abs}}   {N_T{TEMP}}
        ⋮          |                                            |
     { {loc{src}}}  { {abs}}                              { {loc{gol}}}
        |            |                                        |
       {N}        {N{imp}/{P/{{gol}/{N{int,e}}}}}           {N_i}
        |            |                                        |
     { {ego}}     {P/{loc{gol}/{N{int,e}}}}               { {tu}}
                     |
                 {P;N/{src{abs}}} ...... { {loc{gol}}}
                     |                        |
                 { {src{abs}}}           {N{int,e}}
                     |
                 {N_i}
                     |
                 { {tu}}
                     ⋮
                   *leave!*
```

Interpreting (14) depends on the addressee(s) knowing that they are (it).

But we now turn to what is perhaps the most spectacular indexing, which is not simply lexical or syntactic – though co-indexing in these domains can involve ellipsis, absence of overt expression. What concerns us now is co-indexing that links representation of syntactic sentences and their direct expression by phonological categories of pre-utterance, rather than the phonological expression of the content pole in the lexicon, where the sign relation is stored.

In Chapter 13 we looked briefly at some of the ways that in the lexical-to-pre-utterance interface a sequence of phonologically-realized word forms can be accommodated to each other to form a sentence and ultimately be implemented as (part of) an utterance. Both word and pre-utterance phonological representations are constructed with the same hierarchy of (suprasegmental) heads: associated with rhyme, syllable, foot and tone group. But the unmarked position for a pre-utterance tonic is on the last lexical tonic in the tone group, and lexical word tonics may be demoted in utterances in favour of other tonics; and a word's stray (unfooted) syllable may be accommodated in the foot ending the preceding word, or if (part-)utterance-initial may be accommodated by a 'silent' stress. There is thus a suprasegmental 'frotting', as well as a morphophonological.

Some of such accommodations are illustrated in (I.155) from Chapter 13, containing representations that omit secondary features and assume rhoticity:
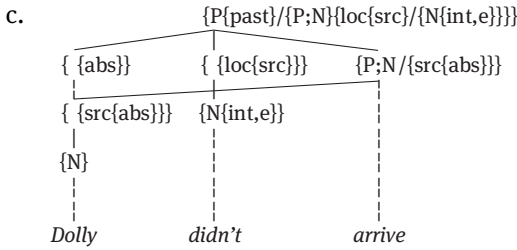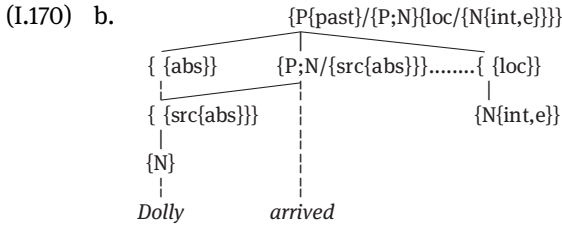
(I.155) a.

{V}
{V}   {V}
{V}   {V}   {V}   {V}   {V}
{C;V} {V/}   {V/}   {C} {V/}   {V/}   {V/}
{C}   {V;C}   {C;V}   {C}   {V;C}
{C} {C;V}

[ð] [a] [t] [s] [ɪ] [m] [p] [ɒ] [s] [ɪ] [b] [ə] [l]

b.

{V}
{ }   {V}   {V}
{V}   {V}   {V}
{C{u}} {V{ }/} {V;C{c}} {V{i}/} {C{v,u}} {V{i}/}
{V;C}   {C}   {V;C}

[⌂] [p]   [ə] [r] [m]   [ɪ] [t] [b]   [ɪ] [l]
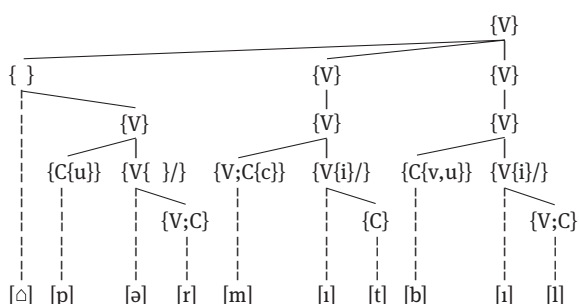
In (I.155a) the onset-less first syllable in *impossible* shares the final consonant in *that's,* and the latter word lacks a tonic. In (I.155b) we have an unvocalized or glottalized initial ictus, represented there as '[⌂]', and the lexical tonic of *permit* is also reduced to an ictus at this interface.

Additionally, (I.155a) also introduces the phenomenon illustrated by *that's,* where the copula can be said to be encliticized. This, however is not a synchronic phenomenon but is the result of a diachronic phonetic process of English and other languages that we have rather neglected along with its consequence, the presence of 'weak' forms. Most relevant here is the tendency for phonologically weak(ened), and often notionally light, expressions to attach themselves to a preceding phonological head, to be reinterpreted as synchronically part of its morphological structure. Synchronically, some lexical elements have alternative expressions, either as a separate word or an affix. Since I do not regard cliticization itself as synchronic, any more than the Great Vowel Shift, we should spend some time looking at how the resulting sequence is to be interpreted.
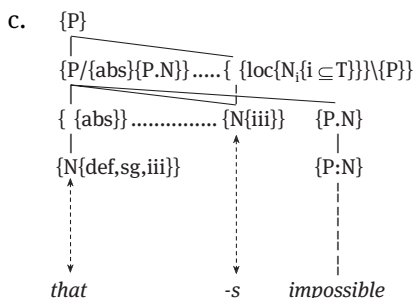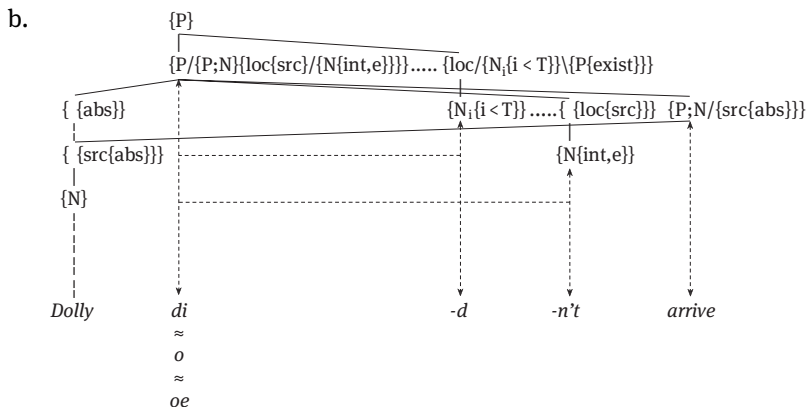
We encountered one morphological consequence of historical cliticization in Chapter 15, repeated, in Chapter 35, in the form of (I.170c), where a negative existential is subjoined to {P}.

(I.170) b.

{P{past}/{P;N}{loc/{N{int,e}}}}

{ {abs}}   {P;N/{src{abs}}}........{ {loc}}

{ {src{abs}}}   {N{int,e}}

{N}

Dolly   arrived

c.

{P{past}/{P;N}{loc{src}/{N{int,e}}}}

{ {abs}}   { {loc{src}}}   {P;N/{src{abs}}}

{ {src{abs}}}   {N{int,e}}

{N}

Dolly   didn't   arrive

Contrast (170b), where the existential and the main verb are both subjoined to {P}, and there is no direct expression of the positive value of the existential.

The situation is clarified if we spell out with respect to (I.170c) the morphological structure created by the diachronic cliticization, as in (193b), to compare with that in (193a) (rather than (I.170b)), which deconstruct the sentences both syntactically and morphologically.

(193) a.

{P}

{P/{P;N}{loc/{N{int,e}}}}......{loc/{N$_i${i < T}}\{P/{loc{int,e}}}}

{ {abs}}   {P;N/{src{abs}}}......{ {loc}}

{ {src{abs}}}   {N{int,e}}

{N}

Dolly   arrive   -d

b.

$\{P\}$

$\{P/\{P;N\}\{loc\{src\}/\{N\{int,e\}\}\}\} \ldots \{loc/\{N_i\{i < T\}\}\backslash\{P\{exist\}\}\}$

$\{\ \{abs\}\}$ $\{N_i\{i < T\}\} \ldots \{\ \{loc\{src\}\}\}$ $\{P;N/\{src\{abs\}\}\}$

$\{\ \{src\{abs\}\}\}$ $\{N\{int,e\}\}$

$\{N\}$

Dolly   *di*   *-d*   *-n't*   *arrive*

≈

o

≈

oe

c. $\{P\}$

$\{P/\{abs\}\{P.N\}\} \ldots \{\ \{loc\{N_i\{i \subseteq T\}\}\}\backslash\{P\}\}$

$\{\ \{abs\}\} \ldots\ldots\ldots\ldots \{N\{iii\}\}$ $\{P.N\}$

$\{N\{def,sg,iii\}\}$ $\{P:N\}$
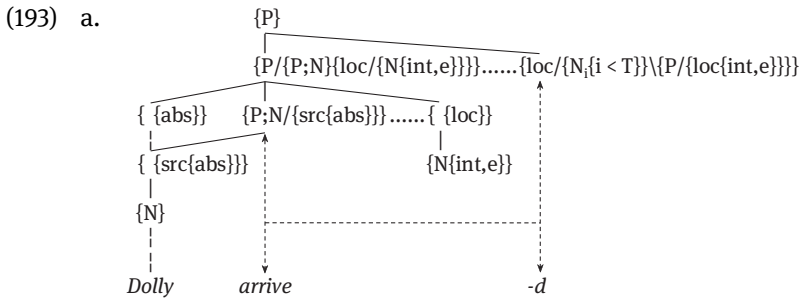
that   *-s*   *impossible*

d.   Your idea of a visit to Thessaloniki's impossible

(193b) embodies the claim that both the tense and existential locatives again coincide syntactically in sequence with {P}, but both tense and negation are expressed inflectionally, indeed by different endings; and the alternations associated with the paradigm of *do* are indicated.

In the supraphonological structure we can associate with (I.155a) above, on the other hand, we have morphologically an alternative, affixal manifestation of, in this instance, the person/number/tense features of the copula (number being redundant, if person is present), even though they are affixed to its subject, which is subjoined to {P}, giving (193c): the subject has been converted to a copula. We have already encountered a similar situation in inflectional languages, where the base noun form is subjoined to a functor, which is expressed inflectionally.

Clearly, in the present instance, the subject subjoined to the copula can be considerably more complex, of which (193d) is a rather modest example. The complex structures headed by {P} are thus not lexical phenomena, but are created at the interface, on the basis of the lexical entry for this copula form and what is chosen as the subject of the sentence on the basis of subject selection. As
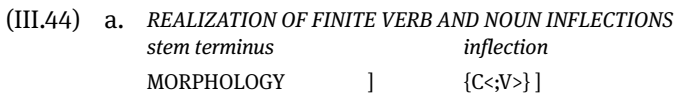
we have seen, the same lexico-syntactically-determined placing is also true of the English genitive, but it is a 'phrasal inflection' that does not reflect a change of major category.
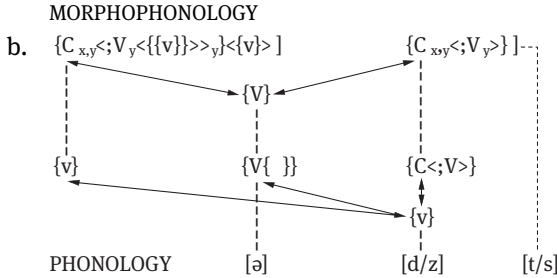
We might, nevertheless, remind ourselves of that expressional complexity of the genitive configuration, since the 'weak' form of *is* shows the same exponential variation. Let's recall the relatively simple representation of a genitive structure in (II.21d) from Part II, where the genitive inflection is voiced in accordance with the voicing of the preceding segment.

(II.21)   d.   {N{def}}
                    |
               {N/{src}}
               ┌──────────
               { {loc}}   { {src}}
                  | |
               {N{def}}   {N}
                  | |
               {N/{src}}   {N;P}
               ┌──────   ┆
               ┆   { {src}}   ┆
               ┆ | ┆
               ┆   {N}   ┆
               ┆ | ┆
               ┆   {N;P}   ┆
               ┆   ┆   ┆
               ┆   ┆   ┆
              the   girl's   spoon
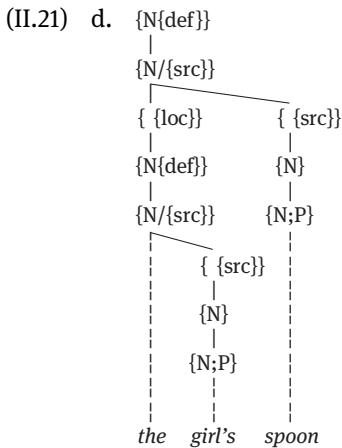
Here *spoon* satisfies the upper {N/{src}} in (II.21d) and *the girl* the lower one.

Just as the genitive inflection is varied in expression (it undergoes morphophonological 'frotting'), so the shape of the inflection in (193c) varies morphophonologically in accordance with the segment that ends the preceding formative. Both these variations, in genitive inflection and 'weak' operative *-s*, are in conformity with the relevant parts of the redundancy as diagrammed in (III.44) from Chapter 29:

(III.44)   a.   *REALIZATION OF FINITE VERB AND NOUN INFLECTIONS*
                    stem terminus   *inflection*
                MORPHOLOGY   ]   {C<;V>}]

MORPHOPHONOLOGY

b. $\{C_{x,y}<;V_y<\{\{v\}\}>>_y\}<\{v\}>]$ $\{C_{x,y}<;V_y>\}]$

         $\{V\}$

$\{v\}$ $\{V\{\ \}\}$ $\{C<;V>\}$

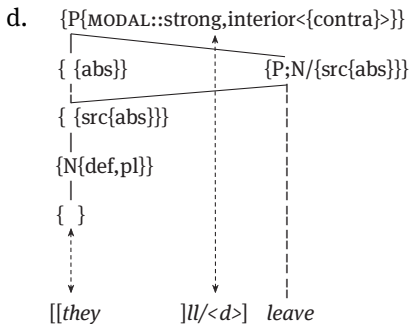 $\{v\}$

PHONOLOGY   [ə]   [d/z]   [t/s]

Accordingly, the inflection in (193c) *That's* is realized as voiceless [s], but that in *Nothing's (impossible)* is voiced [z], and that in *Madge's (impossible)* is syllabic [əz] – instead of the independent [ɪz] of *Madge is impossible*.

The inflectional status of the other forms of the copula is perhaps not as obvious. The other 'full' forms of the present, *am* and *are* also have 'weak' alternatives, as in *I'm happy* and *we're/you're/they're impossible*. The segment that distinguishes the two 'full' forms is what is retained in the 'weak' form; they are what is inflectionally crucial. And the pronouns end in vowels. Thus, equivalents of the representation in (193c) seem to be appropriate in their case too, with, of course, the invariant inflections *-m* for first singular present and *-re* for second and plural present. As suffixes, these expressions do not 'invert' with their subject. But other 'weak' operative forms can, provided they are syllabic. This is true of 'weak' *was* and *were*, for instance: the categories involved have simply an alternative word form with a reduced vowel, rather than an affix. So too is another variant with a weak form for *are*, [ə(r)], that can appear in *Are you leaving?* and *They are leaving*.

In the present instance of 'weak' *is*, an abbreviation of the relevant aspects of the morphology of the copula can be represented lexically as in (194a), with the morphophonology allowed for by (III.44b–c).

(194)   a. $\{P\}$

            $\{P\}..........\{pres\}$

            Subject .....\{iii\}

            $[[\quad\quad] \{C;V\}]$
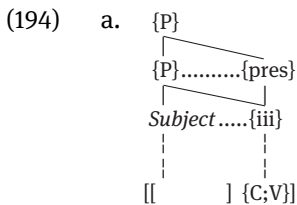
    b.   He's left, He'd left, They've left
    c.   He'd/they'd leave

d. {P{MODAL::strong,interior<{contra}>}}

  { {abs}}   {P;N/{src{abs}}}

  { {src{abs}}}

 {N{def,pl}}

  { }

  [[*they*   ]*ll/<d>*]   *leave*

The inflection of the 'weak' {P} is expounded by the (final) syntactically-placed inflectional suffix to the final word in the subject.

This phenomenon is not limited to *be*-forms, but may be associated with other operatives, notably the other non-modal periphrast, *have*, as is illustrated in (194b), where all of the finite inflections of the verb are 'weakened', and arguably inflectional, though the last one would be an unfamiliar suffix, and the full form (as in *They have left*) would usually be regarded as uninflected; but the presence of [v] signals simultaneously perfect/possessive finite and not past and not third person. Many speakers also have the mobile (thus non-affixal) 'weak' forms [əv,əd,əv], however, which is preferred after consonants.

This verbal shares the 'weak' form [d] with *would* as in (194c), which also has a syllabic 'weak' and mobile form, [wəd], as well as non-mobile [əd] instead of [d] after consonants. The latter preference is also characteristic of post-consonantal 'weak' *will*, rather than the *-ll* of *I'll, you'll, she'll, we'll, they'll (regret it)*, as shown in (194d). Compare with the above the syllabic pronunciation of *It'll/It'd (be regretted). Can* and *could* and *should* have mobile, so non-inflectional, syllabic weak forms.

Certain expressions seem to show (at least diachronic) 'inversion' of a non-syllabic weak form and drastic frotting, as in *zat John?*; this is an idiom. We have a complex and volatile situation here that I'll not attempt to provide a full picture of. But we must at least acknowledge the existence also of non-syllabic 'weak' modals, not all of which inflect in the same way as *be* and *have*, in not showing tense. And some recognition is due to periphrastic subjunctives, where person-number and tense suffixes are lacking, but where the contrafactive has a 'weak' form. (194d) attempts to represent the conversion of a subject to a modal, where of the representatives in (194d) *'ll* differs from *'d* in the absence of {contra(factive)}. The representation alludes to the various features that differentiate the modals presented in Table XV.

Table XV: Core-modal contrasts
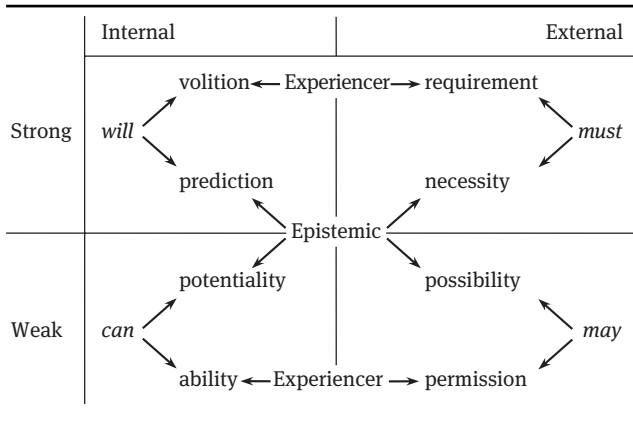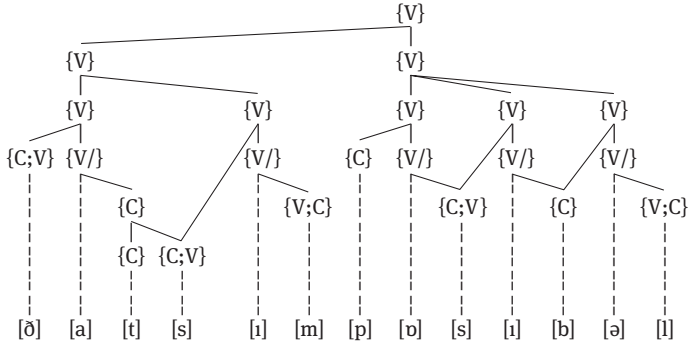

The modals in (194d) also omit the non-past.

The above relatively neglected phenomenon brings together a variety of different levels, but their lexical phonological interest is diachronic. Let us therefore return to synchronic pre-utterance phonology, and what is perhaps the most striking grammatically relevant feature of utterances, the system of tones carried by tonics and the coindexing that operates between planes.

We have already come upon instances of this syntactic-intonational connection, particularly as involving an exponency of interrogatives. The expounding rising-intonation phenomenon was very roughly indicated as in (16) from Chapter 35.

(16) a. Dolly has arrived
      b. Dolly arrived when

Let's now look at how tone might be incorporated in our phonological notation, before looking at the syntax-phonology interface. Observe firstly here that the representations in (I.155) assumed that the unmarked position for the pre-utterance tonic coincided with the last lexical tonic in a sentence.
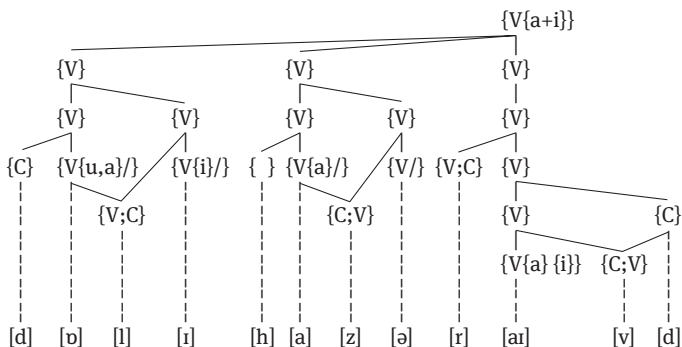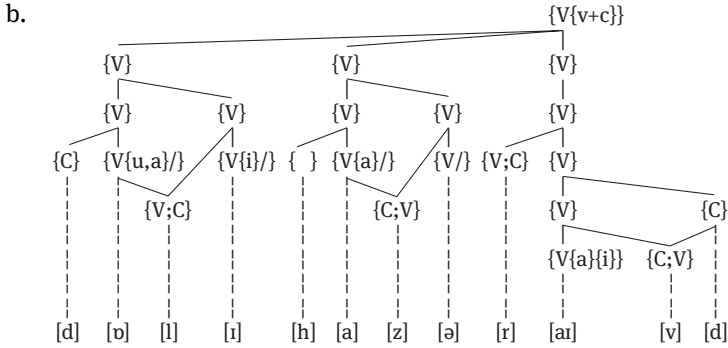
(I.155)   a.

```
                                              {V}
                  {V}                          {V}
           {V}            {V}            {V}    {V}         {V}
      {C;V} {V/}         {V/}       {C}  {V/}   {V/}        {V/}
             {C}          {V;C}          {C;V}       {C}      {V;C}
            {C} {C;V}
       [ð]  [a]  [t] [s]   [ɪ] [m]   [p] [ɒ]  [s]  [ɪ]  [b]  [ə]  [l]
```

   b.

```
                                                   {V}
            { }                       {V}           {V}
                  {V}                 {V}           {V}
             {C{u}} {V{ }/}    {V;C{c}} {V{i}/}  {C{v,u}} {V{i}/}
                    {V;C}             {C}              {V;C}
            [△]  [p]    [ə]  [r] [m]   [ɪ] [t] [b]   [ɪ]  [l]
```
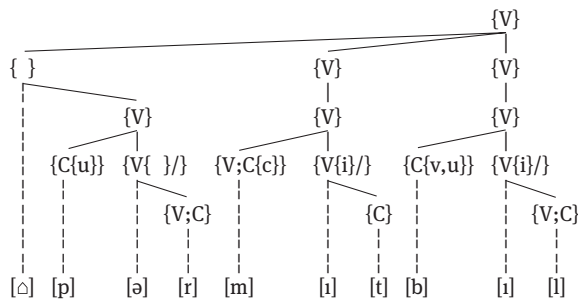
So too with (16), in its crude way.

I suggest that we represent (16a) as in (195a), where (for reasons of space) only major categories are given for consonants, and it is assumed that none of the vowels is reduced:
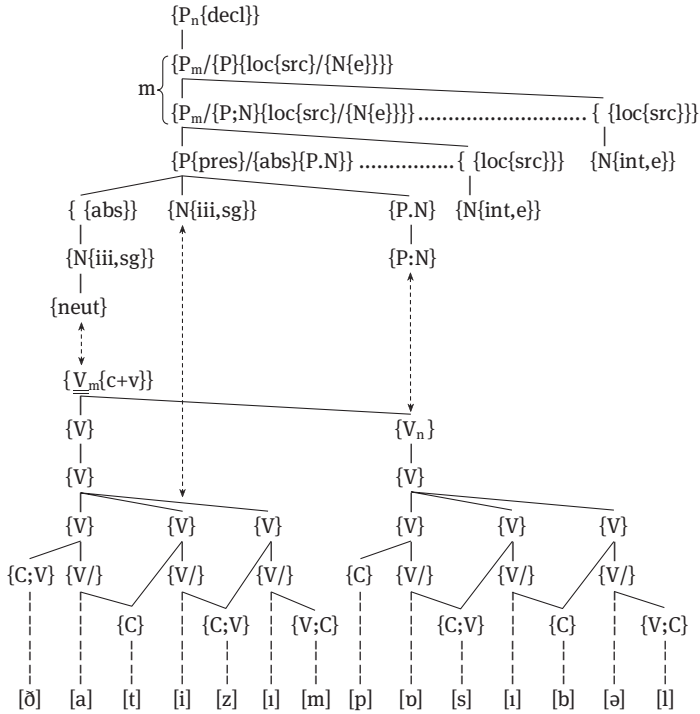
(195)   a.

```
                                                  {V{a+i}}
              {V}                  {V}              {V}
           {V}      {V}         {V}    {V}         {V}
      {C}  {V{u,a}/}  {V{i}/}  { } {V{a}/}  {V/} {V;C} {V}
              {V;C}                {C;V}                {V}        {C}
                                                  {V{a} {i}}  {C;V}
       [d] [ɒ]  [l]    [ɪ]    [h] [a] [z]  [ə]  [r] [aɪ]      [v]  [d]
```

b.

```
                                                              {V{v+c}}
        {V}                          {V}                 {V}
      {V}        {V}            {V}        {V}           {V}
   {C} {V{u,a}/}   {V{i}/}  { }  {V{a}/}  {V/} {V;C}    {V}
          {V;C}                    {C;V}                {V}        {C}
                                                     {V{a}{i}}  {C;V}
   [d]  [ɒ]  [l]   [ɪ]     [h] [a] [z]   [ə]    [r]   [aɪ]      [v]  [d]
```

The rising tone is represented by the sequence {a+i}, (low-high), attached as a secondary to the tonic {V}, where the + indicates that the sequencing is intrinsic and contrastive, not redundant. How extensively the rise spreads in different implementations is variable. Notationally, however, this is another area where the CV notation is perhaps more insightful, in so far as use of **a** and **i** elsewhere normally implies the possibility of a **u**, describing a three-dimensional space: {a+i} is misleading and {a+i,u} cumbersome. Here we need only one dimension, low-high, and in some circumstances intermediates, starting, for instance, with **a,i,** or rather **v,c** (mid). I shall thus prefer (195b) to (195a), as far as tone representation is concerned. (We have already looked at a CV-representation for segments – but that is not our concern here, though it involves a proposed analogy.)

Let's assume now that the tonic in the sequence in (I.155a) is instead on the initial syllable, giving contrast, as represented in (196), by a heavy tonic, with double underlining of a super-tonic.
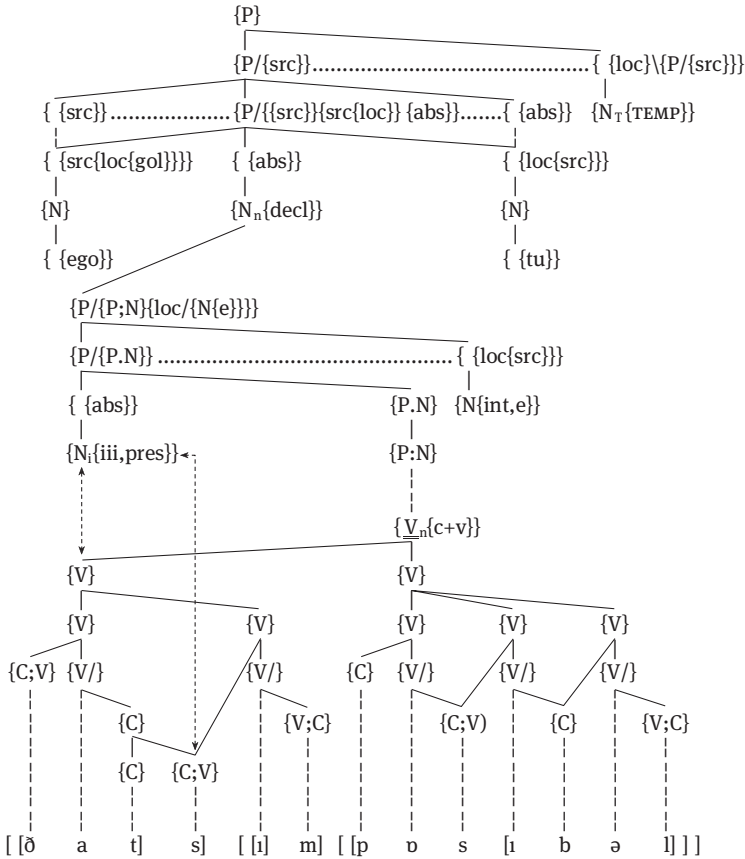
(196)

```
        {V{c+v}}
      {V}                              {V{c+v}}
      {V}                              {V}
      {V}              {V}         {V}        {V}        {V}
  {C;V} {V/}          {V/}      {C} {V/}      {V/}       {V/}
        {C}              {V;C}       {C;V}     {C}       {V;C}
     {C}  {C;V}
  [ð] [a] [t] [s]     [ɪ] [m]   [p] [ɒ] [s]   [ɪ] [b]   [ə] [l]
```

Here the emphatic falling tone is, of course, attached to the first (maximal) path of {V}s. There may well be a distinct, but unmarked, tone, and in the character of which there is variation in response to context, in particular. Thus the lexical tonic of *impossible* is retained.

We can now indicate how such representations might be completed by connecting the exponent tonic placement with its syntactic role, via **transplanar co-indexing**, perhaps as outlined in (197) (which omits mood-internal structure and simplifies tense), where the reinforced, underlined tonic is co-indexed with the pair of negative syntactic existentials, by the **m** (marked) syntactic index, while the subject of the copula expounds concord. This subject, at the lexico-syntactic interface, has indeed been converted to a copula before the 'weak' form, and the emphasis associated with the double negative existential is expounded by the double underlining of the super-tonic.

(197)

((197) and the immediately-following representations omit the morphological structure of the adjective, as not pertinent to our present concerns.) Again we have syntactic placement of the inflection, given that the size of the subject is limited only by implementational restrictions (cf. *The suggestion…'s impossible*). The non-emphatic tonic on the adjective is coindexed with the declarative mood.

Compare (197) with (198), where the copula is contrastive, and with (199), where the pronoun is again contrastive, but is not subjoined to the copula.

(198)

$\{P_n\{decl\}\}$

$\{P_m/\{P\}\{loc\{src\}/\{N\{e\}\}\}\}$

$\{P_m/\{P;N\} \{loc\{src\}/\{N\{e\}\}\}\}$ .... $\{ \{loc\{src\}\}\}$

$\{P\{pres\}/\{abs\}\{P.N\}\}$ .... $\{ \{loc\{src\}\}\}$ $\{N\{int,e\}\}$

$\{ \{abs\}\}$ $\{N\{iii\}\}$ $\{P.N\}$ $\{N\{int,e\}\}$

$\{N\{iii\}\}$ $\{P:N\}$

$\{neut\}$

$\{\underline{V}_m\{c+v\}\}$

$\{V\}$ $\{V_n\}$

$\{V\}$ $\{V\}$

$\{V\}$ $\{V\}$ $\{V\}$ $\{V\}$ $\{V\}$ $\{V\}$

$\{C;V\} \{V/\}$ $\{V/\}$ $\{V/\}$ $\{C\}$ $\{V/\}$ $\{V/\}$ $\{V/\}$

$\{C\}$ $\{C;V\}$ $\{V;C\}$ $\{C;V\}$ $\{C\}$ $\{V;C\}$

[ð] [a] [t] [i] [z] [ɪ] [m] [p] [ɒ] [s] [ɪ] [b] [ə] [l]

(199)

```
                        {Pₙ{decl}}
                            |
      ⎧ {Pₘ/{P}{loc{src}/{N{e}}}}
   m ⎨         
      ⎩ {Pₘ/{P;N}{loc{src}/{N{e}}}} ........................... { {loc{src}}}
                            |                                          |
              {P{pres}/{abs}{P.N}} ................ { {loc{src}}}   {N{int,e}}
                    |                                    |
      { {abs}}   {N{iii,sg}}              {P.N}   {N{int,e}}
          |                                |
    {N{iii,sg}}                          {P:N}
          |
       {neut}
          
     {Vₘ{c+v}}
          |
        {V}                              {Vₙ}
          |                                |
        {V}                              {V}
          
   {V}      {V}      {V}          {V}      {V}      {V}
{C;V} {V/}   /{V/}   /{V/}      {C}  {V/}   /{V/}   /{V/}
  ⋮     ⋮  {C}   ⋮ {C;V}  ⋮ {V;C}  ⋮    ⋮ {C;V}  ⋮  {C}   ⋮ {V;C}
  ⋮     ⋮    ⋮    ⋮    ⋮    ⋮    ⋮    ⋮    ⋮    ⋮    ⋮    ⋮    ⋮
 [ð]   [a]  [t]  [i]  [z]  [ɪ]  [m]  [p]  [ɒ]  [s]  [ɪ]  [b]  [ə]  [l]
```

The co-indexed super-tonics in (198–9) provide extension of another detailed analogy with the syntax, where {P}, like tonic {V}, can immediately recur in subjunction – including in the syntactic representation of contrast. In this case the phonology also qualifies as iconic.

The simple indicative of (155a) of course involves a simple existential structure. I fill out the overall structure, including the morphological bracketing, as in (200), which also spells out the declarative, though it is the default (so redundant) mood, and which assumes in this instance that the basic sentence is generic.

(200)

```
{P}
  |
  {P/{src}}...........................................{ {loc}\{P/{src}}}
    |                                                        |
{ {src}}...................{P/{{src}}{src{loc}} {abs}}.......{ {abs}}   {N_T{TEMP}}
    |                           |                            |
{ {src{loc{gol}}}}          { {abs}}                     { {loc{src}}}
    |                           |                            |
   {N}                      {N_n{decl}}                     {N}
    |                          /                             |
{ {ego}}                      /                           { {tu}}
          {P/{P;N}{loc/{N{e}}}}
            |
          {P/{P.N}}.........................................{ {loc{src}}}
            |                                                  |
        { {abs}}                              {P.N}  {N{int,e}}
            |                                    |
      {N_i{iii,pres}}◄┐                       {P:N}
            |        |                          |
            |        |                      {V_n{c+v}}
           {V}       |                          |
            |        |                         {V}
      /-----|--------|-------\           /------|------\
    {V}            {V}       {V}       {V}    {V}    {V}
     |              |         |         |      |      |
{C;V} {V/}        {V/}      {C} {V/}  {V/}   {C}    {V/}
  :    :            :        :   :      :     :      :
       {C}        {V;C}         {C;V}  {C}  {V;C}
        |
    {C}  {C;V}
  [ [ð   a    t]   s]   [ [ɪ]   m]  [ [p   ɒ   s   [ɪ   b   ə   l] ] ]
```

The morphological structure is indicated by the brackets around the (individually unbracketed) symbols in the transcription, though, as elsewhere, the transcriptional phonetic-alphabetic symbols themselves have no systematic status. Again the internal non-(morpho)phonological lexical structure of the adjective is ignored.

   In the unmarked case the declarative mood feature is, as here, associated with the final tonic, but also it is co-indexed with the tone, and indeed determines the tone, which is not phonologically intrinsic but conforms to the redundancy expressed by the co-indexing. Phonologically, we simply have combinations of **c** and **v**: which combination is determined by syntax and context. So that usually {decl}//{V{c+v}}. The co-indices on tonics, the contrastive 'm' and the neutral 'n', are the pivots around which the syntax, with its sequence of lexical items, and the pre-utterance phonology orient themselves and determine how the exponence of the latter is expressed, in particular by the location and substance of the tonic.

These diagrams illustrate something of the syntactic role of intonation, but there is much much more to be considered, most of which remains somewhat mysterious (to me, at least). It is not just that there can apparently be 'compound' tonics, with a **pretonic** dependent on and preparative to a tonic, as anticipated in (I.157), with again immediate recursion of tonic {V}, but in both subjunction and adjunction.

(I.157)

	{V{ ⬈ }}		*Tonic*
{V{ ➔ }}	{V}		*Pretonic*
{V}	{V}	{V}	*Ictus*
{V} {V}	{V}	{V}	*Syllabic*
{V} {V}	{V}	{V}	*Rhymal*

where's the <u>tooth brush</u>?
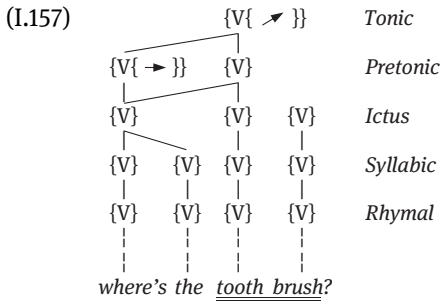
There is a **pretonic** in this short utterance**,** which with the tonic we now might re-represent (I.157) as (201).

(201)

	{V{v+c}}		*Tonic*
{V{c}}	{V}		*Pretonic*
{V}	{V}	{V}	*Ictus*
{V} {V}	{V}	{V}	*Syllabic*
{V} {V}	{V}	{V}	*Rhymal*

where's the <u>tooth brush</u>?
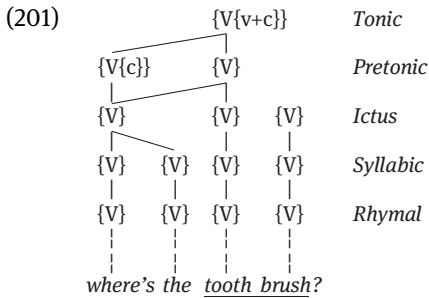
We can add to this skeletal phonological structure the (simplified) syntactic representation in (202) (based on (30a) in Chapter 35), but as well as being inclusive of mood structure, as there, and particularly interpretation of the question as a request, it also includes an indication of morphology and some 'frotting'; but it ignores any synchronic result of cliticization, or any attempt at segmental phonological representation – for reasons of space in the latter case, but also with the intention of simple de-cluttering.

(202)

```
                            {P}
                            {P/{src}} ...........................................{ {loc}\{P/{src}}}
           { {src}} ........... {P/{{src}{loc}{abs}} ....... { {abs}}      {N_T{TEMP}}
        { {loc{src}}}    { {abs}}                    { {loc{gol}}}
        {N{def}}         {N_i{req}/{P//{0}}}          {N{def}}
        { {ego}}         {P/{abs}{{gol}}{{src}}}   { {tu}}
    { {loc{gol}}}.....{ {abs}}.................{ {loc{src}}}
    {N}              {N{VALUE::/0}/{P}}  {N}
    { {ego}}         {P//{top}}             { {tu}}
{ {abs}           {P}
                  { P/{P}{loc/{N{int,e}}}} ......... { {loc}\{P/{loc/{int,e}}}}
                  {P/{abs}{loc}}       { {loc}}   {N_i, T⊆ i}
    { {loc}}...........{iii,pres}  { {abs}}  {N{int,e}}
    {N_p{0} {top}}                 {N{def}}
                                   {N{sg}/{src}}
                                      { {src}}
                                      {N{*pl}}
                                      {N;P}
                                      {N;P}
                                             {N;P}
    [          [C;V] ]     [ ] [ [ ]        [ ] ]
               {C;V{v}}        {V_i{v+c}}
    {V_p{c}}                   {V}
    {V}                        {V}       {V}
    {V}              {V} {V}             {V}
    {V}              {V} {V}             {V}

    where          's    the  tooth    brush?
```
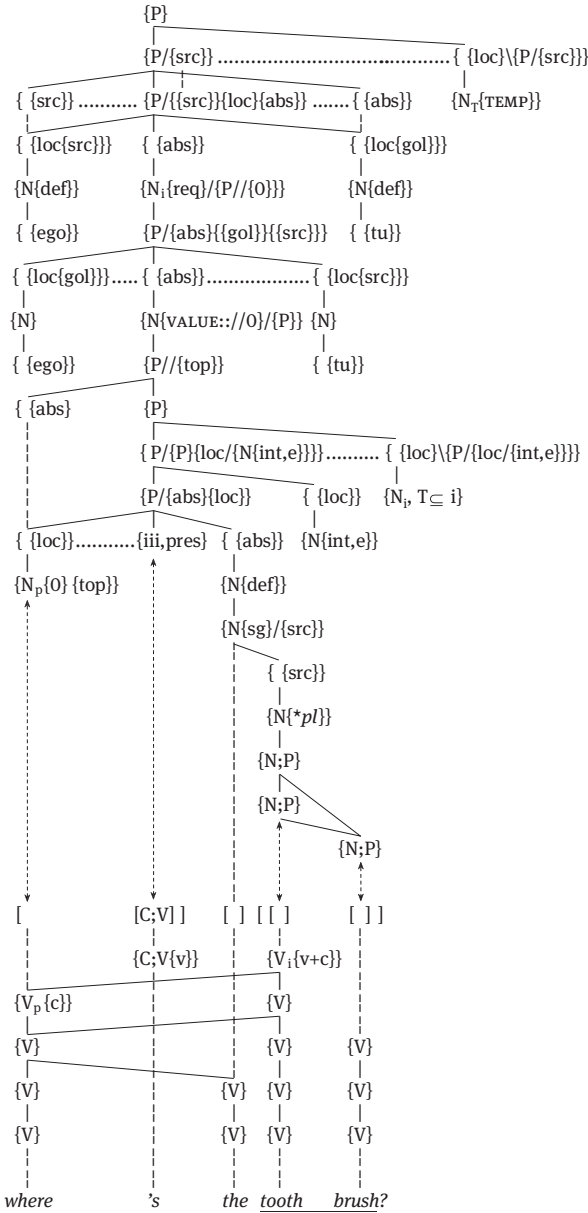
The reader will note that (202) has indeed grammaticalized the effects of cliticiza-
tion – just for a change. Perhaps more worth observing is the complex expression

of this interrogative structure again requires two distinct tones and so multiple co-indexing, involving **p** and **i**.

And, of course, other, more complex combinations of tones are possible. But there are also variations in the syntactic domain occupied by a tone group: it may occupy part of a clause or more than one clause. And I have exhibited only a tiny set of the available tones and tone combinations.

(203) fills in the phonological skeleton of (201) on the basis of a rhotic accent, and drawing on the CV notation of Table X (repeated below).

(203)

$$\{V_i\{v+c\}\}$$

$\{V_p\{c\}\}$ $\{V\}$

$\{V\}$ $\{V\}$ $\{V\}$

$\{V\}$ $\{V\}$ $\{V\}$ $\{V\}$

$\{C;V\}$ $\{V\{c,v\{c\}\}/\}$ $\{C;V\{v\{c,v\}\}\}$ $\{V\{\ \}\}$ $\{C\{c\}$ $\{V\{c\{v\}\}\}$ $\{C\{v\{c\}\}$

$\{V\{v\}/\}$ $\{C;V\{v\}\}$ $\{C;V\{c\{c,v\}\}\}$ $\{V;C\{v\}\}$ $\{V\{\ \}/\}$

$\{V;C\{v\}\}$ $\{V;C\{c\{v\}\}\}$

where's   *the*   <u>*tooth*</u>   *brush*?
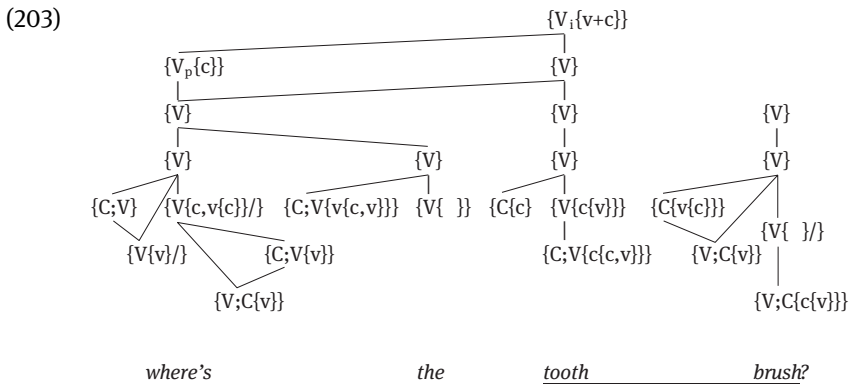
With such a representation of pre-utterance phonology of any length the subsyllabic elements are difficult to align, as will be apparent even from the short utterance of (203). However, even though overlapping in (203) may be adventitious, their presence might serve to remind us that parts of speech normally overlap to varying extents for various speakers. Thus, variation in the degree of overlap between the voicelessness and the vocalic value of the onset to the first syllable is common (and, indeed, voicelessness is commonly absent, though it is a feature of my speech).

Alphabetic orthography or transcription misleadingly depends on strict segmentation, which obscures such overlapping as well as obscuring prosodic phenomena, even if contrastive. And this is also true, of course of the display in Table X, repeated here.

Table X: Vocalicness and Gravity

V						*{V$_3$}$\mid${V<C>}	
Vocalicness	{V} (intrans)	vs.	{V/C} (transitives)	vs.			
Vocalicness	{v} [a]	vs.	{c,v} [e/o]	vs.	{c} [i/u]		
			{ } [/ə]				
Gravity	{c{v}} [u]	vs.	{c,v{v}} [o]	vs.	{c,v{c}} [e]	vs.	{c{c}} [i]
V;C							
Vocalicness	{v} [r]	vs.	{ } [l]	vs.	{c} [m/n/ŋ]		
Gravity	{c{v}} [ŋ]	vs.	{c} [n]	vs.	{c{c}} [m]		
C;V							
Vocalicness	{v} [v/z/ð/ʒ]	vs.	{c} [f,s,θ,ʃ]				
Gravity	{v{v}} [ʒ]	vs.	{v} [z]		{v{c}} [v]		
			{v{c,v}} [ð]				
Gravity	{c{v}} [ʃ]	vs.	{c} [s]		{c{c}} [f]		
			{c{c,v}} [θ]				
C							
Vocalicness	{v} [b/d/g]	vs.	{ } [π/τ/κ]	vs.	{c} [p/t/k]		
Gravity	{v{v}} [g]	vs.	{v} [d]	vs.	{v{c}} [b]		
	{ {v}} [κ]	vs.	{ } [τ]	vs.	{ {c}} [π]		
	{c{v}}[k]	vs.	{c} [t]	vs.	{c{c}} [p]		

In general, as I acknowledge again, this has been the most cursory of looks at the syntactic role of phonology in what are implemented as utterances. So much so that, as well as being partial in its survey, it has evaded, for instance, the problems with distinguishing this grammatical role from the paralinguistic and other functions of intonation – to the extent that these can be distinguished. For instance, what is the relation to tonal exponencies that are more obviously grammatical with to the slight rise at the end of declaratives present with the speech of many users that apparently has in many cases an empathy-inviting role?

However, the goal of illustrating, though in a primitive way, cross-planar co-indexing has been the main focus of our attention, together with merely illustrating how the relationship between syntax and intonation might be approached in terms of our present assumptions, particularly in the background of the pervasiveness of co-indexing. And this has, at least, and at last, driven us, in a few of these last representations, to hook up, extra-lexically as well as lexically, the two planes – and include the interplane in (202).

But another aspect of the above representations suggests a short coda on secondary features attached to primaries that are not necessarily segmental, as with the tones, whose implementation, indeed, extends beyond the segment to whose tonic node bears the tonal features. Another instance of such a phenomenon occurs in what is somewhat unhelpfully called 'vowel harmony'. In various languages the bearer of the appropriate feature(s) is/are the head of a higher-level vowel category (or sometimes lexical/morphological unit), and it/they are implemented by any accommodating segment among the subordinates of that category. We have a type of Firthian **prosody** implemented in successive segments subordinate to the feature-bearing higher node. However, there are segmental articulations that mask the phonetic implementation of the prosody, or even block its implementation in succeeding segments. But phonologically there is a single contrastive feature involved; and its spreading is not a phonological phenomenon.

There is another such phenomenon prominent in English but among consonants and much more restricted; and this takes us back to a clarification of the nature of the elements of the expression pole of the sign. In Chapters 11–12 I suggested that sequences of homorganic nasals and obstruents in the syllabic coda might be regarded as phonological compounds, dubbed 'SONOBs'. This would accord with the violation by some such sequences after some intransitive vowels of the limitation of intransitive codas to a single segment, a violation illustrated by (I.135a), particularly striking in the morphologically simplex forms:

(I.135)   a.   bind, point, hound, ounce, wound, fiend, feint, pined, pines, loaned

These consonant sequences are unlike affricates, however, which I also regarded as compounds, in accord with their occurrence both in onsets and codas, as in *judge*. This is not the case with the codas in (I.135a).

Perhaps more firmly supported here, though it may not directly account for the violation of coda length, is the status of the homorganicity as a prosody of the coda in all such sequences, as briefly anticipated in Part I: the prosodic feature(s) is/are attached to the head of the coda, as in (204), with a transitive vowel.

(204)

```
                {V}
                 |
                {V}
                 |
                {V}
               /  |
          {V;C}  {V}
            ┊    ┌──────────┐
            ┊  {V{v}/}      {C{{c}}}
            ┊   ┌─────┐       |
            ┊  {V;C{c}}  {C}
            ┊   ┊     ┊   ┊
           [l]  [a]  [m]  [p]
```
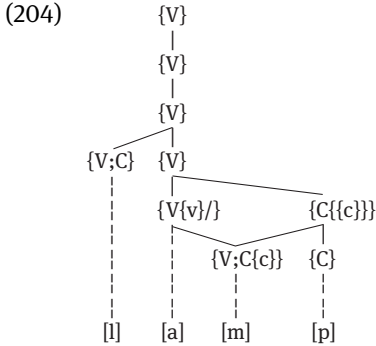
The tertiary {{c}}, 'labial' (in CV notation – as illustrated above in Table X) is a feature of the coda head, and manifested throughout the coda. The provisional lexical entry notation of Chapter 6 in (205a), with a simple distinction of the segments outside and inside the rhyme doesn't reflect this; and I suggest that more appropriate as the lexical source for (204) would be (205b) and the phonological poles of signs in the lexicon, using a feature notation, here CV.

(205) a.   [l[a,m,p]]
       b.   {{V;C} {{V{v}}{V;C\{C+{{c}}}}}

In (205b) there is a secondary homorganicity feature {{c}} ('labial') that the plosive in the rhyme must depend on; and this feature is thus projected in the syllable tree onto the coda head created by the **active adjunction**, marked by '\{C+{{c}}}', of the nasal to the plosive, as in (204).

Recall (I.74) in Chapter 6 (OK, it's a long way back!), though in non-CV notation, where the phonological structure in (I.74a) is built on the sequence of what become the leaves in the tree (and the associated segment notation has no systematic status), but it does not express the homorganicity prosody as it stands:

(I.74) a.

```
                    {V}
                  ┌──────┐
        {C{u}\{V}}   {V}
            ┊       ┌───────────┐
            ┊     {V{i}/}       {C }
            ┊      ┌────────┐     |
            ┊    {V;C\C}  {C\{V}}
            ┊     ┊    ┊      ┊
          [kʰ]   [ɪ]  [l]    [t]
```
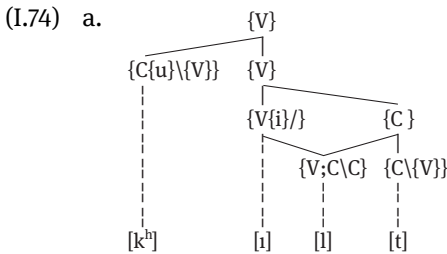
       b. C_i is adjoined to C_j if C_i is adjacent to and higher in sonority than C_j

In previous discussions here I have usually ignored the final dependency line in adjunction circumstances like those in (I.74a), as unnecessary to these discussions.

Such an account as (204/205b), in the present discussion, at least unifies the coda elements, even though one is a complement and the other a modifier, as in (204), or one is a modifier and the other 'extrametrical' – exceptional or morphological, as in *point* and *pined* in (I.135a). Does the presence of the prosody suspend the restriction on rhyme size that the latter apparently violate? Similarly, the same prosody binding the nasal and first (more sonorous) plosive in the coda of *attempt* and *pre-empt* and the like may prompt such suspension.

The non-voicing agreement typical of simple (morphologically simplex) obstruent clusters in codas can also, of course, be characterized in prosodic terms – but the coda has wagged enough, I think.

Envoi

There seems to me to be no point in trying to provide a conclusion that is essentially a prosefying of the lists of chapter contents. What I can perhaps usefully offer is only an estimation of where I think, and hope, we have got to. What I have attempted here is to confront a particular viewpoint – concerning the substantive basis of language structure – with what seem to me major, and some more detailed, properties of English. It takes an inclusive view of 'grammar', unlike many more recent interpretations of 'grammar' as merely syntax.

From a structuralist point of view, it may be objected to my carrying out of this task that I have provided insufficient formal, distributional evidence for many of the analyses offered. To the extent that this may be the case, it may be offset by the observation that a representational grammar has not just a duty to offer generalizations concerning distributions, but a goal, which I think takes priority, to seek to reconcile the sense of the language with its expression. That is, its goal is to seek an account of how sense is expressed in certain ways, and perhaps even why. Thus notional evidence is more important than distributional, since it is assumed that meaning is paramount in explaining distribution, an aspect of expression. One consequence is that the evidence of (the commonly despised) approximate paraphrase relations can have an important role in motivating choice of representations, without necessarily identifying the representations of the respective expressions or their place in the set of components and representations.

My hope is that we have progressed, with the help of insightful predecessors and colleagues, some distance along the tortuous route towards the goal envisaged above. We have reached, perhaps belatedly in my case, at least the staging post of acknowledgement of the centrality of the lexicon in projecting single-level syntactic and phonological structures, and tentatively formulating how this proceeds, including in two, lexical and pre-utterance, stages. This perspective also brings an outlook that recognizes the shared structural properties of lexicon, syntax, and phonology, including the pervasive role of the dependency relation, which I take to be a reflection of our shared cognitive and perceptual capacities and our wordly situation.

But, ultimately, it is for readers to decide whether this is a road worth following, and, if so, how far we have got – and no doubt where I've misread some of the road-signs. The latter has not been too pervasive, I also hope. But I acknowledge that we have not got very far in deconstructing the lexical structures that have such a crucial role to play in what again I trust will be future developments in mental road transport – perhaps even transports of delight!

I anticipate, at least, that more light can be thrown on lexical structure by further deconstructions of secondary categories as configurations of more

primitive categories, involving even more deployment of dependencies. The goal is to achieve the appropriate balance between multiplication of 'particles' and proliferation of 'molecular structure'. Related is the obvious need to investigate the status and character of the lexical vs. encyclopaedic distinction, which I have simply assumed, though also seeking to rely on grammatical motivations for assigning the status of lexical structure. What is emerging concerning the lexicon is the extent to which its content directs the construction of syntax in particular, while, on the other hand, much of lexical structure is equivalent to delinearized syntax. How much of cognition, or encyclopaedic knowledge, is structured in this way, without its having a source in grammatical status, or whose grammatical status is undiscovered? To what extent are proposed logical systems simply impoverished syntax and lexicon? We already have reason, too, to think that figurativeness is not 'special' language but part of its basic functioning.

Let me finish with acknowledging one missing 'concept' whose absence, despite, or because of, my remarks at the end of Chapter 12, may have surprised a reader or two. I have nowhere here (I hope) invoked a 'phonetic level'. This is because I have no concept of what such a level would consist of. On the basis of local contrast we can establish the set of phonological distinctions at different places in structure that are associated with different phonological parts of speech, as again sketched in Chapter 12. We can indicate the basic phonological parts of speech as in (203), if we ignore the distribution of specifiers (as always, for simplicity's sake, bless her):

(203)　　　　　　　　　　　VOWEL/PRE-CODA　CODA
　　　ONSET　POST-ONSET
　　　　　　　　　　　　　VOWEL　　　　　CODA

Different subsets are associated with specifier, onset, transitive and intransitive vowel, coda, etc.

We can nevertheless combine many such locally contrasting elements, on the basis of similarity of substance and of the patterns of contrast, into a single contrastive unit, with so-called 'allophones', or, better, polytopical variants. Some neutralized elements we can even combine with contrasting elements occurring elsewhere: thus, the {\\{C}} of onsets such as that in *spit* can be combined with contrastive {C;V} elsewhere, as in *sit*; in other instances this resolution is not possible, as in the case of the second segment in *spit*, whose potential non-neutralized partner is indeterminate. We have one kind of locally isolated, or monotopical, contrastive element. These operations give us a set of phonological units each of which is contrastive in one or more parts of speech, i.e. C(ontrastive) U(nit)s that can differentiate lexical items.

This doesn't mean that a feature that is not contrastive in a subset of CUs may not be appealed to in a morphophonological relation that also refers to contrastive instances of the feature. Thus, as I suggested in the commentary to Chapter 12, the Scottish Vowel Length generalization invokes a secondary {v} of the stem-final units preceding noun and verb inflections, whether the {v} of the stem-final is redundant, as with vowels, or not, as with e.g. fricatives, or as with [r] but not [l] or a nasal, 'stops' whose redundant voicing is insufficient. Similarly, the inflectional morphophonology represented in (44) in Part III invokes the voice of vowels and sonorants:

(III.44) a. *REALIZATION OF FINITE VERB AND NOUN INFLECTIONS*

        stem terminus   *inflection*

        MORPHOLOGY   ] $\{C<;V>\}$]

        MORPHOPHONOLOGY

    b. $\{C_{x,y}<;V_y <\{\{v\}\}>>_y\}<\{v\}>$] $\{C_{x,y}<;V_y\}$] ---

                      $\{V\}$

    c. $\{v\}$ $\{V\{\ \}\}$ $\{C<;V>\}$

                                $\{v\}$

        PHONOLOGY   [ə]   [d/z]   [t/s]

However, representationally, morphological and phonological distinctions mark the limit of grammar in this area.

We can indeed associate phonological representations with further variably detailed perceived sounds. We can annotate such phonic characteristics as 'transcriptions' of articulations, for instance, and these can be 'broader' or 'narrower', depending on their role. And the various 'levels' that we can associate with representation of phonetics can undoubtedly have a role to play in certain activities, such as in linguistic field work, or in learning a new language, or merely identifying for a hearer a particular utterance (especially in a noisy environment), but these have no status in grammatical theory – though one of their roles has been in helping, I trust, with my own exposition.

Adoption of such a view of phonetics is also, of course, not to deny that we can perceive, and rely on in processing language, more of phonic substance than what is contrastive, but there is no privileged single and systematic level, beyond the phonological, that can be recognized on the basis of these perceptions. The inclusive view of grammar adopted here nevertheless excludes such a level, even more certainly than, however it is to be identified, 'encyclopaedic'

knowledge – while again I acknowledge the obvious role of both in language processing, whatever their status. We can think of the relations between phonological representation and articulatory or acoustic records as giving insight into the interface between the ontologically different domains of phonology and articulata or recognita.

My point is not merely that, as indeed in grammar itself, there is much individual or inter-group variation in these relations. Rather, implementation invokes a different kind of capacity from knowledge and use of the grammar of a language: a memory of the motor capacity of articulation and auditory differentiation that, of course, we monitor and adjust in relation to linguistic knowledge. This is also not to deny that the mechanism of speech, as well as originating and influencing language-change, is the basis for the existence of syllable, foot, and tone group structure, a dependency hierarchy with structural analogies in syntax, as well as making available the ability to store, produce, and hear a range of sound values, and differentiate linguistically non-contrastive aspects of different 'accents' as well as contrasts. The availability of these capacities contributes to our 'language-readiness'. Specifically, it has made possible the implementation of the invention of language itself.

At any rate, a further, final analogy between the planes begins to emerge. The relation of non-contrastive phonic variants to phonological elements is analogous to that between content poles and encyclopaedic information concerning them and their referents. Neither is part of grammar but both contribute to instances of its implementation and development. And in both planes the boundary between the grammatical and other manifestations of their substances remains 'fuzzy': this is particularly evident in the area of intonation and other pre-utterance phenomena, as well as in conceptualization. Moreover, the picture of lexical structure that has emerged here is insufficiently dense or delicate. There are collocational links between lexical items whose character has not been fully formulated and integrated, as also with links between lexical items and encyclopaedic knowledge. I am not the first to envisage a multidimensional mental network of connections that embraces our knowledge. But 'beyond grammar' will have to build on how well we can formulate grammatical knowledge, its most accessible manifestation.

And there is an obvious related limitation of my account of English grammar: it limits itself to the grammatical structure of 'minimal utterances'. I have ventured into the analysis of question-answer sequences and the role of ellipsis. But, despite much discussion, even textbooks and handbooks, on **discourse**, I have not been convinced that investigators of language have been able to throw much light on whatever structuring can be attributed to what is realized as more extensive discourses than I have commented on here. Anything resembling grammat-

ical structures more inclusive than the sentence are difficult to elicit, beyond inter-sentential links involving consequence (*therefore*) or propositional doubt (*however*) or time (*afterwards, then*) or place (*elsewhere, there*). Maybe I should not be looking to find suprasentential <u>grammatical</u> structure as I would understand it?

Even accounts of those formal discourses proposed over the centuries by systems of rhetoric are not well supported or generalizable. Prescriptions I know on specific recognized discourse types such as are contained in 'how to write an essay/research paper/textbook/...' are questionable and limited. In recent times I find no agreement, or even precisely and explicitly argued disagreement, on 'discourse structure' in what I have read of it.

Personally, I cannot claim any insight concerning even how to approach this area and its interaction with sentence grammar, despite the relevant work of John Sinclair and others. Despite the already acknowledged presence of a literature, even textbooks and handbooks, specifically devoted to 'discourse (analysis)', it is not clear to me how it is systematically approachable in a principled way. In what terms? Can we even call it an 'area', an entity of some sort? Can it be the subject of a discipline? Am I merely exhibiting to those who know better my functional illiteracy? Help welcomed.

Subplot: Commentary on the Text

On Prelude to Part III

In common with the contents of Part II, the discussions of morphology in the following chapters have benefited from a large literature, including particularly Poutsma (1914–26), Jespersen (1942), Marchand (1969), Bauer (1983), Aronoff (1994), Beard (1995), Bauer & Huddleston (2002), Bassac (2004), Booij (2010), and contributions to *Morphology (Yearbook)* and to Spencer & Zwicky (1998) and Hippisley & Stump (2016). Regrettably, it is again impracticable here to adequately record agreements and differences with such a large body of different views only part of which I have alluded to.

On the view adopted here of the place of morphology and its interfaces see especially Anderson (2014b). Colman & Anderson (2004) advocate a diachronic interpretation of 'word-formation', including coining, and 'loaning', as well as the development of morphologically derived forms and conversions. Idiosyncratic creations, the result of 'clipping' and 'blending', also belong here, though, as they are grammatically marginal, and, more seriously, almost unpredictable, I have not pursued them here, though blends and clippings such as *athleisure* and *tech* are increasingly to be encountered. Let me compensate with a Thackeray blend from my recent reading that manages to include the phonological segments of both elements of the blend by means of overlapping. In Chapter XI of Volume II of *The Newcomes* there is described the presentation to the Reverend Honeyman by the devoted parishioners he is leaving, on his transfer to his present parish, of a silver teapot 'filled with sovereigns', concerning the fate of which the narrator comments: 'The devoteapot he has, but the sovereigns, where are they?'.

On Chapter 27

The verb *behave* is an intrinsic middle; hence the normal presence of what is generally a manner circumstantial (cf. *She behaved badly*). However, its marked valency can also be expressed analytically, in the shape of a reflexive: *She behaved herself*. In other languages, of course, a range of marked derived valencies – middle, passive, reflexive, reciprocal – are expounded by a single type of verb form.

Other words than those mentioned in the text apparently with nominalizer *-th* (whatever their history), are: *dearth, birth, strength, sloth, health, truth, mirth, stealth, death*, and various opaque, obsolete, or (even) more controversial forms. The other *-th*, suffix, the ordinalizer, as in *fourth*, is also limited in its scope in

terms of source and derivation class; and examples are numerous only by virtue of the extent of the numeral system – despite the extension quoted from Wharton in the overall preface in Book I.

As well as the variation with *plenary*, such a variability also occurs in *centenary* and *centennial,* for instance, though this may be signalled in the spelling (gemination or lack of it); but the correlation is not consistent in spoken usage. A further such example is the source of the base in *-ity* form *fecundity*, itself with transitive initial, [ɛ]: the initial rhyme in *fecund* alternates between this and what would seem to be its 'vowel-shift' equivalent, [i], though the second superheavy transitive rhyme shows no alternation. Consider too *able* and *ability*, where the accent and vowel alternation in the derived form do not coincide. There is no effect of the presence of the {-əs} suffix in *various* (with source *vary*), unlike the {-ɪəs} of *bilious* (source *bile*). Indeed, the {-ətɪ} suffix reverses the direction of the alternation in the first syllable of *variety*.

(17) is similar to Giegerich's (1992: 306) 'metrical' formulation (16), except that, unlike the latter, it is not mutative. Synchronically it is a generalization extracted from lexical entries which serves as a template for potential fresh coinings. This is consistent with the principle that mutation of structure is a feature of diachrony not of synchronic accounts of phonology (and other areas of language, of course). On the problems associated with proposals of 'synchronic vowel shifts' see e,g. Anderson (2014b: §3) and references therein.

However, and of course, there is still much more to be said about 'vowel-shift' alternations, illustrated by the pairs *impious* vs. *pious, piety* (compare *various*), *delineate* vs. *line*, *designate* vs. *design*, *malignant* vs. *malign*. Most obviously perhaps, the bases of *malignant* and *signal* have a [g] lacking in the source: we have an alternation [aɪ]/[ɪg]. Also, there is no noun *finity* corresponding to *finite* (as does *finiteness*), but *infinity* from *infinite* is of course familiar. Incidentally, most dictionaries I consulted give [ɜː] for the first vowel: in *servility*, though in my experience the vowel is reduced, whatever one thinks of the canonical *servile/servility* alternation.

The historical vowel shifts appeared in different forms in different varieties of English, and the individual shifts occurred at different points over a spread of time, so that Stockwell and Minkova (1988: 366) conclude that 'the "inner coherence" of the GVS is a chimera'. I use the term 'vowel shift' here merely in the identification of a set of morphological alternations that reflect something of these earlier shifts. For further comments on this history see Anderson (forthcoming).

The results of the complicated history of affixations are often irregular. It is sometimes claimed, for instance, that the variation between the deverbal suffixes *-or* and *-er* is associated with whether the source of the base is Latin or Germanic (e.g. Bassac 2004: 264): so, *actor* but *player*. But the situation is much more complex than

this: consider the non-Germanic suffixed forms in *practitioner*, *mariner*, *preacher*, *philosopher* (the list is long). The choice of suffix partly depends on whether the form is borrowed directly from a classical language or via French, and at what period in the complex history of these suffixes in English they were borrowed.

Something more of the uncertainties surrounding usage concerning complex loanwords and particularly those whose base lacks a source in English is illustrated by the range of formations found in the Modern English period that are based on *tenebr-*. As adjectives with an overlapping range of meanings, we have *tenebricose*, *tenebrific*, *tenebrificous*, *tenebrious*, *tenebrose*, *tenebrous*; as nouns, *tenebrity*, *tenebrosity*, *tenebrousness*. Some of these are admittedly rare (but include a 'vowel-shift' pair, *tenebrose/tenebrosity*, and an alternative *-ity* form, the above-mentioned *tenebrity*).

Another kind of complication arises from the observation that not all of the nouns in *-ation* have a source in an *-ate* form. Also, a number of adjectival forms with final *-ine* lack final full accent, unlike *divine*, and sometimes lack a related alternating form: *equine, asinine, vespine, supine*. The adjective *marine* lacks evidence of the historical vowel shift, but the second vowel alternates with that in *mariner*. And there is much variation with the pronunciation of nouns in *-ine*.

Kaisse and Shaw (1985) maintain that since the deverbal noun-forming suffix *-al*, which in their terms is added at 'level 2', only attaches to verbs with final accent (*deny/denial, propose/proposal*, etc.), accent is assigned at 'level 1'. This observation gains some support from the fact that this non-native suffix came to attach itself to native words with final stress. But final accent in verbs in very common, and even so we also find *bury/burial* (though, certainly, the suffix is of different origin). Moreover, the relationship between source and base can be formulated quite independently of appeal to strata. Accent, in any case, is assigned in these forms, simple and derived, in accordance with the general restrictions on accent placement, including word class, independent of morphology. The accents in all these forms are syntacto-phonologically, not morphophonologically, determined – including in derived nouns with source-less bases, such as *reprisal* – unless one appeals to the notionally different *reprise*.

We pursue the distinction between (syntactico-)phonological and morphophonological accent-placement in the chapters that follow, including, in Chapter 29, their relationship to the morphophonology that affects inflections, the realization of whose morphology does not affect accent-assignment, in accordance with other evidence for this 'level-ordering' offered by Kaisse and Shaw (1985). In Chapter 29 inflections are shown as attaching to a stem that may include derivational affixes as well as a base. Inflections are major-category preserving, and this is reflected in their morphological structure: [[STEM] INFLECTION] rather than [BASE[DERIVATIONAL SUFFIX]].

On Chapter 28

The present chapter focusing on the familiar phenomena of word accent seeks merely to illustrate how the structure of some common phonologically-expressed phenomena might be made explicit in terms of the overall framework developed in this work as a whole.

It should not be too unclear from the text and preceding commentary that, given, for one thing, the variety of stored and possibly idiosyncratic behaviour that underlies the content of actual or potential lexical entries, I am sceptical of attempts to formulate morphological and morphophonological phenomena in terms of mutational/derivational 'rules', whether organized into strata, cyclic levels, or whatever. This is reinforced by the already indicated inappropriateness of such formulations to the description of synchronic linguistic phenomena. Phonological patterns proper are much more amenable to robust generalizations, but they too need not invoke mutation. This is almost self-evident.

If there are syllables ahead of the main stress, then a secondary accent may in many cases be assigned in accordance with (31a).

(31)   a.   *THE PHONOLOGY OF WORD ACCENT*

$$
\begin{array}{ccccccccc}
 & & & & & & & & <\{V_4\}>^{\star}_1 \\
 & & & & & & & & | \\
 & & & & & <\{V_4\}>_1 & & & <\{V_3\}>_1 \\
 & & & & & | & & & | \\
\{V_1\} & <\{V_1\}>_1 & <\{V_{SH}\}>2 & <\{V_1\}_E> & \# & \Rightarrow & \{V_1\} & <\{V_1\}>_1 & <\{V_1\}>_2 & <\{V_1\}_E>
\end{array}
$$

An extended example, however, with a pre-primary dactyl rather than trochee is *mulligatawny*, with the secondary accent on the first of three weak syllables (see diagram (28) on syllable weight).

In the following passage from P.G. Wodehouse (*The Mating Season*, Chapter 21), inventiveness with an apparently 'dead' adjective formation-type, illustrated by (25) and elsewhere, triumphs over inertia: 'He had the look of a man who had recently passed through some testing emotional experience. His eyes were aglow, his moustache a-bristle and his nose a-wiggle'.

The text tries to illustrate something of the complexity and variety of expo-nence by affixation etc. But it is difficult to overstate the divergences among users of the language. One trivial example of this is the use of the two 'negative' noun-forming prefixes in *un-believer* vs. *non-believer*. The former is, whatever else, unusual with nouns (recall the discussion of *unease*); it is typically a verb- and adjective-former, with verb and adjective sources, respectively. *Un-believer*, to my mind, is also stronger than *non-believer*; the former typically denotes an opponent of whatever belief is at issue or any belief of a particular type, whereas

the *non-believer* is not necessarily antagonistic. But this is not a universal inter-
pretation, I find. I can't refrain from reiterating my comment that the diversity of
usage of derived forms is much greater than could be conveyed by the discussion
and exemplification in Chapter 28.

On Chapter 29

The terms 'declension' and 'conjugation' are metaphorical: for instance, the
non-nominative (subject) case inflections were visualized as falling away ('declin-
ing') to different extents from the vertical or orthodox nominative, which is the
citation form, the name (Latin *nomen*) that identifies the declension class. In the
text, I pointed out that declensional and conjugational classes 'are not syntactic
classes'. However many of the class markers in different languages look like the
residue of exponents of syntactic classes. Thus, a number of the weak class verbs
in Old English are derived causatives or factitives (Lass 1994: §7.3.2).

The copula paradigm involves various stems. The most straightforward is *be*,
which occurs bare as infinitive, imperative, and non-factual (as well as citation
form), and with a suffix in the non-finite *being* and *been*. There is, apparently a
stem *i-*, inflected for present III singular in *is*. But what do we make of *are* and
were, which seem to be associated with plurality, though they also expound ii
singular, which contrasts in the present and past singular with *am/is* and *was*
(though there have been fashions for *you was*, for instance). *W-* seems to correlate
with pastness, given *was* as well as *were*. The use of past for second person is
perhaps 'polite' in origin. Some of the forms seem to be stem-free, however. And,
as elsewhere, things are even less clear in non-rhotic varieties of English.

It has been argued that in Old English the strong verb alternations could be
formulated as simply filling in vowels in a stem with an unspecified vowel, but
over time the contexts identifying which set of alternations is associated with
a particular set of strong verbs have been much obscured and the alternations
themselves have been much modified and diversified. Thus, for instance, *ride*
and *bite* once belonged to the same set, i.e. strong verb 'ablaut' class, but their
current pasts (*rode* vs. *bit*) are now marked with vowels associated with descent
from different forms of the Old English verb. And other alternations are intro-
duced by descendants of the basically strong verbs that have weak presents (e.g.
sit/sat). Other verbs (such as *hit*) are invariant for tense, as are count nouns like
sheep for number. Other nouns show internal alternation (e.g. *mouse/mice*) or a
residue of the earlier weak declension (e.g. *ox/oxen*).

However, what we can regard as the default inflections for nouns and verbs
formulated as in (44) show the structure-building property of their morphoph-

onological realizations; add an intercalary vowel, and/or voice, or leave alone. Apparently the only at all common analogy in derivational morphology is those few non-productive noun/verb relations, such as *advice/advise* that are characterised by final [s] ≈ [z] – corresponding to one variant allowed in the (44) redundancy, but without the phonological contexts. And we also have *live, life, alive*, where the first written form may be pronounced systematically with either vowel, as well as *belief/believe*. The default inflections, as such, are those that are associated with new adoptions.

For different views on Old English strong verb ablaut see e.g. Lass & Anderson (1975: Chapter I), Anderson (1988), Lass (1994: §7.2), and references therein. The *was/were* alternation in present-day English reflects its (irregular) historical strong verb pattern. The *-en* inflection that occurs with some strong verb past participles in Modern English sometimes acts as a derivational suffix in differentiating between participle and adjective, as in derived adjectives *drunken, sunken* vs. participles *drunk, sunk*.

In the passive construction represented in (52c) I attributed to the functor *by* that realizes the head of the apposed phrase the secondary features '{loc{src}}'. However, *by* otherwise occurs as a path, as in *by (way of) Falkirk*, or as a relative locative, as in *by the pond*. *By car* can be thought of as a path, but the phrase is more obviously a movement instrumental, which is notionally closer to the functor of the passive apposee. The selection of features in (52c) was motivated by the use in such circumstances in a number of languages (including Latin and Old English) of the equivalent of 'from'; and in Old English texts it is sometimes difficult to determine with passives whether a concrete spatial or causal sense is involved. However, English is not alone in using an otherwise path form here, which we also find in French, for instance (though the languages have admittedly been much in contact). Moreover, agency and instrumentality (a type of path) can be expressed in the same way (recall *by car*). It may be that appositions to passive are served by these two different metaphors, so that my suggestion of {loc{src}} for appositional *by* must be regarded as tentative. At any rate, for many users this appositional construction is undoubtedly routinized, a convention.

For a brief review of the debate over the development of the progressive periphrasis see Denison (1993: Chapter 13). For different cross-language perspectives on 'auxiliaries', see e.g. Kuteva (2001) and G.D.S. Anderson (2006). But an agreed concept of 'auxiliarihood' and its place in the parts of speech is not apparent. What I have dealt with here I have called operatives, for roughly the words that have been called 'auxiliary verbs' in English. Some of them, including a couple of modal operatives, are also what I have called periphrasts, and *be* is a copula joining two absolutes or one and a non-verb contentive or locative.

I do not know to what extent such distinctions would emerge from the study of other languages from the same perspective as has been adopted here. Certainly, I expect the {P}/{N} distinction to recur in some form, whatever the language, and even if the verb/noun distinction is apparently lacking.

The volatility of the count/mass distinction varies in different languages. Even within the Indo-European languages, Greek, for instance, the status of a noun is more volatile than English in this respect. Nevertheless, careful studies such as Wierzbicka's (1985) show that, not only are changes from one to the other notionally motivated, but established plural mass nouns that resemble count nouns semantically, nevertheless typically reveal a notional basis for their distinctiveness. One major consideration she formulates as: 'other things being equal, stuffs consisting of bigger, more conspicuous individual entities are more likely to be viewed as "multiplicities" and designated by plural nouns than stuffs consisting of smaller, less conspicuous entities' (1985: 313). Also, she argues that mass nouns denoting homogeneous substances such as *water* or *butter* are associated not with 'unboundedness' (contra Whorf) but with 'arbitrary divisibility'.

McCawley (1975) also comments on the phenomenon of plural mass nouns that is illustrated by *clothes*.

(i)   My clothes are/*is in this locker
(ii)   *I've just bought several/five clothes
(iii) ?*Many clothes are too expensive for me to buy

Inherently plural mass, or collective plural nouns cannot be enumerated, though (iii) can be given an interpretation I find acceptable. Observe the mass quantifier in Trollope's 'he needed to make much amends for past misconduct' (*The Three Clerks*, Folio edn., p. 257), where otherwise *amends* might be treated as a collective plural in English.

Other languages show more widespread inflectional signalling of gender and a more extended set of distinctions, sometimes involving many more noun subclasses and more deployment of agreement. Some such systems, particularly those showing few distinctions, are further lexicalized and conventionalized to varying extents. And not all members of further-lexicalized (or 'grammatical') gender sets share the sense suggested by the naming of the gender – though there may be some other sense (however figuratively-based or vague) that the members of some subset share.

'Heavily-grammatical' gender is primarily a morphological phenomenon. Is it then a declensional class, like the conjugational classes of strong and weak verbs, as well as the survivors of the weak noun class? Declensional/conjugational classes are differentiated by a set of paradigm forms. However, unlike with such simple

morphological classes, some members of a set of words share a feature of a notional class of gender; they exhibit what is usually distinguished as 'natural' gender.

Even some weak verbs in Old English, as already noted, share the notional property of causative, and often have an overt source, as with *cwellan* (weak) 'kill' and *cwelan* (strong) 'die', This goes beyond morphology and morphophonology, with a suggestion that the 'weak' conjugation may be a weakened causative construction. Not infrequently there are 'mixed' systems, 'grammatical' and natural/notional. And typically in Indo-European languages with 'grammatical' gender the gender distinctions cut across the traditional declension classes. But in both classifications we have heavy morphologization, essentially paradigm-type indicators, despite traces of naturalness in typical 'grammatical' genders.

We might render a mixed gender situation as in the redundancies in (iv)-(vi), with examples from French, which has only two 'grammatical' genders, and where 'feminine' in (iv)-(vi) is the label for a declensional class that is related in different ways to the gender lexicosyntactic, notional features.

(iv)   {N;P{female}}   ⇔   feminine
      ¦
     femme 'woman'

(v)   {N;P}   ⇔   feminine
    ¦
    table 'table'

(vi)   {N;P{human}}   ⇔   feminine
      ¦
    personne 'person'

Only in (iv) is there a two-way redundancy. 'Female' bears a hyponymic relation to {human} and {animal}, so that in (vi) there is morphological neutralization of the hyponymic distinction. However, it must be conceded that there are borderline cases in drawing the distinction between morphological class and notional class.

'Grammatical' gender and natural gender both normally participate in relations of agreement. Where both are present there is a potential conflict, but with natural gender being favoured the more remote is the syntactic connection between the agreeing elements: see again for discussion and references Anderson (2011a, II: §6.4), which provides a rather different account of 'grammatical' gender, however (see the commentary to Chapter 14 here). The same work also introduces the idea of 'referential gender' in relation to examples such as Greek (vii), as represented in (viii), where the unbracketed gender terms label morphological classes, and the downward arrow indicates agreement.

(vii)   I kali γιatros   'the good doctor'

(viii)   {N{def}}
          |
         {N{female}/{src}} ⇒ feminine
           ╲
              { {src}}   ⇓
                |
             {P.N/{src}} ⇒ feminine
             ┌──╲
           {P:N} { {src}}
                   |
                 {N}
                   |
               {N;P{human}} ⇒ masculine
          ┊   ┊
          fem/masc   masc
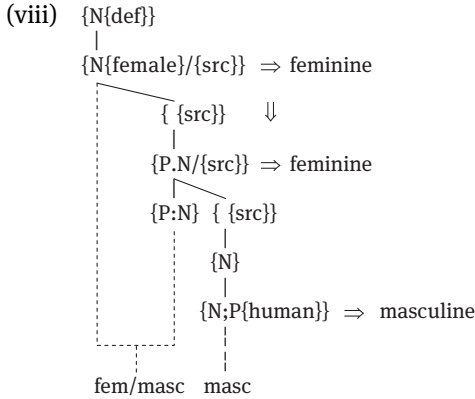
As represented in (viii), for historical reasons, the word for 'doctor' is of masculine 'grammatical' gender (i.e. morphological gender), but it (now) denotes humans (natural gender') and in (vii) 'the doctor' is shown to refer to a female (referential gender) by the form of the determiner and the agreeing adjective inflection. The bottom line shows the variability of the 'grammatical' gender features attributable to the major categories in (viii), other than the noun. A phrase terminating in *oδos* 'street', however, is feminine throughout. On (verbal) concord vs. simple non-verbal agreement see further Chapter 36.

I note, tangentially, that the Greek gender system is quite a formidable set-up for gender-usage-reformers to confront in order to accommodate usage to whatever gender-usage doctrine they favour. Another problem is, despite declarations to the contrary, how little we understand about the effects (apart from outrage) of traditional gender (and ethnic, for that matter) usages. Moreover, Orwell's speculation is yet to be substantiated, despite his diagnosis of political language.

> … one ought to recognize that the present political chaos is connected with the decay of language, and that one can probably bring about some improvements by starting at the verbal end …. Political language – and with variations this is true of all political parties from Conservatives to Anarchists – is designed to make lies sound truthful and murder respectable, and to give an appearance of solidity to pure wind.
>
> (George Orwell's 'Politics and the English Language' (1946)).

The pragmatic role of functional categories in derivation is easiest to see with subjunctions to {N}, which introduces reference and coreference, and to {P}, which introduces mood and existentiality, or truth status. But it is also evident with {P.N}, with its comparison of referents.

I have not gone in here to minor variations in morphology, such as the precarious status of non-subject *whom* in clause-initial position: *who(m) do you blame?*. There are also, for instance, variation in the form of possessives of words ending in [s] (*Jones'(s)*) and between *mine* and *mine's*.

The text did make a tentative suggestion that the *-s* in *ours* in (66b) – and the ending of *mine* etc. – reflected the plurality of the unrealized {N;P}.

b. {N{src}}

```
        { {src}}
          |
        {N}
          ┌──────────────────────┐
        {N{src}}                  { \{N{src}}}
          |                          ┌──────────┐
        {Nᵢ}                       {N{def}}
          |                          |
        {N;P}                      {N/{src}}
          |                          ┌────────────┐
        {P;N}                      { {loc}}......{ {src}}
          ┌──────────────────┐       |            |
        { {src{src}}}......{ {{gol}}} {Nⱼ}       {Nᵢ}
          |              |            |            |
        {Nᵢ}          {Nⱼ}         {ego,pl}     {N;P}


          a     friend             of    ours
```
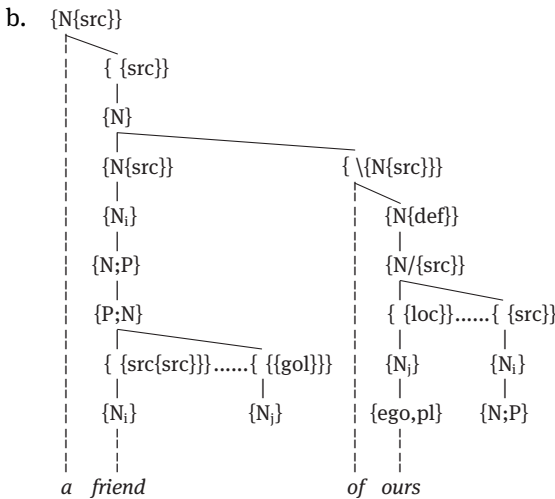
If this were to be extended to predicative instances like (ixa), the unexpressed plural noun would be unspecified ('possessions'?).

(ix) a. That is yours

b.
```
                      {P/{abs} {abs}}
          ┌───────────────────┬────────────────┐
        { {abs}}                        { {abs}}
          |                                |
        {Nᵢ{def,sg}}                     {N{def}}
          |                                |
        { {loc}}                         {Nᵢ/{src}}
          |                                ┌──────────────┐
        {N{dis}/{loc}}                   { {loc}}.......{ {src}}
          |                                |              |
        {N}                              {N{pl/sg}}    {N{pl}}
          |                                |              |
        {ego}                            {tu}          {N;P}


          that              is  your-              s
```
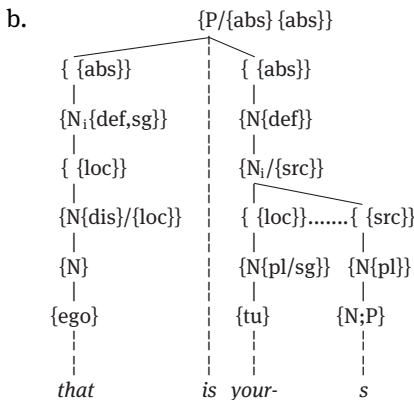
This would involve something like (ixb). But such a proposal would seem to be at all convincing only if the subject were plural. On the other hand, the equative asserts coreference between *that* and the {N} above the possessive, and the former is singular. The developments and status of these forms are controversial, however.

Further controversy surrounds the interaction between inflection and vowel length in Scottish and some other varieties of English, such that, for some speakers at least (myself included), the intransitives in *tire* and *fear* are noticeably longer than the vowels in *tile* and *feel*. Controversy includes questions relating to the contexts that demand either variety of length, in some cases accompanied by a marked 'quality' difference, and also questions relating to the identity of the set of affected vowels, both of which seem to vary among speakers. The contexts for the longer variant in my usage are: word-finally or before {V} or before a combined **V** that has a contrastive secondary **v** (voiced fricatives and [r]). In terms of CV notation, lengthening is before # (word-boundary),] + inflection (stem-boundary), {V} (vowel), {{V;C{v}}} (rhotic), {C;V{v}} (voiced fricatives). The other combinations {V;C{{v}}} (lateral and nasal, whose **v** (voicing) is not contrastive and tertiary) and {C} are excluded. Interestingly, this cuts across the set of sonorants: what is selected as a consonantal context for length are non-stops with a contrastive secondary **v**.

However, we need not go further into these controversial areas, except to make the assumption that, though in other varieties all the vowels involved are intransitives, in the present varieties, to judge by the relative distributions of the vowels concerned, the longer variant (in *pear, tie*) is intransitive but the other (in *feel, tide*) is transitive; monosyllables containing these vowels must be closed. In the present context, what is of interest in the vowel-length phenomenon is the evidence of frotting between stem and inflection that the variation provides.

Thus, *tide*, like *tile*, and *need*, like *feel*, contain the shorter variant. But *tied* and *knee'd* (as in *She knee'd him in the crotch*) contain the longer version. Selection of length variant is partly mophophonological: preceding the inflection ']{C}]' the vowel is long, as if without an adjunct (as in *sigh*, *high*, and *Th<u>ai</u>land*. The stem-inflection boundary selects the long variant when available. The result is a marginal local contrast at the phonological level between the short and long pairs exemplified above. Before ']{C;V}]' the vowel would be long anyway: *sighs* and *size* have vowels of the same length, in complementary distribution with the length of the vowel in *nice* and *dice*. Both inflections select for exponence the voiced alternative, in accordance with (44), where this voicing is triggered by preceding a **V** or secondary **v.**

(44) a. *REALIZATION OF FINITE VERB AND NOUN INFLECTIONS*

       stem terminus   inflection

       MORPHOLOGY   ] $\{C<;V>\}$]

       MORPHOPHONOLOGY

  b. $\{C_{x,y}<;V_y<\{\{v\}\}>>_y\}<\{v\}> $] $\{C_{x,y}<;V_y>\}$] --

                        $\{V\}$

  c. $\{v\}$ $\{V\{\ \}\}$ $\{C<;V>\}$

                                 $\{v\}$

       PHONOLOGY   [ə]   [d/z]   [t/s]
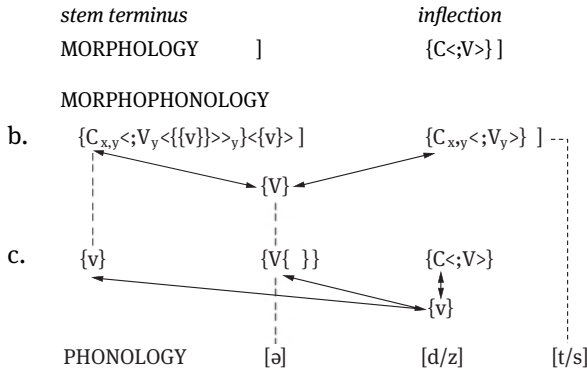
The voiced fricative exponent is a lengthening context, so no contrast is introduced; whereas the voiced plosive is not, and its failure to shorten the vowel creates the phonological contrast between *tide* and *tied* and the like.

In terms of the (CV) notation of (150a) from Chapter 13, the longer variant is intransitive and the shorter not, so that the vowels we've looked at might be represented as in (x) and (xi) respectively.

(150) a. *CV AND A CANONICAL THREE-HEIGHT VOWEL SYSTEM*

      $\{c\{c\}\}$:   [i] $\{c\{c,v\}\}$: [y] $\{c\{v\}\}$:   [u]

      $\{c,v\{c\}\}$: [e] $\{c,v\{c,v\}\}$: [ø] $\{c,v\{v\}\}$: [o]

                      $\{v\}$: [a]

(x) $\{V\{c\{c\}\}, \{V\{v\}\{c\{c\}\}\}$ *knee'd, tied*

(xi) $\{V\{c\{c\}\}/\}, \{V\{v\}\{c\{c\}\}/\}$ *need, tide*

A morphological complementary distribution of the variants emerges as a local phonological contrast, albeit marginal.

There are other complexities in the distribution of length in Scottish varieties of English and some others. Usually, the long versions are found before voiced fricatives; and this is particularly evident with the $\{a\}\{i\}$ diphthong, where quality as well as length is very noticeably different in the two variants, as with the monosyllabics *rise* (long) vs. *rice* (short). So too after the accented vowels in the polysyllabic *horizon* vs. *enticing*. However, the accented vowel in my childhood Scottish pronunciation of *poison* and some other words of a similar etymology is the short version of $\{a\}\{i\}$, even though the segment following is a voiced fricative. Here is another circumstance where there is a marginal contrast between a long and short

vowel variant, and in this case not attributable to morphophonology. Elsewhere too in the study of the Scottish vowel system it is well known that we need more intensive investigation of non-monosyllabic contexts: compare, for instance, *pile, boil*, and *smiling*, all in my speech with an accented short {a}{i}, as 'expected' before [l], with the long variant in *pylon* or *nylon* (with unreduced following vowel).

Another familiar morphology-assisted phonological contrast is initial [θ ≠ ð]. The voiceless segment is quite common, though mainly present in loans (from Greek especially), but the voiced is limited to definites: pronouns (*they*), adverbs (*there, then, thence*, etc. etc.), pronominal (*that, these*) and non-pronominal (*the*) determiners. Many occurrences, particularly among the pronouns and determiners are 'weak', no doubt associated with the voicing (not a feature of Old English, apparently). Unsurprisingly, a final voiced segment of this character is not common (*loathe, lithe, bathe, …*), but more common foot-medially (*father, smother, gather, other, …*), unlike the voiceless equivalent (but for such names (with complex histories) as *Ethel, Matthew, Arthur,* and many Greek loans, such as *ether, ethane, mathematics, mythic, …*).

On Chapter 30

For more detailed descriptions and exemplification of the area addressed in this chapter see particularly Marchand (1969: Chapter II). He discusses (1969: 290–2), for instance, *-like*, *-worthy*, *-monger*, *-wort* and other unreduced cases in a section he entitles 'semi-suffixes'; but he has no problem, apparently, no suggestion of 'semi-prefix', in the case of the 'prefixes' *retro-* and *semi-*. Their independent use, as 'clippings', would, of course, be too recent or parochial (as with the use of *semi* in relation to dwelling types, or *retro* in relation to objects or activities – including myself, according to a friend) to bring to bear in his account. As concerns reduction as typically a marker of affixal status, there is, nevertheless, obviously no question of compound component status for a suffix such as *-ee* that attracts accent to itself: *-ee*, like *-er*, expresses a participant of the verbal base.

A new-to-me compound formation that apparently as a whole has undergone attachment of a suffix, *school teacher-ish* appears on the BBC news website ('Awkward Handshakes') on 8ᵗʰ June 2014. On the other hand, as observed, many recent innovations involve 'clipping', as with *bot*, or 'contractions/abbreviations' such as *blog*, or attempted asymmetrical blends (such as, in covidspeak, *staycation, covidsploitation, covidiots,* etc.), of course.

We should add to the account of *lookout* ('person') and *outlook* ('prospect') the observation that *lookout* has been allowed the 'prospect' sense, illustrated by the following from Sheridan le Fanu's *Wylder's Hand*, Chapter 16: '… and very

solemn, too, the look-out from the window among the colonnades of tall old trees, ...' Actional rather than actor senses are also preserved in idioms like *It's your lookout*, *Keep a lookout*.

As with *-able*, *-ful* formations are numerous, and, though sometimes routinized, also productive, and their productivity is associated in my case with encounters with unfamiliar examples, such as recently *disgustful* (in Aldous Huxley *Antic Hay*, Chapter X). Less routinized are quantifying or measuring compound nouns such as *pocket(-)full*, *bucket(-)full*. The text notes that for many speakers the reduced *-man* of *postman, chairman*, etc. functions as a gender-free agentive suffix. This does not apply to ethnic formations such as *Scotsman* or *Frenchman*, which are neither agentive nor gender-neutral.

Outstanding seems to be used non-metaphorically in the following, from G.K. Chesterton's story 'The Curse of the Golden Cross': 'His dreams ... were full of strange saints with square and triangular haloes, of golden outstanding crowns and glories round dark and flattened faces ...'. Another type of example where the attachment of an affix to a sequence marks it as a compound is *all-rounder*, whether applied to humans or collars.

There is an intriguing pattern of derivation associated with *thief* even more extensive than mentioned in the text. As well as the agentive noun *thief* (with a covert verbal base) and its derived weak verb *thieve*, there is an action noun *thieving* with the verb as its source and a legal noun *theft* with the noun as source and with dissimilation of the suffix we find in *depth*, *stealth*, etc. – not to mention *thiefdom*, *thievery*, etc. – It's a steal.

Marchand (1969: §2.1.6) cites *báby oùtfit* and *oíl oùtput* as instances of a compound within a compound in English. The treatment of *cook-housekeeper* in the text invokes 'coordination'. The treatment of coordination was illustrated as (I.213c).

(I.213) c.

```
                                              {P{past}}
                                            ┌─────────┘│
            { {abs}}                        {P;N/{src{abs}}}
              │                                        │
            { {src{abs}}}                              │
              │                                        │
            {N{pl}}                                    │
            ┌──┐                                       │
          {N}  { /{N}\{N+{pl}}}                        │
           ┆      │                                    ┆
           ┆    {N{pl}}                                ┆
           ┆    ┌──┐                                   ┆
           ┆  {N}  { /{N}\{N+{pl}}}                    ┆
           ┆   ┆      ┌──┐                             ┆
           ┆   ┆      ┆  {N}                           ┆
           ┆   ┆      ┆   ┆                            ┆
         John  Bill  and  Mary                        left
```

It has been suggested to me that *cook-housekeeper* is a 'dvandva' compound. But, in my understanding, though the typical 'dvandva', like the coordination in (I.213c), assigns plurality or duality to the compound, this is marked morphologically in the 'dvandva'. An invented 'dvandva' in English might be *mother-fathers*, which, like *parents*, would be plural. *Mother-fathers* combines two nouns to express a hyperonymous feature. This is not what happens in (79a) from the text, which does not introduce a hyperonymous term, but co-indexing among the compound and its conjuncts.

(79) a.

```
        {Nᵢ}
         |
        {N;P}
        ┌──────────────────────┐
        {N}
        {Nᵢ}              { /{Nᵢ}\{Nᵢ}}
         |                     |
        {N;P}                 {Nᵢ}
         |                     |
     {P;N/{src} {abs}}        {N;P}
        ┌────────┐           ┌──────────────────────┐
    { {src}}…..{ {abs}}     {Nⱼ/{src}}
        |         |         ┌──────────────────┐
       {Nᵢ}      {N}        {N;P}              { {src}}
        ┊         ┊          ┊                   |
        ┊         ┊          ┊                  {Nᵢ}
        ┊         ┊          ┊                   |
        ┊         ┊          ┊                  {N;P}
        ┊         ┊          ┊                   |
        ┊         ┊          ┊              {P;N/{abs}{src}}
        ┊         ┊          ┊               ┌────────┐
        ┊         ┊          ┊            { {abs}}…..{ {src}}
        ┊         ┊          ┊               |         |
        ┊         ┊          ┊              {Nⱼ}      {Nᵢ}
        ┊         ┊          ┊               ┊         ┊
       cook      house      keep-           er
```

A single entity is represented as having a double function.

Closer to the 'dvandva', though involving functional components, is the compound in (ia), as represented in (ib).

(i) a. John and/or Mary

  b. {N_{i,j}{{sg}}}

```
        {N{i,j}{{sg}}}
         ┌──────────┐
      {N{pl}}    { {/{N}\{N+{{sg}}}}
       ┌────┐
     {N_i}     { /{N}\{N{pl}}}
      │         ┌──────┐
    { x}        ┊   {N {{sg}}}
      ┊         ┊      │
      ┊         ┊   { {N}\{N+{{sg}}}}
      ┊         ┊      ┌──────┐
      ┊         ┊      ┊   {N_j}
      ┊         ┊      ┊      ┊
    John      and    or    Mary
```

The compound is a disjunction based on a coordination. Recall that '{{sg}}' is distributive. Paying attention to the co-indexing, we can paraphrase this structure as 'either (John and Mary) or (John or Mary)'. It is immediately obvious that what is going on here is rather unlike the syntactic 'alternative' in *John or Mary or both*.

The headless compound is characterized by a 'listing' intonation that we can also associate with the coordinated prenominal attributives we shall encounter in Chapter 40.

(IV.149) a. a large, good-looking blonde boy

  b. {N{spec}/{src}}

```
     {N{spec}/{src}}
      ┌──────────┐
      ┊    { {src}}
      ┊       │
      ┊     {P.N}
      ┊    ┌──────────┐
      ┊  {P.N}      { \{P.N/{P.N}}}
      ┊    │             │
      ┊ {P:N{SIZE}}   {P.N/{src}}
      ┊    ┊         ┌──────────┐
      ┊    ┊       {P:N}     { {src}}
      ┊    ┊         │           │
      ┊    ┊      {P;N{n}}    {P.N/{src}}
      ┊    ┊       ┌────┐        ┌──────────┐
      ┊    ┊     {P:N} {P;N}  {N;P{COLOUR}}  { {src}}
      ┊    ┊       ┊     ┊        ┊            │
      ┊    ┊       ┊     ┊        ┊          {N}
      ┊    ┊       ┊     ┊        ┊            │
      ┊    ┊       ┊     ┊        ┊          {N;P}
      ┊    ┊       ┊     ┊        ┊            ┊
      a   large  good looking  blonde        boy
```
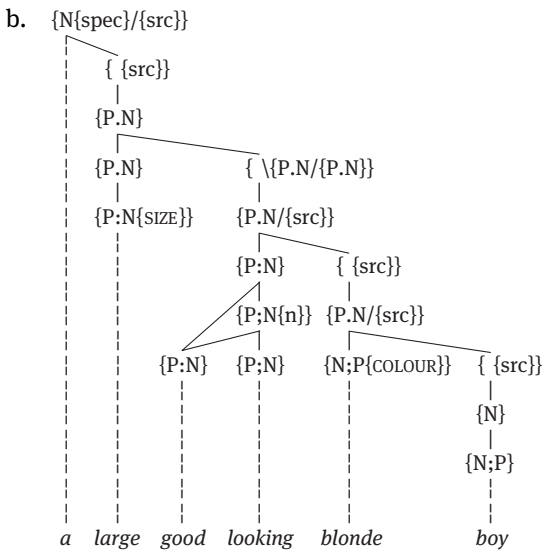
This phenomenon occurs in two different situations involving coordination, one involving compounds, the other syntactic. The compound in (IV.149) is an element in the coordination, unlike the compound *and/or* in (i), which contains the coordination.

In other, more highly inflected languages than English, a compound seems to be more obviously composed of stems, perhaps with a 'linking element'. This is less distinctive if, in such languages at least, one makes the difference between 'word' and 'word form' such that word status is independent of the presence or absence of inflections (see further Chapter 31) while a 'word form' is as inflected as it can be.

So-called 'separable prefixes' are a feature of German, but associated with verbal morphosyntax. This too arguably involves compounding vs. its absence, though in this case separation or its absence is typically syntactically determined rather than marking a lexical difference, as with English *overtake* vs. *take over*. Meredith (*Beauchamp's Career* (Constable), p. 455) prefers *outspeaking* (rather than *outspoken*) to the now more usual *speak(ing) out*, despite the long history of *speak out*.

The chapters that follow move away from prototypical compounds in two opposed directions. Firstly, we confront sourceless or partially sourceless compounds, particularly so-called 'neoclassical compounds'. And then we look more concentratedly at lexicalized phrases.

On Chapter 31

I draw here again on Marchand (1969: especially §§3.1.5-14), and also on Bauer (1983: §§7.3, 8.3), in particular, for observations on 'neo-classical compounds', though it will be evident that I do not share their assumptions concerning lexical structure. I cannot here devote appropriate attention to compositional elements in a number of other languages, particularly Indo-European ones, such as German (see e.g. Isensee-Montgomery 2001) and, of course, Greek.

Arch-duke is an older 'mongrel' than *bioscience*, and adopted as a whole into English. Even older, and with a more complex history is *archbishop*. *Filmography* exemplifies native + Greek 'mongrels'; in it the native first component has acquired a Greek compositional vowel.

We noted the variation in (80) involving the historical 'vowel-shift'.

(80) a. philósophy
     b. bíbliophìle

The compound *haemophilia(c)* illustrates that the particular transitive vowel in the first component of (80a) is not limited to first position.

Such compounds are, even more than others, likely to vary in how they are stored in the lexicon, especially how much internal structure is registered. Internal structure for a noun like *solitude*, for instance, will be at all transparent, I suspect, only to some users of the language. There are clues, of course: the first element might suggest to the user a relation to *sole*, and *-(i)tude* recurs in other noun forms (*magnitude, rectitude, multitude, beatitude, attitude*, etc.). But the first component of these forms doesn't always have an obvious source, nor does the compound achieve transparency.

For a discussion of compound ('dithematic') personal names in Old English see Colman (2014, particularly Chapters 5 & 7), which is the source of the Old English examples in the text, and also provides an explicit account of the grammar of names in general, and a description of the status of names and name-giving in other cultures. On names in general see too, again, Anderson (2003a, 2004c, 2007), Colman (2008, 2015, 2018).

At different periods, the favoured means of vocabulary expansion can be observed to vary. In contrast with the periods when classical elements were adopted particularly as potential compound components, let's recall that the so-called 'digital age', as well as being responsible for extending the use of abbreviation by initial capitals (too many for me to store!), has also seen the burgeoning of 'texting' economies and of childish monosyllabics such as *tweet, blog* and *tech*; and it has also brought forth such etymologically contorted 'compounds' (whose amusement value also depreciates rapidly) as *podcast, youtube* (compare the relatively transparent *she-wolf* or *he-man*), and *facebook*, not to mention *i-/e-* + almost anything.

On Chapter 32

As another example here of the structuring of different domains by localist interpretations consider, briefly, the expression of circumstantial 'cause' in *He died from a surfeit*, where the localist representation is made overt by a locational source as a circumstantial of 'cause'. I have suggested that the prototypical circumstantial is introduced by a secondary locative of some sort. Thus this source

is just one kind of circumstantial that is so expressed, as a locative source. But it shares the **src** feature with the participant cause associated with agents. *Die*, of course, as a (de-)existential, is also a directional verb, expressing going from existence.

Representation as a 'causal' source would also be appropriate in the case of appositives to secondary sources that mark the optional 'cause' in passive constructions. And, indeed, this 'cause' is expounded in many languages by a form that is used elsewhere as locative source. In Modern English, however, as noted, we find expressing a circumstantial passive 'cause' what is etymologically an expression of path, as well as a simple locative expression, as in *by the shore*.

Recall the representation in (52c) of Chapter 29, where the *by* is interpreted as a locative source.

(III.52)   c.
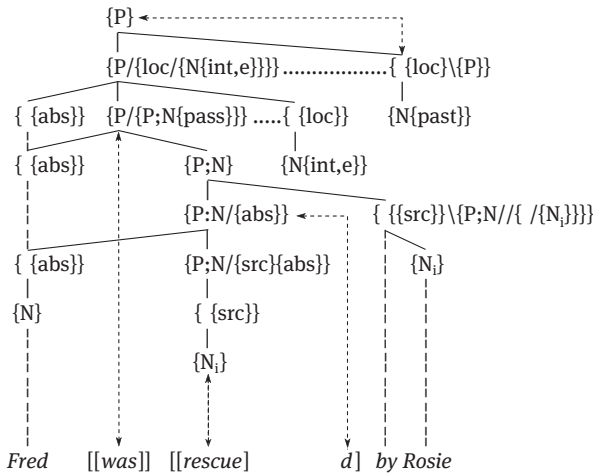
The presence in the passive of a 'causal' locative source in apposition to an incorporated secondary (non-locative) source directly reflects the conceptual relationship between the two kinds of source, secondary and tertiary.

But we apparently interpret obvious 'instrumentals' as, among other things, accompanists of the causing, in English ('with'), while in other languages they may be inflected as are agentives. Particularly 'instruments' that are deverbal favour *by* (*They saved the building by reinforcing the pillars*). Groupings of senses of a functor form vary, so that *by* can be associated with a locational (*by the cliff*), a path (*by the side door*), a circumstantial agentive (*by Rosie*), 'before (in time)' (*by nine*) – though some concrete sense is usually prominent, while others are more likely to show variation among speakers, depending on what figurative histories are favoured.

Typical language-users' perception and linguistic representation of time is in some ways at odds with recentish scientific characterizations. This observation is difficult to reconcile with views such as Bloomfield's (1933: 139) belief that '<we> can define the meaning of a speech-form accurately when this meaning has to do with some matter of which we possess scientific knowledge'. People's interpretation of linguistic forms may sometimes be based on 'scientific knowledge' of some vintage, but our perceptions of our world, as expressed in language, often provide us with different conceptualizations from the scientists' (as Bloomfield [1933: 139–40] also notes). But this does not invalidate attempts, however incomplete, at characterizing these conceptualizations and their expression, even in relation to forms such as Bloomfield's examples of *love* and *hate*. Understanding of what utterances mean is a complex and multi-faceted activity, and it has a limited connection with scientific views of the period concerned, whose scope is constrained by their methodology – and concerning which, moreover, despite Bloomfield, 'scientific classification' is (fortunately for scientists) not necessarily 'universally recognised and accurate' (1939: 139).

The representations (87) and (88) are adapted from Anderson (2011a, I: §3.1.1). On ideas concerning the origins of *kick the bucket* see Brewer (1870: 183), and of *hammer and tongs* and *hell for leather* see Kirkpatrick & Schwarz (1993: 144, 164), for instance. *Take a haircut* had threatened to become a pervasive economic-speak idiom – but who knows? A recent review from the *London Review of Books* (vol. 39, 18th May, 2017, p. 5) provides a typical example of another metaphorical use of *up*: 'The prevailing tenor of De Quincey's writing is upwards: a spirit of lightness pervades it'.

In discussing examples like those in (89), Culicover and Jackendoff (2005: 42) appeal, unnecessarily, to an otherwise unmotivated and notionally vague syntactic category 'particle' as part of what they call, again unnecessarily, 'the verb-particle construction', which allegedly displays a number of different and apparently unrelated semantic functions.

(89) a. He threw out her belongings
      b. They loaded up the truck, He ate up his supper
      e. Bill cried his heart out, They danced the night away
      f. She looked up the entry (in a dictionary)

Such 'particles' and 'constructions' are not syntactically homogeneous, but they all involve arguably locative adverbs, mostly figurative and part of a lexical phrase headed by the verb. In my experience, appeals to a syntactic category 'particle' are always spurious – except, perhaps, in the traditional sense of 'uninflecting', with reference to parts of speech. Such a sense would include Culicover and Jack-

endoff's (2005) 'particles', but also many other forms with even more markedly different distributions and meanings.

On the development of the causative role of the ancestor of *have*, *habban* in Old English, see Kilpiö (2013). As noted in the text, some instances of the *have*-headed derivational periphrasis are not based on an ultimate instrumental noun, as in *Dolly had a shower/bath*; rather, the activity noun has subjoined to it simply a covert verb, as in *Let's have a party*, which alternates with the conversion-containing *Let's party*.

We might also spell out here the possible structures of the *take* and *do* periphrases in (90c–d).

(90) c.   I had/took a look
      d.   They did a strange dance/the washing up

This is only one of the loose ends left by the discussion in Chapter 32.

Do is well attested as a minimal verbal elsewhere than in derivational periphrases. It is the default operative in circumstances that reject a lexically-finitized full verb but the presence of another operative is not required, as in *Do they like strawberries?* (compared with *Will they like strawberries?*). It also serves as an overt pro-verb in *What have they done?* And it occurs in both capacities in *What did they do?* Its presence as a derivational periphrasis is therefore not unexpected. How should we characterize it, however?

Perhaps as in (i), though this representation ignores much of the detail outside the periphrast, and compare: *Did they do a (strange) dance?*.

(i)
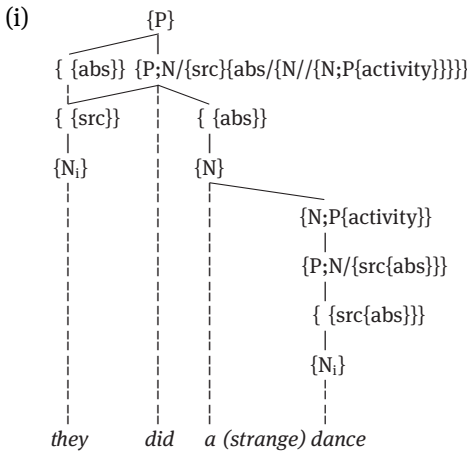
That is, (i) is like the *have*-headed structure in (96) (if we ignore the attributive here), but with an ultimate base in the verb, rather than one of its arguments.

(96)

```
                    {P}
         ┌──────────┘
  { {abs}}  {P;N/{src}{abs/{N/{N;P{activity}}}}}
     │         ┌──────┘
  { {src}}   { {abs}}
     │          │
   {Nᵢ}      {N/{src}}
     ╎          ┌──────┐
     ╎          ╎    { {src}}
     ╎          ╎       │
     ╎          ╎    {N;P{activity}}
     ╎          ╎       │
     ╎          ╎     {P;N}
     ╎          ╎    ┌───┘────────┐
     ╎          ╎  {P;N/{abs{src}}}.....{ {{src,gol}}\{P;N}}
     ╎          ╎     │              │
     ╎          ╎  { {abs{src}}}    {N}
     ╎          ╎     │              │
     ╎          ╎   {Nᵢ}           {N;P}
     ╎          ╎    ╎              ╎
    Dolly      had   a            bath
```

(ii)

```
                 {P}
        ┌─────────┘
  { {abs}} {P;N/{src{abs/{N/{N;P{activity}}}}}}
     │        ┌────┘
  { {src}}  { {abs}}
     │         │
   {Nᵢ}      {N}
     ╎        ┌──────┐
     ╎        ╎  {N;P{activity}}
     ╎        ╎   ┌───┘
     ╎        ╎  {P;N}
     ╎        ╎  ┌──┘──────────┐
     ╎        ╎ {P;N/{abs} {src}}    { {{gol}}\{P;N}}
     ╎        ╎  ┌──┘──────┐          │
     ╎        ╎ { {src}}......{ {abs}} {N{↑}}
     ╎        ╎   │          │          ╎
     ╎        ╎  {Nᵢ}       {N}         ╎
     ╎        ╎   ╎          ╎          ╎
    they    did the       washing      up
```
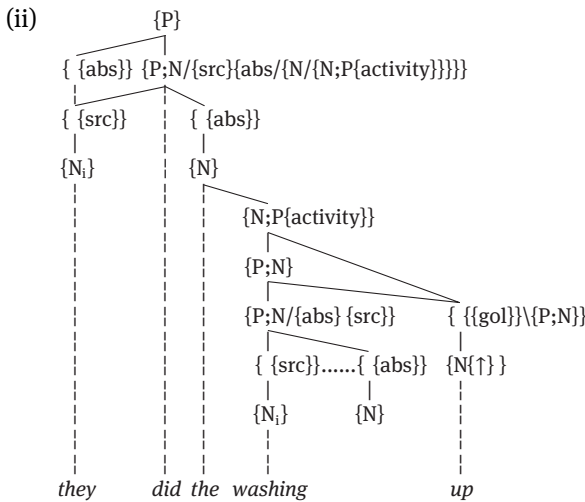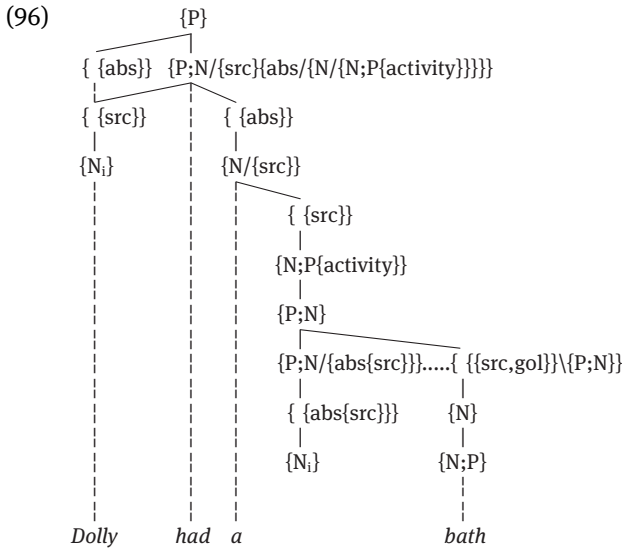
Similarly, the alternative noun in (90d), cited above, is based on a lexical phrase consisting of a verb-head and a circumstantial, as in the compound in (ii). As we might expect, in the abbreviated (ii) *do* marks active involvement in the activity.

But what about the alternative *take* in (90c), also a common periphrasis-head?

(90) c. I had/took a look

As suggested in the text, *take* elsewhere is a causative directional. Let's now be a little more specific, by suggesting that the agent accompanies the moving entity in (iiib), but in (iiia) the goal could also be the agent.

(iii) a. Fred took the anchovy
       b. Fred took the parcel to post office

More extended instances of the two possibilities, specifying a source as well as a goal, are given as (II.161) from Chapter 26.

(II.161) a.
```
                        {P}
              ┌──────────┘
        { {abs}}    {P;N/{src}}
           │           ├────────────────────────────┐
        { {src}}   {P;N/{{gol}}{abs}{{src}}}      { {abs}}
           │           │                 ┌──────────┐   │
        { {loc{gol}}}  │              { {abs}}  { {loc{src}}}
           │           │                 │      ┌──────┐
          {N}          │                {N}    {N}
           ┊           ┊                 ┊      ┊    ┊
         Steve       took            his money  out of  the bank
```

       b.
```
                   {P}
              ┌─────┘
        { {abs}}   {P;N/{src}}
           │           ├────────────────────────────┐
        { {src}}   {P;N/...}                       { {abs}}
           │           │──────────────────┐
         {Nᵢ}    { {loc{src,gol}}\{P;N}}  { {abs}}  { {loc{src}}}  { {loc{gol}}}
           ┊           │                  │         ┊            │
           ┊         {Nᵢ}                {N}      {N}          {N}
           ┊           ┊                  ┊        ┊    ┊        ┊
          they       took            the birds   from Oregon   to  Messinia
```
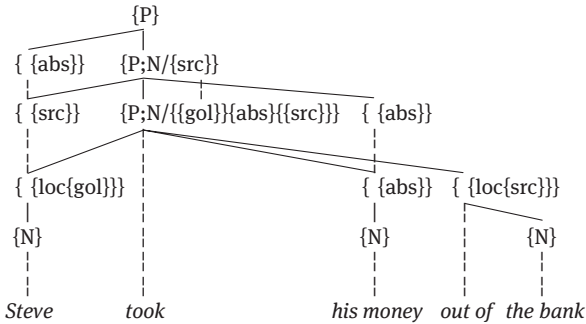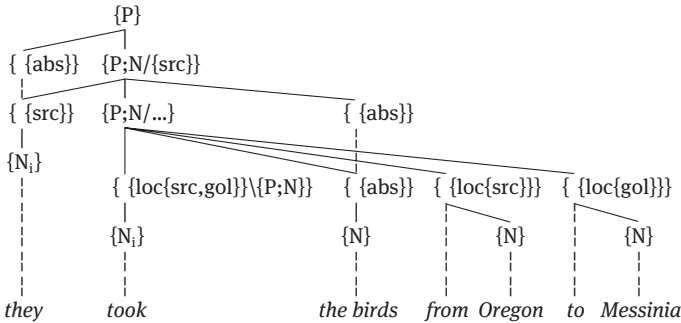
(II.161a), corresponding to (iiia), and having a link between agent and goal, instantiates the more appropriate source for the bleaching emerging in the periphrast, as shown in (iv), again with an abbreviated determiner phrase.

(iv)

```
                    {P}
         ┌───────────┘
    { {abs}}    {P;N/ {src}}
      └──┐      ┌───┴──────────────┐
    { {src}}   {P;N/{{gol}}{abs}{{src}}}    { {abs}}
      │        │    └──────────────────┐    │
  { {loc{gol}}} │                    { {abs}}
      │         │                       │
    {Nᵢ}        │                      {N}
      ┆         ┆                       ┆ └──┐
      ┆         ┆                       ┆   {N}
      ┆         ┆                       ┆    │
      ┆         ┆                       ┆  {N;P{state}}
      ┆         ┆                       ┆    │
      ┆         ┆                       ┆  {P;N/...}
      ┆         ┆                       ┆    │
      ┆         ┆                       ┆  { {src}}
      ┆         ┆                       ┆    │
      ┆         ┆                       ┆   {Nᵢ}
      ┆         ┆                       ┆    ┆
     *we*     *took*                   *a*  *look*
```
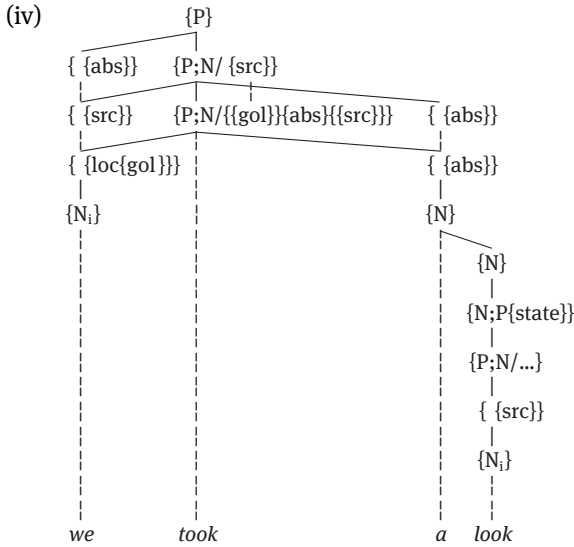
(90a) involves, however, what might be taken to be a state noun rather than an activity noun, or one that is ambivalent in this respect, either of which may be highlighted by the choice of periphrast.

(90)   a.   Let's take/have a break

The *take* here gives more prominence than *have* to 'inception' activity.

There is some discussion of lexical periphrases, along the lines suggested here and in the text, in Andor (2018: 78–82). In the present approach the items discussed here, which are sometimes called 'light' verbs, can all be expressed independently of their periphrastic role; they are not limited to this role, which is parasitic upon their non-periphrastic valencies.

On Chapter 33

Questions of sound symbolism in language and, more generally, the relative arbitrariness of the sign relation have stimulated a longstanding debate in philosophy and linguistics. Many of the studies in this debate are referred to in contributions to Hinton, Nichols & Ohala (1994). In particular, the status of 'sound-symbolism' and 'phonaesthemes' and their relation to iconicity is controversial. For some discussion and further references see Colman (2014: §5.4.2). Van Langendonck (2007) offers a brief history, from the Stoics on, of ideas to do with iconicity, a

classification of varieties of iconicity (crucially imagic vs. metaphorical vs. diagrammatic – based on Peirce) and a discussion of its place in the study of language, together with illustrations of iconicity associated with different linguistic levels. Unfortunately, the varieties in the classification are not disjoint.

The exploitation of suggested literal and phonosemantic correlations is perhaps carried to its furthest extent in the mimologic tradition (see e.g. Genette 1976). On the other hand, orthographic iconicity is prominent in the history of writing systems in the form of pictograms (early Egyptian hieroglyphics, or the pre-Cuneiform script, for instance). However, as is familiar, such scripts do tend to conventionalize, as (unfortunately named) ideograms, and generalize not necessarily figuratively, but simply over homonyms. Typically, a graph with a concrete denotation acquires denotata that share their phonological shape with the original but typically share no sense with it. This is perhaps the most drastic instance of de-iconization in language representation.

Usually phonological distinctions come to be recognized in such systems, initially as a syllabary and later a segment-based alphabet. Some students of scripts have seen letter shapes as attempts to iconize some phonetic characteristic, particularly articulatory: an obvious example is 'B' for voiced bilabial stops. The development of various scripts is beautifully presented in Ouaknin (1999), but the text is tendentious, and weak on language structure. One literary manifestation of attempts at graphosemantic iconicity is offered by the tradition of so-called 'Concrete Poetry'.

Some language users are also able to iconize sounds and/or graphs for themselves as colours. But there are often disagreements among synaesthetics concerning which colours are associated with which sound or graph.

I illustrated the role of repetition in revealing sound symbolism with the following from Hugh Walpole.

> ... he felt tumbled, rumpled, and crumpled, whereas only a quarter of an hour ago walking down Hill Street he had felt debonair, smart, and fashionable ...

Another instance occurs on the first page of a Trollope novel (*The Vicar of Bullhampton*): 'It seems to be a tattered, shattered, ramshackle concern, ...' On different types of non-hesitational repetition in English see Persson (1974).

A phenomenon that is not covered in the text is the apparent spread of iconism by infection. Thus, current news sites report in appropriate language the violent events that constitute a large part of 'the news'. An equally large part of 'the news' is constituted of gossip, whose reporting often replicates the violence elsewhere in the news by the use of clichés like that in 'X blasts Y' to describe verbal 'violence'.

We might represent the syntactic emphatics, which I described in the text as equatives as in (i), with asserted coreference.

(i) a.

```
                  {P{j=i}/{abs}{abs}}
          ┌────────────────┴──────────┐
       { {abs}}  ¦        { {abs}}
          │      ¦           │
       {Nⱼ{def}} ¦        {N{def}}
          │      ¦        ┌───┴───┐
        { ᴋ}     ¦        ¦    {N}
          ¦      ¦        ¦  ┌────┴────────────┐
          ¦      ¦        ¦ {Nᵢ{sg}}  {N/{P}\{N{sg}}}
          ¦      ¦        ¦   │      ┌───────┴──────
          ¦      ¦        ¦  { }     ¦      {P}
          ¦      ¦        ¦   ¦      ¦       │
          ¦      ¦        ¦   ¦      ¦    {P;N/{abs}}
          ¦      ¦        ¦   ¦      ¦       │
          ¦      ¦        ¦   ¦      ¦    { {abs}}
          ¦      ¦        ¦   ¦      ¦       │
          ¦      ¦        ¦   ¦      ¦     {Nᵢ}
          ¦      ¦        ¦   ¦      ¦       ¦
        John  is/was    the  one    that survived
```

b.

```
                  {P{j=i}/{abs}{abs}}
          ┌──────────┴────────────────┐
       { {abs}} ¦      { {abs}}  { {abs}}
          │     ¦         │         │
       {N{def}} ¦      {Nⱼ{def}} {N{def}}
          │     ¦         │         │
        { }     ¦       { ᴋ}      {N}
          ¦     ¦         ¦      ┌───┴────────────┐
          ¦     ¦         ¦   {Nᵢ{sg}}....{N/{P}\{N{sg}}}
          ¦     ¦         ¦      │      ┌──────┴─────
          ¦     ¦         ¦     { }     ¦     {P}
          ¦     ¦         ¦      ¦      ¦      │
          ¦     ¦         ¦      ¦      ¦   {P;N/{abs}}
          ¦     ¦         ¦      ¦      ¦      │
          ¦     ¦         ¦      ¦      ¦   { {abs}}
          ¦     ¦         ¦      ¦      ¦      │
          ¦     ¦         ¦      ¦      ¦    {Nᵢ}
          ¦     ¦         ¦      ¦      ¦      ¦
          it  is/was    John           (that) survived
```
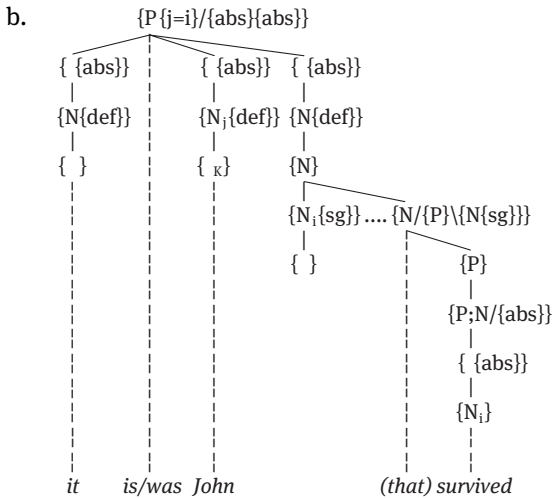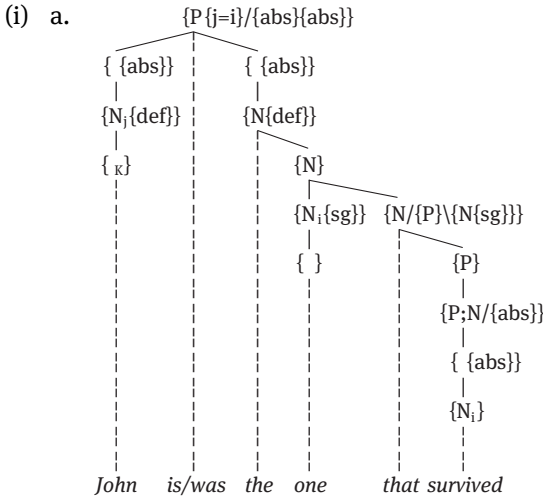
The equative in (ia) establishes coreference between John and the survivor. There is an alternative to (ia) with a relative pronoun instead of the overtness of the finiteness determiner; and in *The one who survived is/was John* the two absolutives of the copula are reversed when compared with (ia). In (ib) subject-formation has failed and subject position is occupied by an expletive pronoun. The bracket

suggests that the finiteness determiner need not be overt here. Compare the rela-
tivized variant in (189).

I take the phonological emphasis in *John survived* to be an exponent, as an
alternative, of the structure realized in (ia) as *is/was the one that*. This outrageous
suggestion might prepare the reader for what happens in Part IV.

On foot/syllable dynamics and lenition/fortition see e.g. Anderson 2014b: §4,
and references therein.

Unlike the *see* of (104a), in (iia) the locative takes a simple {N} argument, as in
(iib), which also makes explicit the directionality of *see* (omitted for simplicity –
and space – in (105b) in the text).

(104)   a.   I saw them leave

(ii)   a.   I saw them

         b.
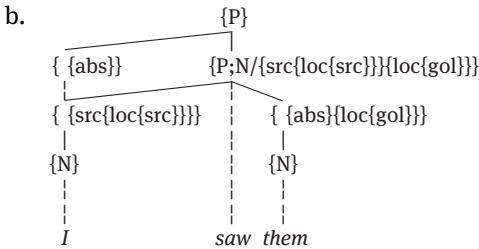
In the present instance the free absolutive of the verb is attached to the goal
locative argument, here *them*. This reverses the directionality of *hear* (but not
listen). For fuller discussion of perceptual and causative verbs along these
lines, and their history see Fischer (1990: §4.6.2.3) and other work referred to in
Anderson (2011, vol. I: 58, note 10)

Morphological representation can iconize lexicosyntactic structure. For an
extensive discussion of such phenomena see Bybee (1985). But this is not easily
illustrated from Present-day English morphology, impoverished as it is. Old English
offers a little more scope in this regard. Take a weak (Wk) verb of class II, and
the form of the past subjunctive plural. These secondary features are expounded
in the traditional order I have given: conjugational class, tense, morphological
mood, person/number – except that there is not a one-to-one mapping in expo-
nence, as shown in the following diagram of category to exponence relations in
sealfian 'anoint':

(iii)

```
        Wk,II   past    subj    pl
          |    /\      /\      /
          |   /  \    /  \    /
sealf-    o-  d-      e-      n
```
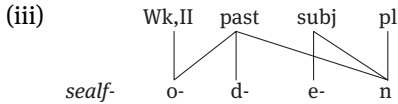
From (iii) one can see that, roughly, relative notional intimacy of an inflected property's connection with verbals is reflected in distance from the root – though the closest place is given to conjugational class, which is not a notional but a morphological inflectional property. Moreover, in many cases at least the weak class marker is clearly derivational (causative-forming), and as such, as elsewhere, it precedes inflections. Even apart from this, conjugational class is an inherent feature of the particular verbal concerned, whereas the rest of the features are elective – so again normally following, as with gender (inherent) vs. number (elective) in nouns.

But we can be rather more precise about the nature of the iconicity than this. Compare the order of elective inflectional formatives with the height of the place of the primary category they attach to in a lexicosyntactic structure – in the present case, as shown in (iv).

(iv)

```
          {P}                          *
           |                           |
       {P<decl>} ..... { {loc}\{P}}
           |                     |
          {P}              {N_T{TEMP}} ──────┐
           |                     |           │
subj ← {P/{loc/{N{e}}}} ..... { {loc}\{P}} → past
           |                     |           │
       {P;N/...}            {N_i, i < T} ─────┘
           |
         {  }
           |
    pl ←── {N{pl}}
```
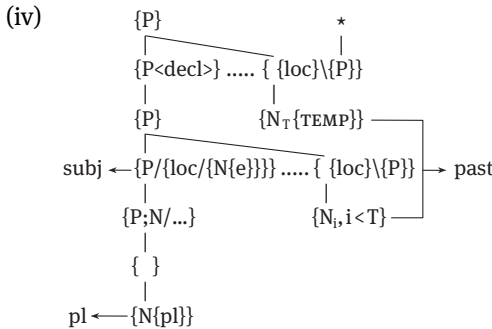
As proposed in Chapter 29, tense is a matter of the locative modifiers of the root {P<decl>} and the existential below, which latter is the location of 'morphological mood', which has to do with existentiality, suggested to be doubtful in the present case. Number originates in an incorporated argument of the {P;N} (the subject, marked by the empty braces) – though it may be represented on a distinct operative, as in (59) from Chapter 29, which returns us to present-day English.

(59)
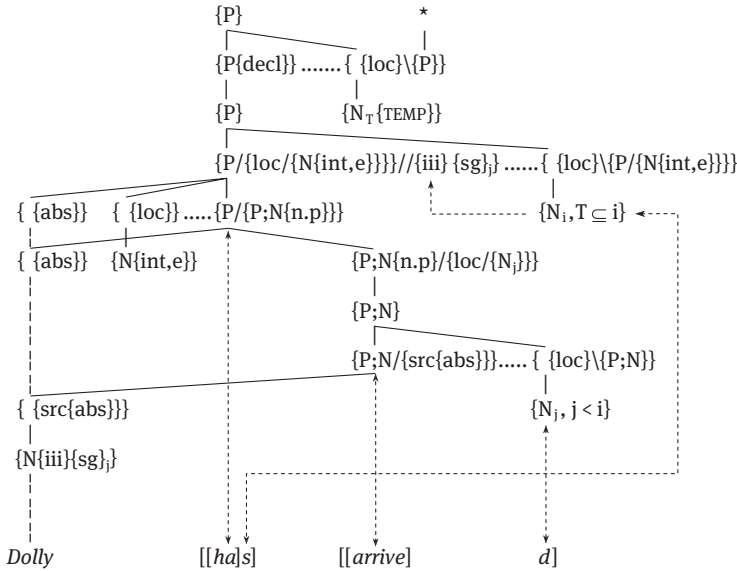
The position relative to the root iconizes the hierarchy, with the concord as the lowest. I have already remarked on the iconic relation between the parts of speech and their morphosyntactic behaviour. So that, for (obvious) instance, the dynamic and relational character of the prototypical verbal is matched by its morphosyntactic expression of mood, tense and concord and by the potentially rich valencies associated with verbs.

On 'neural iconicity', alluded to at the end of the text, consider the research reported in Kosslyn et al. (2010: Chapter 1), drawn to my attention by Miranda Anderson.

Let me reluctantly leave this whole area with a nice instance of an iconic take-over, whose take-over is illustrated in Radcliffe's *The Mysteries of Udolpho* (Folio edn., p. 290): 'She ... placed herself at a window, to select into a landscape some features of the scenery without'.

On Chapter 34

This chapter draws heavily on Anderson (2014a), though neither that account nor the present one can claim to be comprehensive. Here I have introduced some commonly used figures in order to illustrate the proposed classification of figures in terms of a representational grammar, though this does not reveal their com-

monness in all styles of language, even if 'dead' or 'sleeping'. No doubt there is even more overlap among tropes, schemes, and figures of speech than I have acknowledged, but I don't think this undermines the worth of the conceptualization afforded by the classification. Some more illustration based on Anderson (2014a) follow in this commentary.

The source domain of a trope is typically more 'concrete' and anthropic than the goal of the trope, as with the familiar personification in Keats' ode 'To Autumn' alluded to in the text, which begins, you may recall!

> Season of mists and mellow fruitfulness,
> Close bosom-friend of the maturing sun;

But authors and others may also play with associating the concrete with something more abstract, as in the second part of the following passage from Michael Innes *The Journeying Boy* (Penguin, Harmondsworth, 1961), pp. 65–6 – already cited in Chapter 18.

> The engine, a creature whose ancient pride had been to enter stations unblown and on the dot, now pursued with depressed but dogged wheezing a timetable hopelessly beyond its senescent powers. On either side the forlorn and dismal backs of terraced houses stretched like a tedious discouraging argument ...

The personification of the engine and (more mildly) of the terraced houses is followed by an association of the sequence in space of the latter with an argument, with an increase in abstractness – though, admittedly, the manifestation and accompaniments of an argument may be far from abstract.

And George Meredith, for instance, makes use of metonymic 'depersonification' in, for example, the repeated use of '(Madame) the Eighteenth Century' to refer to a conservative elderly lady, or of 'the Dyspepsy' to identify a gentleman who persistently complains about his digestive system and its enemies (*The Ordeal of Richard Feverel* [1896]). We find traffic both ways in this passage from Chapter XXVII.

> The System, wedded to Time, slept, and knew not how he was outraged – anticipated by seven pregnant seasons.

'The system' is a father who is educating his son in accord with a system devised by himself.

Another kind of 'inversion' of the conventional is illustrated by this passage from Frank Tallis's *Darkness Rising* (Arrow, p. 149): 'He was positively mountainous, possessing broad peaked shoulders, and a face that resembled a serendip-

itously anthropomorphic arrangement of rocks'. This mixture of metaphor and simile reverses the established 'mountain-as-body' metaphor mentioned in the text (*crown*, *shoulder*, *foot*, etc.).

Some metaphors link domains synaesthetically. Dickens offers a striking example in *Bleak House* (Folio edn., p. 60): 'We had stopped, and the wagon had stopped too. Its music changed as the horses came to a stand, and subsided to a gentle tinkling, except when a horse tossed his head, or shook himself, and sprinkled off a little shower of bell-ringing.'

Some transportation of terms can be associated with technological innovation (where I use 'innovation' in the neutral sense, whereby not all innovations necessarily have positive consequences). Obvious examples come indeed from the area of transport, where *to drive a car* involves individual lexical items formerly used mainly in other areas (respectively the driving of animals or people, including as propellants of non-motorized vehicles). A recent-ish instance, alluded to in the text, is the transport of terms used in relation to hand-written or printed graphic objects to the products of electronic word-processing: *page, document, file* – the last two rather formal within their earlier domain. Is this 'virtual iconicity', with the terms creating an analogous hierarchy? Such terminology rubs shoulders (or anything else) rather uncomfortably with other already mentioned linguistic elements associated particularly with the virtual world, especially the hypocoristic, even lall-like, journalese of *tweet* and *twitter*, *blog*, *app*, *tech*, *celeb*, *troll*, *meme*, ... – with its continual innovation.

I should perhaps elucidate my notion of the computationally naive (invoked in the text) by confessing that a distinguished (and no doubt frustrated) colleague once accused me (by e-mail, of course) of using my processor as if it were a typewriter. Quite so – and in my case pressing keys still involves only one and the same digit every time.

Recall that Sheridan Le Fanu introduces a common type of metonymy towards the end of the following sentence from *Uncle Silas* Chapter XX.

> He shook his head a little, as he smiled with a sad complacency on me through his blue steel spectacles, and then sipped a little meditative sherry.

Here there is assigned to the sherry an attribute that more obviously and prosaically modifies the verb expressing the actions of the referent of the subject, but thereby renders them more vivid.

And there is a typically allusive Meredithian metonymy in the first sentence of the last paragraph of *The Egoist*.

> So, and much so universally, the world of his dread and his unconscious worship wagged over Sir Willoughby Patterne and his change of brides, ...

The 'world' is the social world of Sir Willoughby's county, and what 'wags' is proverbial.

The 'pun' in (281) doesn't quite work in the variety of English that I grew up with, which lacked the form *anyways*.

(281) a. The good candy came anyways
      b. The good can decay many ways

I first encountered it introduced as an indication of the independence of syntax from phonology.

There is a variety of views concerning **zeugma** ('bond, yoke') and its relationship to **syllepsis** ('taking/seizing together'). These both seem to be, along with puns, sub-types of **paronomasia** ('slight altering'), which roughly involves using the same word form in different senses. The proverb 'Eggs and oaths are soon broken', where *eggs* and *oaths* are yoked together as a participant of *break* although they satisfy different kinds of valency, conforms to one familiar tradition concerning zeugma.

In terms of hypermetaphor, we saw that a metaphor can be extended through whole cognitive domains. We should also recall, in terms of 'extension', though in a rather different sense, that particular tropes and schemes of the word may be implemented throughout a discourse unit, rather there being only an isolated instance, as I have already illustrated with extended onomatopoeia from Pope's 'Essay on Criticism', II, ll.362–73.

> True ease in writing comes from art, not chance,
> As those move easiest who have learned to dance.
> 'Tis not enough no harshness gives offence,
> The sound must seem an echo to the sense:
> Soft is the strain when Zephyr gently blows,
> And the smooth stream in smoother numbers flows;
> But when loud surges lash the sounding shore,
> The hoarse, rough verse should like the torrent roar:
> When Ajax strives some rock's vast weight to throw,
> The line too labours, and the words move slow;
> Not so when swift Camilla scours the plain,
> Flies o'er the unbending corn, and skims along the main.

Metre, alliteration, choice of sound segment, and even the rhyming contrive to offer the 'echo' prescribed in the fourth line in this passage, the echo itself being instantiated by the alliterating sibilants in the line and indeed in the next two.

Among tropes, a narrative that is an extended metaphor, is an **allegory**. Such is *Piers Plowman*, for instance. More easy to cite in illustration, in terms of length,

is the extended personification (and examples of much else figurative) of the following sonnet (Auden, 'Our Bias').

> The hour-glass whispers to the lion's roar,
> The clock-towers tell the gardens day and night,
> How many errors time has patience for,
> How wrong they are in always being right.
>
> Yet Time, however loud its chimes or deep,
> However fast its failing torrent flows,
> Has never put one lion off his leap
> Nor shaken the assurance of a rose.
>
> For they, it seems, care only for success:
> While we choose words according to their sound
> And judge a problem by its awkwardness;
>
> And Time with us was always popular.
> When have we not preferred some going round
> To going straight to where we are?

... as is the extended pun (and much else) of Milton 'Sonnet XIX: On his Blindness', ll. 1–8.

> When I consider how my light is spent,
> Ere half my days, in this dark world and wide,
> And that one Talent which is death to hide,
> Lodg'd within me useless, though my Soul more bent
> To serve therewith my Maker, and present
> My true account, least he returning chide,
> Doth God exact day-labour, light deny'd,
> I fondly ask ...

The 'Talent' pun sends us back to look again at *spent* and is picked up by such as *present ... account* and *day-labour*.

Recall again the 'extended metaphor' implied by (5).

(5) the crown/shoulder/foot of the hill

We have here a set of individual metaphors instantiating a more general metaphor that views a hill as an upright human body. Such phenomena are most strikingly illustrated, however, in those circumstances where this kind of 'extended' metaphor and metonymy are unavoidable. I have argued in the text that the tropes we have looked at add to linguistic structure, and to its expressiveness, and this is

A more compact but slightly more complex example is Pope, "The Rape of the Lock," Canto III, l.11 : 'Favours to none, to all she smiles extends'. Simple antithesis, without inversion, but with parallelism, occurs in Shakespeare, *Julius Caesar* III. ii, ll. 22–3: 'Not that I loved Caesar less, but that I loved Rome more'. Recall too the first line in Shakespeare, *Romeo and Juliet*, I.i, ll.180–7.

Such balancing schemes, like the previous repetitive ones, clearly add structure compared with syntactic structures lacking these features. So too with **polysyndeton** ('with many joining-words'), proliferation of conjunctions, which is common, along with syntactic parallelism, in (particularly informal) narrations such as are abbreviated in (i).

(i)   ... and he says to me ... and I says to him ...

Here the conjunction highlights the assumed consequentiality of the successive events being described. (i) also illustrates the **historic present**, used to give a sense of immediacy, vividness – though in the present example (no pun intended) much routinized.

With the corresponding 'scheme of omission' **asyndeton** ('without joining-word(s)') – omission of a conjunction where one might conventionally be expected – a resulting amplification of structure is perhaps not so obvious. This scheme can be illustrated by one variant of descriptions of the successive foreign intrusions in Polish history that I have heard (as well as by its model).

(ii)   They came, they conquered, they left

However, in this case too the departure from conventional has a structural effect. In (ii), unlike in its model, where the sequence is linked as a natural, almost inevitable one, the simple juxtapositions in the sequence in (ii) are inconsequential, bathetic. In both instances the departure from the conventional involves the addition to this syntactic context of a structural property, juxtaposition, which can have distinct interpretations. This omission is 'additional' because marked, unusual. Schemes, even 'of omission', involve addition of a structural property that enhances expressivity, just as this is enhanced by addition of lexical structure in the case of tropes.

Another figure of speech relevant to the quoted line from 'Miranda's Song' ('My Dear One is mine as mirrors are lonely'), as observed in the text, is functional **ambiguity** (where the term itself is, as usual, a trope, here based on the Latin verb meaning 'wander about'). Less uncertainty but rather puzzlement is the reaction to the figure of speech **paradox** ('contrary to opinion'). A familiar

instance is Wordsworth's 'The child is father of the man', which also illustrates the tropic aspect involved in reinterpreting *father*.

A rather different figure of speech is **prolepsis** ('taking before'), illustrated by Keats' ('Isabella', ll.).

> So the two brothers and their murder'd man
> Rode past fair Florence.

The past tense of *murder'd* anticipates an event that is not past at the time of the action described. Another kind of 'transfer' characterizes **hypallage** ('interchange, exchange'), illustrated in Milton's.

> But let my due feet never fail,
> To walk the studious cloister's pale.

The adjective *studious* has been applied to a place rather than to the activity of those who use it, a kind of displaced metonymy. The result is a paradox that is resolved by interpretation as a type of personification. A minor version of this is involved in *due feet*.

Certain textually-extended phenomena are a feature of particular styles. Illustrative of such are persistent periphrasis and the more particular 'essential epithet' convention, whereby particularly a named entity is regularly accompanied by a specific attributive, as with, in ancient times *Πύλος η Αμμουδερή* ('sandy Pylos').

The traditional linguistic figures are a part of the potential for linguistic structuring that has been considered most important to creative literature and public rhetoric. And this has, in my experience, resulted in neglect of the study of the role of figures in language in general and its development (except to some extent in the 'metaphor industry' of recent years), and particularly their effects on linguistic structure. Both these effects and their centrality to the evolution of linguistic structure and other aspects of culture deserve more explicit and intensive exploration of the character of Trousdale (2018). Such figures as we have looked at enable and embody the workings of the imagination, not necessarily 'literary'; and they are the basis of linguistic and much of other cognitive creativity.

On Conclusion to Part III

Lyons (1977, I: §9.5) and Persson (1990: Chapter 3) illustrate problems with simple hierarchical models of hyponymy, and Lyons' Chapter 9 classifies a number of opposition types. More generally, prominent in my mind in recent work on lexical

structure are the publications of Gunnar Persson and his associates, including Magnusson & Persson (1986a,b) and Persson (1990), the work illustrated by De Mulder & Stosic (2009), and work in 'cognitive' approaches, represented recently in, for example, R.W. Gibbs (2008) and Aurnague & Stosic (2019). In the text I distinguish some of the main opposition types in terms of their independently-motivated internal structure. But the classification is incomplete.

We could in particular pursue the deconstruction of the functor relations in terms of dimensions and antonymy after the fashion of (137) in the text.

(137) { {loc{DIR::pos}}}
        |
      {N{int}/{loc}}
      ┌─────╲
      ┆   { {loc}}
      ┆ |
      ┆   {N}
      ┆   ┌────╲
      ┆   ┆   {N;P}
      ┆   ┆   ┆
      ┆   ┆   ┆
     into the yard
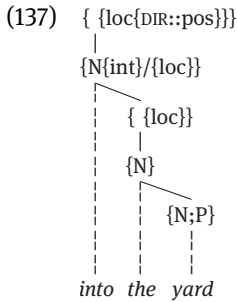
And a similar dimensional analysis was suggested in the case of (138);

(138)   Is Billy at home? No, I'm afraid he's out

But generalizing such an approach has consequences whose desirability is at least debatable.

For instance, within the actional rather than locational domain, { {abs}} would have a different characterization, as actional, since it participates in actions but is not itself active, { {ACTIVE::neg}}, compared to { {src}}, { {ACTIVE::pos}}. Now this difference is already recognized in the other notation, with the addition of a tertiary {gol} to such an { {abs}}, as in (i).

(i)   Billy read the book

But in a simple intransitive, such as (ii), neither {gol} nor either of the antonymous features seems to be necessary.

(ii)   Billy slept

And the accommodation of middles, holistics, and patients, for instance, will considerable complicate the necessary picture of antonymic dimensions. And the text suggests a localistic analysis of at least some antonymic dimensions.

In the text we observed a convention that in coordinations of pairs of antonyms the positive precedes (*good and bad*) etc. But other factors are involved with non-antonymic pairs such as *father and son* and *brothers and sisters* and *man/husband and wife*. Social assumptions are implied here. There also may be rhythmic motivations, in *aunts and uncles* or *Gran and Grandad*, for instance, avoiding awkward sequences of dactyl + monosyllabic foot. Or both these factors might be involved, as perhaps in *men and women*. There may also be iconizing of temporality, as with *young and old* or, with a retrospective perspective involving a single entity, *man and boy*. Many such pairs are lexicalized, as with *fish and chips*, to introduce one of many more coordination types, whose range is uncertain.

Along with such uncertainties and the inherent difficulties in the task of characterizing unsignalled antonymic relations, the present lack of progress in this area, I believe, has also been again associated with the promotion by 'formal' linguists of their over-estimate of both the 'rule-governedness' of language and the extent of understanding of the fundamentals of language that can be derived from attempts to extract allegedly autonomous regularities from both syntax and semantics. But usually 'autonomy' is merely apparent, and such accounts remain incomplete, indeed non-explanatory. And, to the extent that such apparently autonomous regularities in lexicon and syntax can be extracted, they are simply a consequence of conventionalization, and even conventions tend to acquire new functions, as in the case of the non-universal (as usual) convention of subject formation.

As I understand it, such 're-cycling' is recognized in, for instance, a number of discussions of the role of 'exaptation' in language change, such as Lass (1997: §6.4). The same impulse to make distinctive use of an expression is also disastrous for the maintenance of potential synonymies.

On a lighter note with regard to conventionality, relatively recent changes in 'set phrases' are particularly striking because of their recurrence: for instance, every time I read a book by Hugh Walpole or other authors of that era, *once and again* regularly stands out for me as part of the locating of the epoch of the story. We should note again too, on a similar note, the jocular genesis of a number of formations, such as *underwhelm(ing)* and *cleanth*.

Fudge (1967) discusses the 'unnaturalness' of the set of consonants undergoing morphophonological relations and of the set of oppositions attested in particular contexts in a variety of languages, including English. A familiar illus-

tration of the latter is provided by the set of consonants occurring in the environment '# s____' in English, as discussed at various points in the text.

On Prelude to Part IV

Sometime between, say, Sweet's grammar of English (1892, 1898) and, say, Jespersen's grammar (1909–49), or thereabouts, there came about a profound change in attitudes to the domain of syntax – with Poutsma (1904–26), for instance, standing aside from the trend. Compare the proportions of these grammars devoted to 'syntax': Sweet's 'Part I', 'Introduction. Phonology, and Accidence', occupies a volume of 449 pages, and 'Part II', 'Syntax', 127 pages, including the index to both volumes; of Jespersen's seven volumes, on the other hand, one is devoted to 'Sounds and Spellings', one to 'Morphology', and five to 'Syntax'. Poutsma devotes two volumes to 'The Sentence', and three much fatter ones to 'Parts of Speech'. He also confesses, disarmingly, 'I have not included derivation, "word-formation", and phonetics in my programme, these subjects lying for the present outside the field of my special studies' (preface to 1904).

The earlier tradition was, naturally, given limited access to the language, even more evident in grammars of earlier stages of English. Thus, Cook's English translation of Sievers' *Grammar of Old English* has two parts only, entitled 'PHONOLOGY' and 'INFLECTION' (1885). And something like such an interpretation of 'grammar' is maintained in Campbell's *Old English Grammar* (1959). But even this tradition has eventually followed the twentieth-century trend, culminating in a proliferation of 'corpus-based' studies that utilize digitalized edited texts, and which provide tainted data, particularly if the corpus is 'tagged', and in either case not based on seriously evaluated theoretical assumptions. Grammars don't just emerge from corpora. Mitchell's (1985) grammar has a more scholarly basis, but he insisted on pursuing and presenting his 'findings' within a framework of categories whose failings had been well established long before. At this point, however, I should confess to dependence on secondary sources in my own limited incursions into the history of English grammar. Philology is too difficult for me.

To resume our survey of the earlier development of grammars of English: Meiklejohn's (1892) pedagogical grammar of the modern language has a chapter ('Etymology', pp. 8–60) devoted to the parts of speech, a chapter ('Syntax', pp. 61–84) devoted to the functions of the parts of speech, and a chapter ('Analysis', pp. 87–115) devoted to syntax, before several chapters on morphology (pp. 116–60). Together with a few remarks on words that have changed their form or meaning,

these chapters constitute Part I of the grammar, which is entitled 'The Grammar of the English Language'; Part II is concerned with 'Composition, Punctuation, Paraphrasing, and Prosody'. In the *Abridgment of Murray's English Grammar* of 1829, 'Syntax' occupies only pp. 61–70 of its 128 pages.

In the mid twentieth century, Zandvoort ([1945]1964) remains balanced towards parts of speech in terms of space devoted, and Scheurweghs (1959) blends together almost even treatments of the parts of speech and the syntax. But by the time of Freeborn's (1987) *A Course Book in English Grammar*, however, syntax has swallowed everything else, with only two short preliminary chapters on 'word-classes' (the parts of speech) – though as a help the author does give Hallidayan nods in the direction of meaning.

However, this shift in conception of the core of grammar roughly coincides with the beginning of the idea that syntax should be studied without reference to other aspects of language, in particular without reference to semantic considerations, though some among the American structuralists emphasized the importance of phonological signals of syntactic structure. The banishment of semantics was partly in reaction to the 'psychologism' that characterized many 19th century studies of syntax. But this reaction also meant rejection, by American structuralism, in the first place, of the traditional, mainly semantic account of the role of inflections and prepositions, and acceptance of a syntax based on distribution only.

This had disastrous consequences for 20th century approaches to syntax, culminating in the fiasco of 'formal syntax' (and then 'phonology') the consequences of which still beset us. Many students of language now simply accept as given such views and the associated assumption of the centrality of syntax, and its divorce from semantics. This is not adequately compensated for by the various multi-authored 'reference grammars' that have appeared in the last century or so, which tend to be ultra-conservative and controversy-avoiding, particularly in relation to meaning and the role of the lexicon (not to mention phonology). And the proliferation of surveys of alleged 'usage' based on digital corpora has not improved this situation. This is unsurprising of such a behaviouristic approach, given that grammar is a mental capacity. This last insight is perhaps the only worthy part of the Chomskyan linguistic legacy. Perhaps the most unworthy is the rubbishing of pre-generative structuralism, while adopting the language-internal autonomistic assumptions typical of the American structuralists. These were not part of the sign-based Saussurean tradition, however.

In the present work, as proposed in the main text, I am suggesting that syntax is simply the single level resulting from the meaningful selection of lexical items and the hierarchizations and sequencings, at the interface, of the semantically-

based valencies stored with them in the lexicon, along with such 'repairs' as the provision of a free absolutive to verbal valencies that lack them, as well as acknowledgement of the requirements of contextual considerations.

I also suggest in the text that the functor required by a non-conventionalized topical {P} is an optional locative source, {loc{src}}, typically associated with an argument of the main verb. The most common choice for topic is another type of source, the source of the scene, actional or experiential, transitive or intransitive. It would therefore not be surprising if the expression of (a subset of) non-locational sources came to be perceived as one marker of topicality as well. In that case, the marker could spread to non-agentive absolutives, which are next most common as topics, in preference to locationals. And the way then lies open for the routinization of the marker: loss of necessarily topical content, and status as what is traditionally called a subject. The commonness of subject expressions in the languages of the world is not surprising.

Some of the complexities in the positioning and intonation of adverbs is illustrated in considerable detail in Hartvigson's unduly neglected (1969) study, to which we shall return in a subsequent chapter.

A further striking example of reflexive usage is provided by a paragraph spanning the first two pages of Austen's *Emma*, where the reference of *herself* that occurs towards the end of the paragraph depends on the reader's knowledge that the paragraph is a description of Emma's thought: 'It had been a friend and companion such as few possessed, intelligent, well-informed, useful, gentle, knowing all the ways of the family, interested in all its concerns, and peculiarly interested in herself, in every pleasure, every scheme of her's; ...'. Such is analogous to (7b), where the reflexive refers to the speaker/thinker.

(7)   b.   It was a picture of me/myself

This is important to our renewed look at finiteness.

I ignore in the text the natural extension, in the culture concerned, of *himself* as a title: *Himself's at home again*. The focus of interest here is the simple coreferential with an antecedent, as in *John messed himself*. Interpretation of some of these suggests that *yourself* and *myself* may have antecedents that are part of the finiteness complex, as in *He retaliated with a caricature of myself*. The antecedents are part of a lexical predication that is analogous to that containing an overt performative. Such a 'performative analysis' for declarative sentences is suggested in Ross (1970), which provides a range of evidence for it, including the 'picture noun' phenomena invoked here, which he attributes to Jeffrey Gruber. But Ross's analysis is couched as a proposal concerning syntax, whereas in the

text here the 'performative' is lexical; it is part of the lexical finiteness complex – though there are, of course, syntactic (contentive) 'performatives'.

On Chapter 35

As an alternative to the optative in (27a) we have the construction in (i), where there is an explicit modalized main-clause existential and the subordinate may be marked as a ('present') subjunctive.

(27) a. May she come back (very soon)!
    (i) May it come about that she leave(s) (very soon)

Moreover in some instances the subjunctive may occur alone, as in (iib), which is consequently more insistent.

(ii) a. May it suffice (to say) that they separated
    b. Suffice it (to say) that they separated

Thackeray's *Philip* (vol. II, Chapter II) provides the example: 'Suffice it that Mrs. Mugford was one of Mrs. Brandon's best, kindest, and most constant patrons …'.
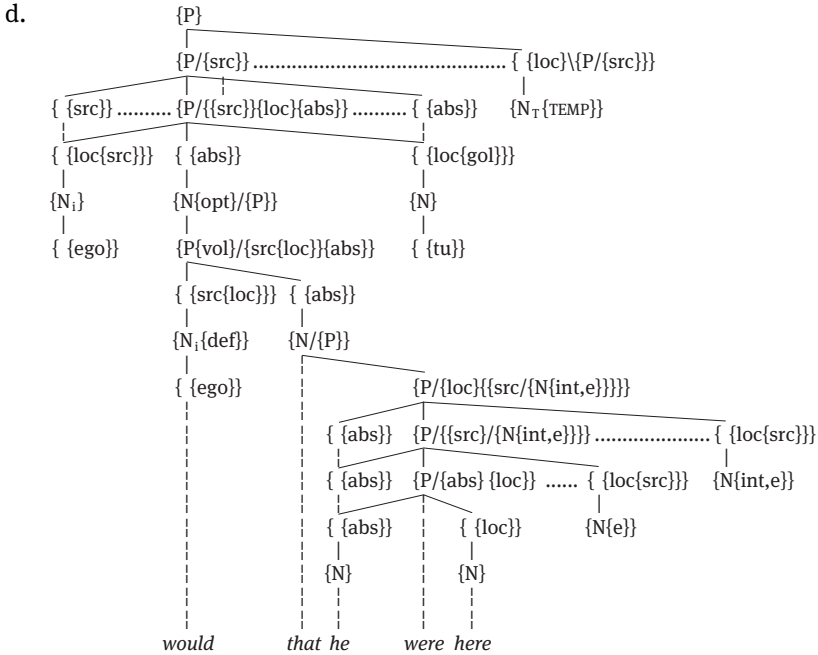   In the chapter that follows we shall be looking at the role of *would* as a periphrastic substitute for the contrafactive subjunctive, as in one interpretation of (62a) of that chapter.

(62) a. If he left she would follow him

Thackeray again illustrates the once common alternative with a morphological subjunctive in both clauses and marking of the protasis by inversion: '"Had they come to Virginia," he thought, "I had given them a different welcome!"' (*The Virginians*, vol. I, Chapter XLVIII).
    Suitably, *would* also occurs in the expression of the rather forlorn traditional **optative** in (27c), and the subordinate clause expressing the wished-for situation is, of course, contrafactive as represented in (27d).
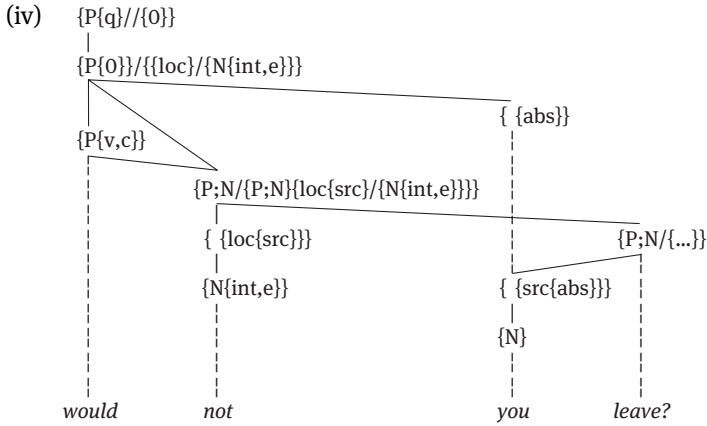
(27) c. Would that she were here!

d.

```
                        {P}
                        ┌─────────────────────────────────┐
                    {P/{src}} ............................................ { {loc}\{P/{src}}}
                    ┌──────────────┬──────────────────────┐              │
        { {src}} ......... {P/{{src}}{loc}{abs}} ......... { {abs}}      {N_T{TEMP}}
        │                    │                               │
    { {loc{src}}}        { {abs}}                        { {loc{gol}}}
        │                    │                               │
      {N_i}               {N{opt}/{P}}                      {N}
        │                    │                               │
    { {ego}}            {P{vol}/{src{loc}}{abs}}         { {tu}}
                        ┌──────────────┐
                    { {src{loc}}}  { {abs}}
                        │              │
                    {N_i{def}}      {N/{P}}
                        │              │
                    { {ego}}      :   {P/{loc}{{src/{N{int,e}}}}}
                        │         :   ┌──────────────────────────────┐
                        │         : { {abs}}  {P/{{src}/{N{int,e}}}} ................... { {loc{src}}}
                        │         :   │         │                                          │
                        │         : { {abs}}  {P/{abs} {loc}} ...... { {loc{src}}}      {N{int,e}}
                        │         :   │         │                      │
                        │         : { {abs}}  :  { {loc}}            {N{e}}
                        │         :   │      :    │
                        │         :  {N}    :   {N}
                        │         :   :     :    :
                     would    that he    were here
```

This expresses a wish that someone's absence should cease, which involves a negative directional existential (eventuative) above a simple negative locative existential. Contrafactivity is examined a little more extensively in Chapter 36.

As concerns operative-negative compounds, a passage of Trollope's from *Dr Wortle's School* (Folio edn.), p. 151, suggests fronting of the complex can throw focus on to the subject, particularly since it is repeated in successive sentences: 'I did do what was wrong. Would not you have done so under such circumstances? Would not you have obeyed the man who had been so true a husband while he believed himself entitled to the name?' In the following, again from Austen's *Emma* (folio edn.), p. 350, the modern reader is tempted down a 'garden-path' by the compound's presence before its subject: 'For the world would not she have seemed to have threatened me'. Edgeworth's *Vivian* (Chapter v) provides the apparent compound *do not* in '... Did not you know I was married?'.
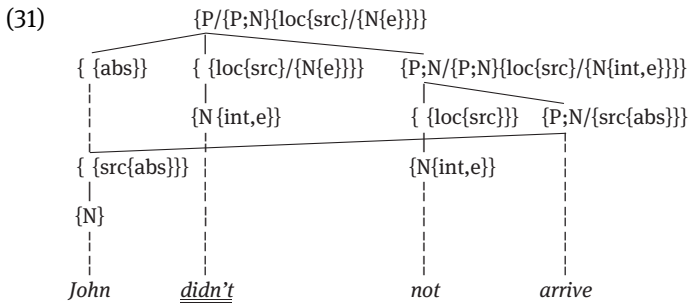
Such examples are compatible with a compound status for the *would/did not* configuration. Perhaps this might take the (abbreviated) shape in (iv) (which ignores the 'rhetorical' status of the question), where *would not* is a lexical unit.

(iv)   {P{q}//{0}}
        |
        {P{0}}/{{loc}/{N{int,e}}}
                                                          { {abs}}
        {P{v,c}} |
          | {P;N/{P;N}{loc{src}/{N{int,e}}}} |
          | { {loc{src}}} | {P;N/{...}}
          | | | { {src{abs}}} |
          | {N{int,e}} | | |
          | | | {N} |
          | | | | |
          | | | | |
        would   *not*   *you*   *leave?*

{v,c} in (iv) abbreviates 'volitional contrafactive' (cf. Chapter 36) – not phonology!

Present day English, however, though perhaps allowing a compound interpretation of *did not* in (32a), would have separation of the components in (32c).

(32) a.   Dolly did not arrive
      c.   Did Dolly not arrive?

And the sequence of <u>*didn't*</u> *not* of (31) involves quite distinct (uncompounded) negations, of course.

(31)   {P/{P;N}{loc{src}/{N{e}}}}
        { {abs}}   { {loc{src}/{N{e}}}}   {P;N/{P;N}{loc{src}/{N{int,e}}}}
          | | { {loc{src}}}   {P;N/{src{abs}}}
          | {N {int,e}} |
        { {src{abs}}} | {N{int,e}} |
          | | | |
        {N} | | |
          | | | |
          | | | |
        John   <u>*didn't*</u>   *not*   *arrive*

However, separable compounds seem to be not an unfamiliar phenomenon.

We should also observe that the mobility of *not* allows for the expression of differences in scope, as illustrated in (v).

(v) a.   Fred may not have arrived (yet)
    b.   Fred may have not arrived (at all)

The different placements in (va) and (vb) favour interpretations which invite the bracketed adverbs. In these instances and overtly in both (iv) and (31), I analysed *not* in those instances as a non-finite verb (despite the origins of the form). As such, it has a finite equivalent in the answer *no*, discussed in the text. Recall too that the compound *nobody* reflects the presence of a negative existential in the finiteness complex.

(33) c.

```
                    {P/{loc/{N{int,e}}}}
            _____|
           /        |
       { {abs}}    {P/{{src}/{N{int,e}}} {abs/{Nᵢ}}}
          ┊        __|
          ┊       /                                       
          ┊     {P;N/{src{abs}}} ..... { {abs}}.....{ {loc{src}}}
          ┊_____|                        |            |
       { {src{abs}}} ┊                    {Nᵢ}        {N{int,e}}
           |         ┊
       {Nᵢ{sg}}      ┊
           |         ┊
       { {human}}    ┊
          ┊          ┊
          ┊          ┊
        nobody      left
```
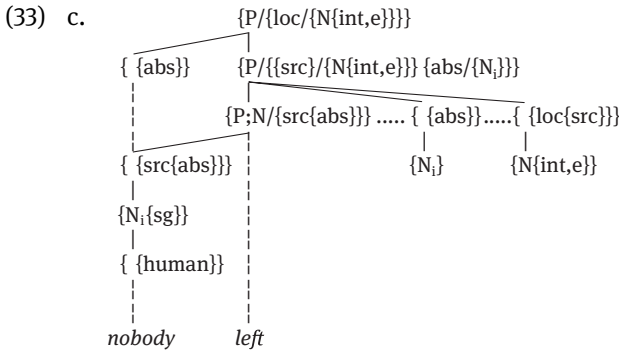
The subject in (33c) is co-indexed with the internalized absolutive of the lower existential.

    The emphatic in (31) is a reminder that we have left unrepresented, in the present chapter, emphatics associated with other components than the existential {P}. In the commentary to Chapter 33 we looked at emphasis as an iconic expression of affirmation, positive or negative. I illustrated syntactically expressed emphatics by the pair of representations numbered here as (via–b), where the latter lacks normal subject-formation, and instead we have an expletive pronoun, but in such equatives co-indexing with *John* is introduced by the sentences rather than already assumed.

(vi)　a.

```
                        {P{j=i}/{abs}{abs}}
              ┌──────────────┴──────────┐
          { {abs}}              { {abs}}
              |                     |
          {Nⱼ{def}}              {N{def}}
              |                     |
          { ₖ}                    {N}
                                   ┌──┴──────────┐
                              {Nᵢ{sg}}   {N/{P}\{N{sg}}}
                                   |            |
                                  { }          {P}
                                               |
                                           {P;N/{abs}}
                                               |
                                           { {abs}}
                                               |
                                             {Nᵢ}

          John    is/was   the  one      that   survived
```

　　b.

```
                        {P{j=i}/{abs}{abs}}
              ┌──────────────┬──────────────┐
          { {abs}}       { {abs}}      { {abs}}
              |              |             |
          {N{def}}       {Nⱼ{def}}     {N{def}}
              |              |             |
          { }            { ₖ}           {N}
                                         ┌───┴──────────┐
                                    {Nᵢ{sg}}....{N/{P}\{N{sg}}}
                                         |             |
                                        { }           {P}
                                                       |
                                                   {P;N/{abs}}
                                                       |
                                                   { {abs}}
                                                       |
                                                     {Nᵢ}

          it       is/was John          (that)  survived
```
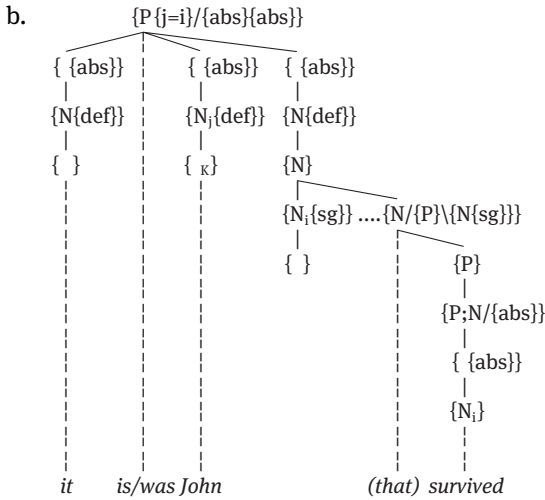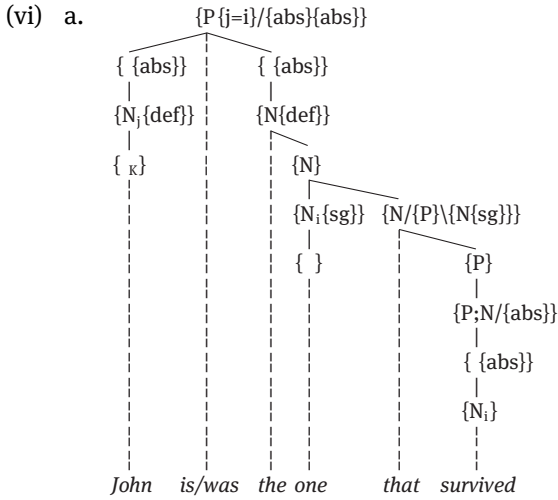
But I merely anticipated at that point that the representation of the purely phonologically expounded expression in such as that in (viia) would require a complex lexical structure like the syntactic structure in (va), as now suggested in (viib).

(vii) a. <u>John</u> survived

   b.

```
                              {P{j=i}/{abs}{abs}}
                          ┌──────────┐
         { {abs}}              { {abs}}
            |                     |
        {Nⱼ{def}}              {N{def}}
            |                     |
         { κ}                    {N}
          ┆              ┌──────────────┐
          ┆  {Nᵢ{sg}{src}} .....{N/{P}\{N{src}}}
          ┆       |                   |
          ┆     { }                  {P}
          ┆                           |
          ┆                      {P;N/{abs}}
          ┆                           |
          ┆                       { {abs}}
          ┆                           |
          ┆                         {Nᵢ}
          ┆                           ┆
          ┆                           ┆
        John                       survived
```
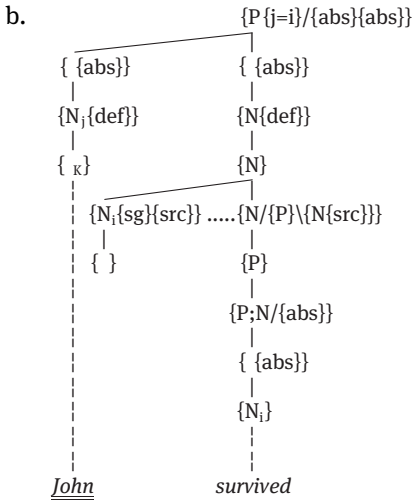
This is another instance (recall the structure in (33), repeated above) where the character of a form (the emphatic subject) is partially determined by the presence of co-indexing with an item in the finite complex.

The examples in the text including the form *trolls*, such as those in (37), were formulated long before I was aware of the prevalence of such a form in recent anti-social media, in a distinct (presumably figurative) sense.

(37) a. There are trolls
   b. There are trolls in existence
   c. Trolls exist

I assume that the latter sense of *troll* has current denotata, and the existential debate suggested by my examples is not appropriate in their case. At any rate it is irrelevant here, as is the verb converted from it.

We can illustrate an aspect of the distinctiveness of 'existential predications' by their behaviour in, among a number of languages, Tagalog, where in its case the routinized 'topic/focus' marker is absent from existential sentences such as (viii) – compare with this the 'non-existential' in {ix}, where 'T/F' labels the 'topic/focus' marker.

(viii) May   aksidente   (Kagabi)
        there.was   accident   (last.night)

(ix) Dadalhin   ni   Rosa   ang   pera   kay Juan
      will.take   by   Rosa T/F   money   to   Juan

(previously cited in Anderson [1997: 195] and Anderson [2011, vol. III: 196], from Schachter [1975]).

We return in Chapter 41 to quantification and the consequence of the article status of *every* (Chapter 8) for its non-participation in the varied positioning of universal quantifiers, as well as taking up the syntax of 'tags', discussed in a more suitable context. Earlier formulations of the approach to quantification discussed here are presented in Anderson (1973b, 1974a, b).

On Chapter 36

On the factors determining the orientation of equatives see particularly the detailed analysis given in Halliday (1994: §5.4).

In discussion of *have* in the text I appealed to the weakening resulting in (50b) to account for the development of *have*, and particularly auxiliary *have*.

(50) b.
        ¦
      {P<;N>/{abs}{loc}}

The lexical link (¦) allows for the subject status of the locative in (49c) and (52c).

(49) c. He had Bill's recently acquired book for ages

(52) b.
                    {P/{loc/{N/{int,e}}}}

      { {abs}}   {P<;N>{stative}/{abs}{loc}} ...... { {loc}}
         ¦   ¦   ¦
      { {loc}}   ¦   { {abs}}   {N{int,e}}
         ¦   ¦   ¦
       {N}   ¦   {N}
         ¦   ¦   ¦
       { }   ¦   {N$_i$}   {P;N{stative}\{N$_i$}}
         ¦   ¦   ¦   ¦
         ¦   ¦   { }   {P;N{past}/{abs}{src}}
         ¦   ¦   ¦
         ¦   ¦   ¦   { {abs}} ..... { {src}}
         ¦   ¦   ¦   ¦   ¦
         ¦   ¦   ¦   {N$_i$}   {N}
         ¦   ¦   ¦   ¦
       he   *has* *the book* *prepared*
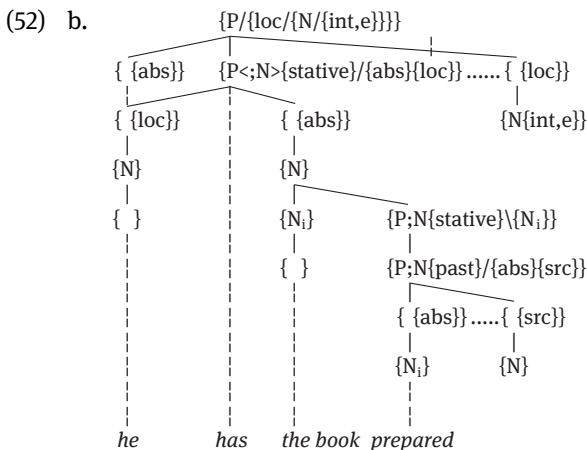
However, there is another synchronic circumstance in which the representation (50b) seems to be appropriate.

Consider the sentences in (i).

(i) a. The best time is in the evenings
   b. In the evenings is the best time
   c. Is in the evenings the best time?

Unlike with the 'weakened' expressions we have looked at, in (ib) the locative in subject position and inverted in (ic), not only has an overt functor, but it also does not control verb concord, which is assigned to the participant that is highest on the subject-selection hierarchy. And recall (36) from Chapter 35, which differs in optionally denying control of concord to the participant that follows the copula – the 'expected' subject in terms of the hierarchy.

(36) a. There are some cups in the cupboard

   b.

$$\{P/\{loc/\{N\{int,e\}\}\}\}$$

$$\{\ \{abs\}\}\quad \{P/\{abs/\{N_i\}\}\}\ \ldots\ldots\ldots\ldots\ \{loc/\{N/\{int,e\}\}\}$$

$$\{\ \{loc\}\}\quad \{P/\{abs\}\{loc\}\}\ldots\ldots\ldots\ldots\ldots\ldots\ \{\ \{abs\}\}$$

$$\{N\{int,e\}\}\quad \{\ \{abs\}\}\qquad \{\ \{loc\}\}\quad \{N_i\}$$

$$\{N_i\{pl\}/\{src\}\}\qquad \{N\{det\}\}$$

$$\{\ \{src\}\}\quad \{N/\{src\}\}$$

$$\{N\}\qquad\qquad\{\ \{src\}\}$$

$$\{N;P\}\qquad\qquad \{N\}$$

$$\{N;P\}$$

there   are   some   cups   in the cupboard
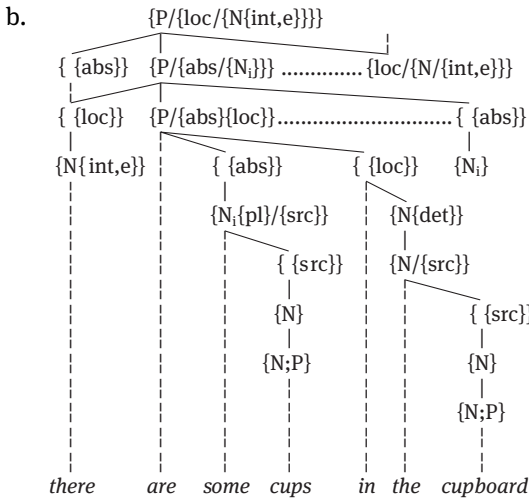
Halliday (1994: §5.4.6) helpfully discusses the nature of the distinction between the members of (i).

The development of a 'have' verb as a perfect is not unknown in other Indo-European languages, though it is often almost restricted to transitives – unsurprisingly given that the verb in (52), quoted above, is transitive. Intransitives typically have a simple copula as periphrast. But other considerations, notably to do with functor differences as well as aspectual, typically come to intervene. Unusually, English has generalized *have* as the perfect periphrast (which we shall

take up in Chapter 38). On the history of this variation see Rydén & Brorström (1987). In many languages (but not English, thus far) the perfect can come to replace the simple past, neutralizing the perfect/simple past distinction, or it can coexist with it, with both showing such neutralization in this distinction, and with the difference being perhaps one of formality.

Similarly, in many languages the locative corresponding to that of the progressive in (ii), a simplification of (54) in the text, which is covert, is given overt expression.

(ii)

```
                        {P}
                         |
           {P/{loc/{N{int,e}}}}.....................{ {loc}/{Nᵢ, i < T}}
                   |                                          |
{ {abs}}    {P/{loc/{N/{P;N{n}}}}} ....... { {loc}}
   |                   |                            |
{ {abs}}            { {loc}}              {N{int,e}}
   |                   |
   |                {N{int}}
   |                   |
   |             {P;N{n{process}}}
   |                   |
{ {abs}}         {P;N/{src{abs}}}
   |
{ {src{abs}}}
   |
  {N}
   |
 *Harry*        *was*        *working*
```
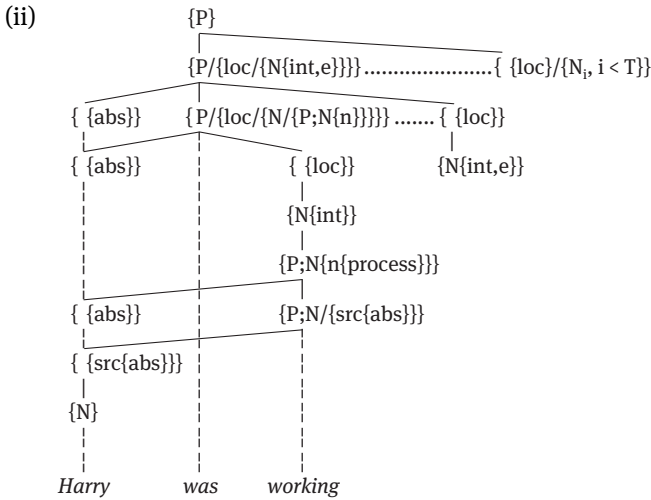
Anderson (1973a: Chapter 2) adduces instances from a range of different languages, from a number of language families. Consider, for example the Scottish Gaelic (iii), with initial copula, and evidence of nominalizing of the verb.

(iii)   Bha e ag gearradh craoibhe   ('Was he at cutting of a tree')

We have another overt manifestation of the localist metaphor. Dickens' 'Does the boy know what he's a saying of' (*Barnaby Rudge* [Folio edn.], 26) seems to blend the progressive periphrastic and the nominal -*ing*-form with dependent *of*; cf. *What was he saying* vs. *his saying of what (is a problem)?*.

As an alternative to (ii) I offer here (iv), where *Harry was working* is a subordinate clause to a covert existential.

(iv)

```
            {P}
            |
            {P/{loc/{N{int,e}}}}...........{ {loc}/{Nᵢ, i < T}}
            |
            { {abs}}.......{ {loc}}
             |            |
            {N/{P}}      {N{int,e}}
             |
            {P/{loc}}
          /      \
   { {abs}}        { {loc}}
      |             |
      |            {N{int}}
      |             |
      |            {P;N{n{process}}}
      |             |
      |            {P;N/{src{abs}}}
      |          /
{ {src{abs}}}
   |
  {N}

  Harry      was     working
```
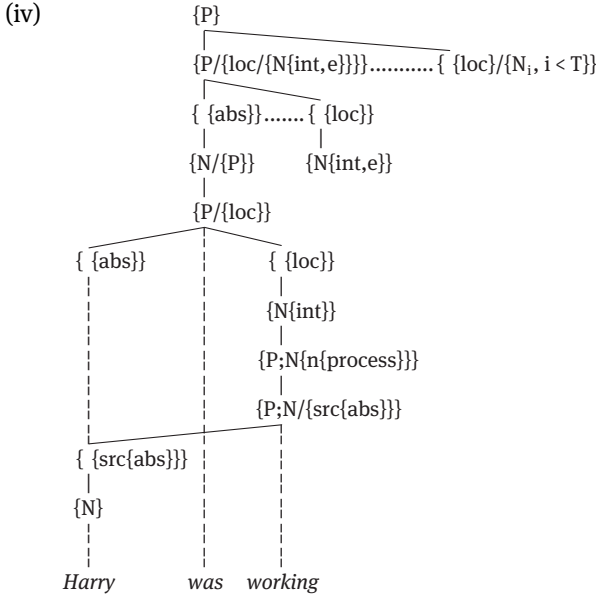
This is closer to the earlier analysis of Anderson (1973a: 76–7) of progressives as existing-at-a-certain-time.

Such structures can also come to represent habitual (as a sequence of scenes that occur over time), and thus be a general imperfective marker. And as such they may eventually become a simple present – which, of course, is not usually perfective. See again Anderson (1973a).

The *get* 'passive' of (v), as a main verb, hasn't quite made it to prototypical periphrastic status, but, as with the latter, it and its complement constitute a distinct lexical unit.

(v)   The motion got overturned/Didn't the motion get overturned?

Among diatheses other than the passive and other detransitivizers considered here are reflexives and reciprocals. Though these diatheses also may have 'middle' morphology in Greek, for instance, they both, and particularly reciprocals, show rather different disruption of argument structure from simple detransitivizing. On reciprocals see Chapter 40. Reflexives are briefly mentioned in the present chapter and more fully in the Prelude to Part IV.

Another potential 'periphrast' that, like 'passive' *get*, and some 'modals', is a main verb rather than an operative is exemplified by such as *They are going to split up*. *Going (to)* offers a subtle contrast to *will* as a more immediate or confident pre-

diction. *Be going to* is clearly a lexical unit, non-compositional. We find an earlier, morphologically-local variant of the construction in Dickens' 'I hope you're not a-going to trouble your head tonight, …' (*Barnaby Rudge* [Folio edn.], p. (292).

I described contrafactive *would* as a contextual periphrast. We can contrast this not just with the *should* that is in dialectal variation with the present subjunctive and with *used to*, where we have a 'disambiguating periphrasis', in signaling habitual as well as past. All of these differ from the prototypical periphrases involving *be* and *have*, which allow a non-finite distinction to feature in finite clauses.

The classification of modal senses in Table XV is almost a compact paraphrase of part of the discussion in Anderson (1971b).

Table XV: Core-modal contrasts

	Internal	External
Strong	*will* volition ←—Experiencer—→ requirement / prediction	necessity *must*
	Epistemic	
Weak	*can* potentiality / ability ←—Experiencer—→ permission	possibility *may*
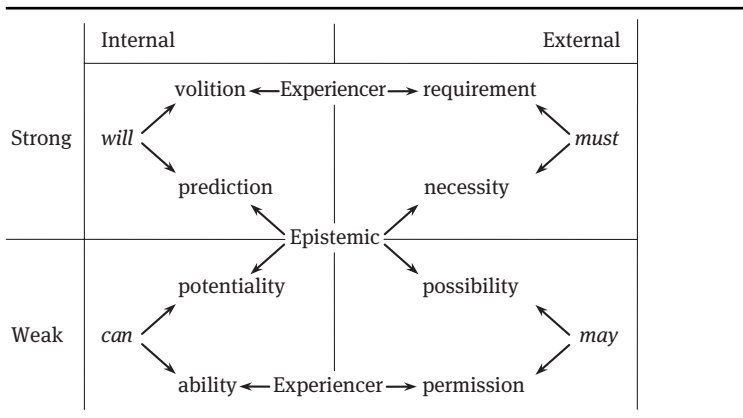
But Table XV also doesn't include the peripheral modal *need*, which has a main verb equivalent, and which as a modal operative is most common in affective contexts, as *Fred needn't leave* or *Need Fred leave?*. These are deontic but we also find epistemics such as *The report needn't be true*. As observed, even more peripheral is *dare*, which as well as sharing these properties with *need* is notionally untypical as a modal, as well as being recessive as a distributional modal. *Need*, however, interacts interestingly with *must*, as illustrated in the text.

The discussion here and elsewhere in this work concerning modality and also mood also benefited particularly from Thorne (1966) and Boyd & Thorne (1969), though they differ from what I've had to say in terms of some basic assumptions.

(60b) was meant to represent epistemic *must*.

(60) b.

```
                              {P}
                              {P/{src}} ....................................... { {loc}\{P/{src}}}
                                              |
   { {src}}............. {P/{{src}}{loc}{abs}} .... { {abs}}   {N_T{TEMP}}
   { {loc{src}}}        { {abs}}              { {loc{gol}}}
   {N{def}}             {N/{P}}               {N{def}}
   { {ego}}             {P}                   { {tu}}
                        {P/{abs}{loc/{N{int,e}}}} ...... { {loc}\{P{int,e}}}
                        { {abs}} ............. { {loc}}      {N_i, T ⊆ i}
                        {N{poss}/{P}}    {N{int,e}}
                        {P/{{src}/{N{int,e}}}{P;N}}
         { {abs}}   { {loc{src}}}   {P;N/{abs}{P.N}}
         { {abs}}   {N{int,e}}          {P.N}
         {N{def}}                       {P:N}
         { {masc}}

           he         must          be    tired
```
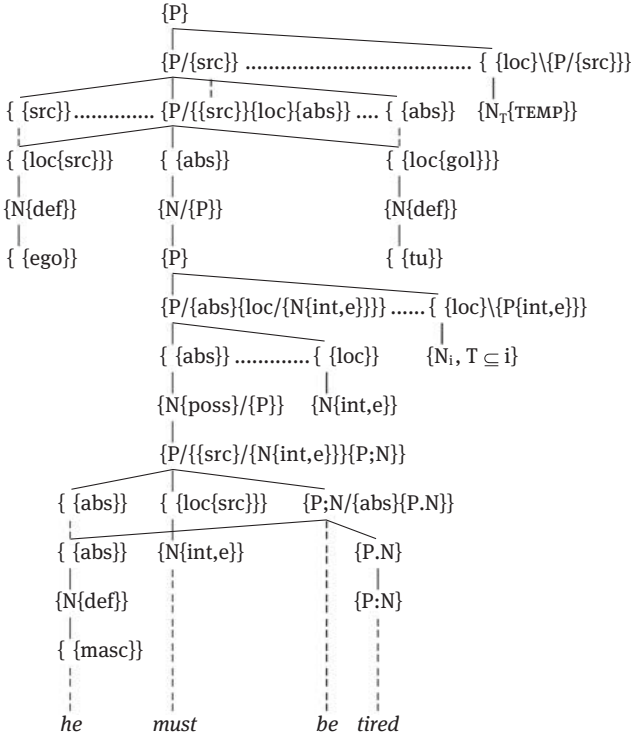
In (via) a negative is added, as there is in (vib), with an epistemic *need*.

(vi) a. It mustn't be true
       b. It needn't be true

They differ in where in the finiteness hierarchy the negative is inserted. I shall refrain from presenting the reader with another huge (indeed, even huger) diagram, but merely attempt a rough paraphrase of the difference, as in (vii).

(vii) a. There's no possibility that it's not the case that it's not true (*mustn't*)
        b. It's not the case that there is no possibility that it's not true (*needn't*)

(vi) assumes the double-negation analysis of (60b) based on 'possibility'. In (via) the added negative is below the *possibility* component, in (vib) it is above. Another manifestation of scope.

In some varieties of English a single clause can contain two or even three modals. I have in mind core modals, rather than such sequences as *You must*

have to register first, or the one-'modal' complexes in *I didn't ought to do that*, or *I had better go*, which are more widespread. However, the latter two appear to have been drawn into the subsystem in so far as the first form in each is subjunctive rather than past, and the first sequence does conform to the restriction on such core sequences as I'm familiar with in the Scottish variety I'm most familiar with: the sequence is typically epistemic + deontic. This is exemplified with the core modals in (viii).

(viii) a. I might could manage it
    b. I'll can go instead
    c. He might should apologize after all

Such deontics resemble *be* and *have* in appearing as both {P} and {P;N}, but the latter only when dependent on an epistemic. But since they are stative, non-transitive, and have no distinctive non-finite morphology, such sequences extend the pre-verb sequence but do not disturb the restrictions we have noted. However, the permitted combinations are variable, within different varieties, and even individual speakers in the same community. See further Brown (1991), for instance, and on the similar phenomenon in varieties of transatlantic English, Boertien (1986) and Di Paolo (1989). The former registers *might should ought* and *might had ought,* and the latter cites *might had better*, again, apparently with initial epistemic, and with subjunctive forms.

A contrafactive protasis need not, of course, be subordinate only to a contrafactive proposition as apodosis. A familiar instance of one possibility is the first line of Rupert Brooke's (in)famous poem 'The Soldier': 'If I should die, think only this of me:'. Here an eventuative, specifically an imperative, is involved in the apodosis. Consider too the telling use of the contrafactive subjunctive following a non-subjunctive main clause in Hugh Walpole's *The Blind Man's House* (Part II, Chapter VIII) when there is a description of the blind man wakening from having dreamt he could see: 'How wonderful it was to see, even though it were only a dream'. Again the non-subjunctive clause realizes a marked mood, here exclamative. But (62a) identifies the usual pattern (as spelled out in (63) in the text), though it also allows a tense/aspect interpretation.

(62) a. If he left she would follow him

And Thackeray's comment on a ceremony at St. Peter's that compares it with ancient pagan rites is terminated by a 'preterite' subjunctive introduced by a coordinating conjunction rather than a conventional subordinator, a now obsolete usage outside of idioms, as far as I am aware.

'... and that old statue of Peter might have been Jupiter again, surrounded by a procession of flamens and augurs, and Augustus as Pontifex Maximus, to inspect the sacrifices, – and my feeling at the spectacle had been, doubtless, pretty much the same.

(*The Newcomes*, vol. I, Chapter XXXV).

I was reminded recently of the traditional 'rules' governing the *shall/will* alternation based on 'politeness', as taught in my primary school in the late 1940's, by observing their use among the 'upper crust' characters in Sinclair Lewis' *Arrowsmith*, set earlier in the century.

The recurrence of discussions of the overt operatives throughout this work perhaps doesn't quite justify the affirmation, concerning access to the intellectual world, of Tristram Shandy's father, that '<t>he whole entirely depends ... upon the auxiliary verbs, Mr. Yorick' (Sterne *Tristram Shandy*, Bk. 5, Chapter XLII) – but they do help.

On Chapter 37

English *George is small/the accountant/in Birmingham*, which all bear an obligatory copula, should be compared with, for instance, the Indonesian of (i), where no distinct verbal is present.

(i) a. Bunga itu méra
     Flower that red
   b. Orang itu tukang kebunnja
     man that gardener the
   c. Ruma saja di Djogjakarta
     house I in D.

Here, non-verbal categories can also be finite, i.e. be subjoined to {P}. These Indonesian examples in (i) are from Hopper (1972: 128–33), and such phenomena are discussed in Anderson (2011, vol. I: §8.1.3).

Anything analogous to (i) in English occurs only in special circumstances, such as when a predicative occupies initial position. This is illustrated by this passage from Trollope's *Orley Farm*.

... and there is one spot on which always stands old Lord Alston's chariot with the four posters; an ancient sportsman he, who still comes to some few favourite meets; ...

(Folio Society edition, 1993, p. 247).

Compare too *Happy the person who know his father!* In some transatlantic varieties we apparently encounter such as *Absent the evidence, the case collapses*.

Some traditional grammars describe 'finite', in accord with its etymology, in terms like 'limited by number and person', sometimes including 'by tense'. This would disqualify the subjunctives as finite. However, these traditional descriptions are drained of notional content, and thus fail to make clear the significance of these 'limitations'. We can remedy this by acknowledging that finites are 'limited' by the components of the act of speech and its immediate context, even if the component has a 'negative' status, as with 'third person' (= 'not SAP') and 'preterite' (= not present at the time of speech act, and indeed previous to it'). Such a formulation includes as finite all the expressions of mood, and, by extension, all expressions introduced by the finiteness determiner that is characteristic of subordinate indicatives. But it also includes the subjunctives, which are under rection from moods, and expressive of existentiality, as well as being introduced by the finiteness determiner, in one or other of its variants, including *if* – as in (63) in the text.

(63)
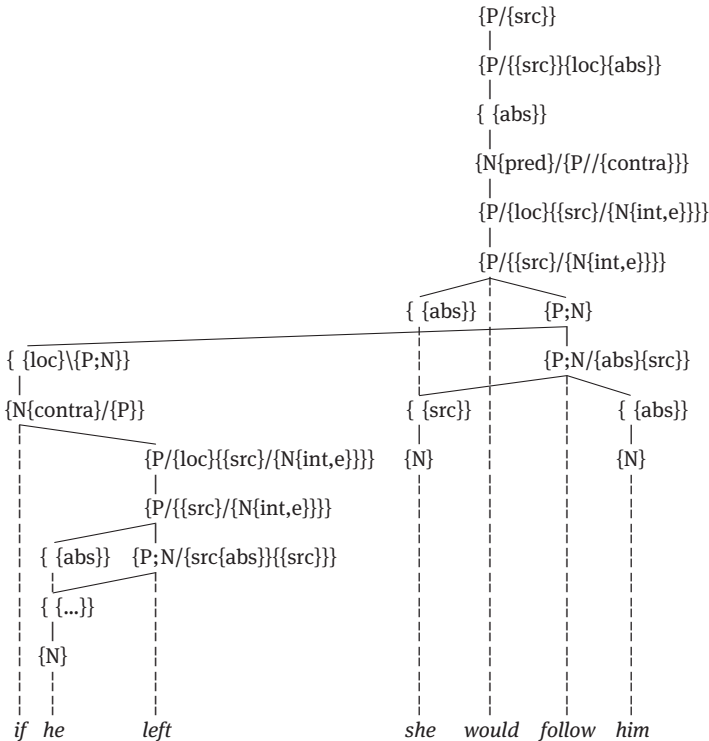
The overall question is: what is it about a verbal expression that warrants regarding it as involving subjunction to {P}?

In main clauses a motivation would be the presence of mood; in subordinate clauses it is the (potential) presence of the finiteness determiner and of such properties as conform to the indicative 'limitations', signalled by the presence of person-number and tense morphology. In subordinate clauses that contain subjunctives the 'limitation' markers are absent, but this is compensated by presence of the marked existentialities associated with {P} and their being controlled by rection from a mood, including those that are themselves reported, as well as by dependency on the finiteness determiner.

Austen's *Emma*, yet again, (p. 73, Folio edn.) provides an interesting instance of a persistent future contrafactive: 'I do so wonder, Miss Woodhouse, that you should not be married, or going to be married! So charming as you are!' Compare too (p. 76) 'It must, if I were not here. I wish I were anywhere else.'

Anderson (2011, vol. I, Part III) discusses finiteness in some detail, and dismisses traditional definitions of 'finite' based on the presence of particular inflectional categories and/or of a distinct 'subject'. The modals are always {P} and do not inflect for agreement; some of them can inflect, irregularly, almost suppletively, for the contrafactive subjunctive and some 'inflected' forms can mark tense/aspect. The imperative often has no overt subject. Such 'criteria', as such, are anyway parochial. However, to accommodate finiteness status with the apparently defective distribution of subjunctives, for instance, there is proposed in that book a complex system of demotion to non-finite and promotion to finite. This is rather cumbersome and over-reliant on 'constructions' rather than their notional value; it inclines too much in the direction of syntactic autonomy. Part III of Anderson (2011, vol. I) – 'A Notional Theory of Finiteness' – was not notional enough! The text here attempts to remedy this, as far as English is concerned.

Moreover, one argument for the non-finiteness of the 'present subjunctive' of (66a) has been the position of the negation in (ii):

(66)   a.   They demanded that she resign

(ii)   They demanded that she not resign

This is consistent with the generalization that *not* precedes only non-finite forms among verbals, as in (iii).

(iii) a.   They made her not resign
       b.   They insisted on her not resigning
       c.   She (*not) may (not) have (not) been (not) affected
       d.   They permitted her (not) to (not) resign

With regard to (iiid), Anderson (2011, vol. 1: e.g. p. 298) regards infinitival *to* as a non-finite verb whose valency is another such: '{P;N/{P;N}}'.

However, there is another way of generalizing over the distribution of *not* and verb forms: *not* cannot precede dedicated finite forms. Dedicated finites are inflected finites, including *do*, and modals. All the verb forms that belong to finite paradigms such as the tense and person-number paradigms are inflected, even if the inflection is null, as in *I like*. The past participle is not part of such a paradigm, but is required by the valency of the periphrast *have*. The 'preterite' subjunctive is also finite: it contrasts with non-subjunctive forms within a modal paradigm (and, contrasts in tense, within periphrases):

(iv) a. If he came here, she would get a surprise
     b. If he comes here, she will get a surprise
     c. If he had come here, she would have got a surprise
     d. If she should come here, she would get a surprise

And it cannot be preceded by *not*.

(v) a. If he *not came here, she would get a surprise
    b. If he didn't come here, she would get a surprise

This is even true of the obsolete *Would not you leave?* construction mentioned in the comments on Chapter 35. And, after all, the 'present subjunctive' is in contrast as a non-SAP singular person, signalled as non-indicative by the absence of an inflection, and the operative subjunctive *be* is more widely distinguished than indicatives, though now obsolescent.

The modals could be subsumed as inflected only if we accept the distinctions in Table XV as paradigms that are irregularly or even suppletively expressed:

However, that is not our main concern here. The modals are dedicated finites on other grounds, particularly the lack of non-finite forms.

If we return to (66a) and (ii) against this background, then I suggest that though the subordinate verb form in the former is finite, it is not uniquely 'dedicated' as part of a paradigm and in contrast with other forms, but required by the valency of the main verb (rection) – even if nominalized, as in *There's been a demand that she resign*.

(66) a. They demanded that she resign

(ii)   They demanded that she/I not resign

Table XV: Core-modal contrasts

The 'present' subjunctive is merely the bare (uninflected) form of the verb we also find as an expression of imperative mood (*Do not leave*), as well as the bare infinitive (*She saw them not obey*) and so allows a preceding *not*, as in (ii).

Contrast this with (66b).

(66)   b.   They demanded that she resigns

(66b) is notionally eventuative but the verb form bears a finite inflection, and so demands support from *do* when negated, as in (via):

(vi)   a.   They demanded that she does not resign
       b.   They had demanded that she/I did not resign
       c.   They had demanded that she/I resigned

So too with (vib), the negative of (vic).

Similarly, as a modal, the periphrastic operative in (66c) precedes the negative, as (vii).

(66)   c.   They demanded that she should resign

(vii)   They demanded that she/I should not resign

This exceptional situation in usage may correlate with the fragility of the (66a) construction in many varieties of present-day English.

Compare with the likes of (80c) in the text.

(80)   c.   If he had left she would have followed him

the obsolete '…"I must have been stupidity itself, if I had not found it out"… .' (Edgeworth's *Belinda*, vol. I, Chapter xiv, p. 229 of Dent 1893 edn.), where in present-day English a different modal expression would be preferred in the apodosis (*I would have to have been*?), *must* having lost its contrafactive force.

There is an alternative interpretation of the structure of (ii), if we allow *not*, as a verb, after all, to undergo finitization when under rection, as in (viii).

(ii)   They demanded that she/I not resign

(viii)
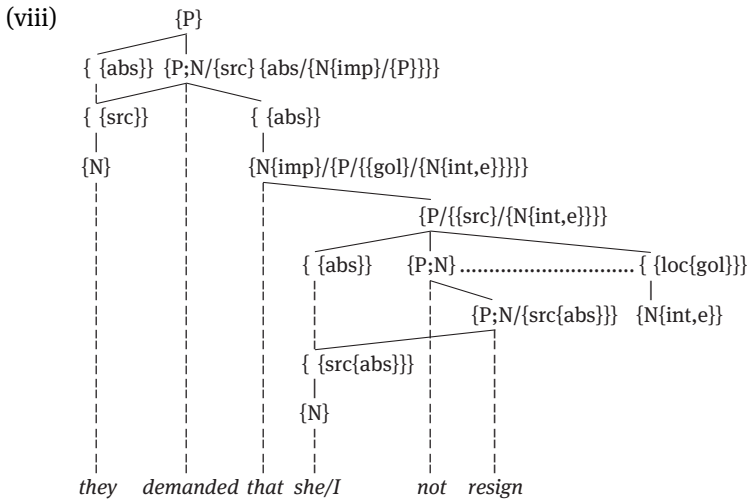
Here the finite *not* precedes the non finite *resign*.

The topic of functional ellipsis deserves more attention than it is given in the text, including its distribution in text types. Ellipsis is common in conversation, for instance, including inside works of fiction. In Chapter 8 of vol. 1 of Austen's *Emma*, for example, the dispute between Emma and Mr. Knightley is peppered with them, of which I cite a couple of instances, the first beginning with a claim by Knightley.

'... He is desperately in love and means to marry her.'
'He is very obliging,' said Emma; 'but is he sure that Harriet means to marry him?'
'Well, well, means to make her an offer then. Will that do?...

The second is stimulated by a comment of Emma's (below).

> ... Mr Martin is a very respectable young man, but I cannot admit him to be Harriet's equal; and am rather surprised indeed that he should have ventured to address her. By your account, he does seem to have had some scruples. It is a pity that they were ever got over. 'Not Harriet's equal!' exclaimed Mr Knightly loudly and warmly, ...'

Such exclamatory echoing of a fragment is, of course, very common.

The present chapter and those that follow in Fit the 2nd draw heavily upon Kiparsky & Kiparsky (1971), though, I fear, I have not coped with all their insights. If only more general attention had been paid to their work and its consequences, we might have been spared sterile decades of syntactic autonomism.

They illustrate the affinity between *the fact* and pre-finiteness-determiner *it* by the pattern of acceptability in (ix).

(ix)   a.   *This is the book which you reported it that John plagiarized
     b.   *This is the book which you reported the fact that John plagiarized
     c.   This is the book which you reported that John plagiarized

Only a non-factive participant *that* is acceptable here.

The following passage from Thackeray's *A Shabby Genteel Story*, Chapter II, illustrates the possible extent of disengagement of non-restrictive relatives from the structure of surrounding discourse, while adding pertinent observations.

> 'Law, Bell,' said Miss Rosalind, 'What a chap that Brandon is! I don't half like him, I do declare!' Than which there can be no greater compliment from a woman to a man.

Helpfully, this also illustrates a comparative relative. Consider too Henry James' (*The Outcry*, in *Novels 1903–1911* [Library of America], p. 1075).

> ... 'she was about as civil to me then – ... – as that devil of a fellow in the newspaper; the taste of whose elegant remarks, for that matter, she must now altogether enjoy.'

Or (ibid., p. 1094):

> Just as he turned from that brief and not wholly gratified inspection Lady Grace – that he had sent up his name to whom was immediately apparent – presented herself at the entrance from the other room.

All of these also illustrate how far its governor may be 'stranded' by the relative determiner/pronoun.

Jespersen's 'extraposition', if interpreted as a 'movement', was disputed in some 'transformational' work, and instead (I.202.b) has been interpreted as involving 'intraposition'.

(I.202) a. It is odd (that) she dislikes him
         b. That she dislikes him is odd

In terms of our present assumptions, neither is necessary, or indeed legitimate.

The extent of the valency requirements of the cognitive verbs in (84a–b) may be indicated by extracting the part of the representations in (85a–b) expounding them, as respectively in (x).

(84) a Sally speculates that they are in Peru
      b. Sally knows that they are in Peru

(x) a.
```
                    {P;N{cog}}
             _____/        _____
      { {src{loc}}}        { {abs}}
                               |
                           {N/{P}}
                                _____
                              {P/{abs}{{src}/{N{e}}}}
                               _____/
                        { {abs}}........{ {loc{src}}}
                             |                 |
                        {N/{poss}}        {N{int,e}}
                             |
                    {P/{{src}/{N{int,e}}}}
```

     b.
```
                    {P;N}
             _____/     _____
      { {src}}        {P;N{cog}}
          |        _____/     _____
   { {src{loc}}}              { {abs}}
                                  |
                              {N/{P}}
                                   _____
                                 {P/{abs}{{src}/{N{e}}}}
                                  _____/
                           { {abs}}........{ {loc{src}}}
                                |                 |
                           {N/{poss}}        {N{int,e}}
                                |
                       {P/{{src}/{N{int,e}}}}
```
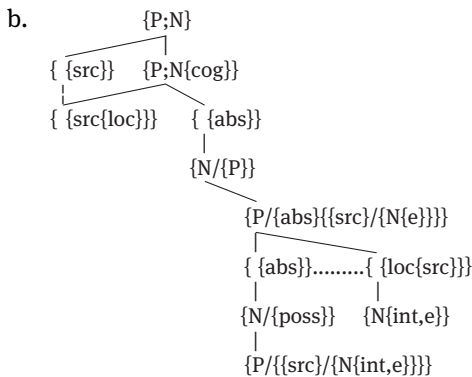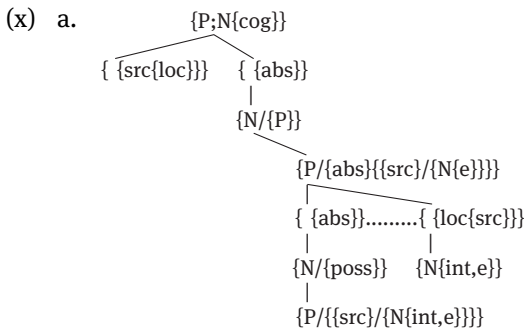
This gives us another hint of something of the complexity of lexical structures and their demands on syntactic structure.

In the text I made a distinction between revealed and acquired factuality; (xia) is ambiguous between the two.

(xi) a. It turned out that John lived in Paris

b.
```
                        {P}
                         |
  { {abs}}   {P;N/{abs}{{src}}{loc/{N/{int,e}}}}
    |                |
  { {abs}}   ┆    { {loc{gol}}}    { {abs}}
    |        ┆         |               |
   {Nᵢ}      ┆      {N{int,e}}     {Nᵢ/{P}}
    ┆        ┆         ┆               |
    ┆        ┆         ┆              {P}
    ┆        ┆         ┆               ┆
    ┆        ┆         ┆               ┆
    it      turned out       that  John lived in Paris
```

c.
```
                       {P}
                        |
  { {abs}}   {P;N/{abs}{loc}{{src}}}
    |               |
  { {abs}}   ┆   { {loc{gol}}}     { {abs}}
    |        ┆        |               |
   {Nᵢ}      ┆     {N{cog}}       {Nᵢ/{P}}
    ┆        ┆        ┆               |
    ┆        ┆        ┆        {P/{loc/{N/{int,e}}}}
    ┆        ┆        ┆               |
    ┆        ┆        ┆           {P;N/...}
    ┆        ┆        ┆               ┆
    it      turned out      that  John lived in Paris
```
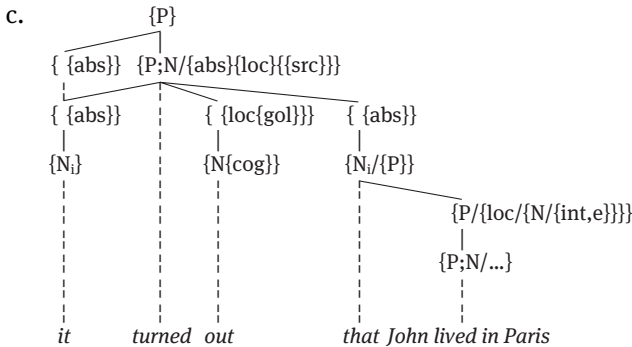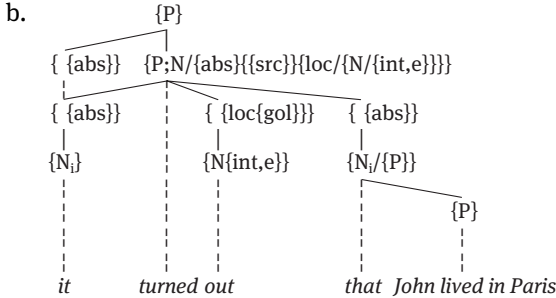
Either (87a) has the sense of (xb), such that it came to pass that John lived in Paris or that of (xc), where it is revealed that John lived in Paris.

Wodehouse offers caricatures of the contortions that pedantic uses of the relative pronoun constructions can engender, such as (*Joy in the Morning* (Chapter 18)) '"It was a brutal, inhuman side of his character, of the existence of which I had never till then had a suspicion"', uttered by the high-minded Florence.

In some varieties and more at earlier periods the role of non-restrictive *which* has not been associated with a particular argument of the relative clause, as it is in (89a–b).

(89) a. The story, which she disowns, caused a stir
b. I saw Clive, who is her broker
c. She married him, which was a mistake

In (89c) the pronoun, co-indexed with the main clause {N/P}, is associated with the whole main clause. The following example is from Thackeray's *Philip*, vol. I, Chapter XVI.

> In a moment that active little housekeeper saw the room ready; flowers on the mantelpiece; his looking glass, which her father could do quite well with the little one, as he was always shaved by the barber now; the quilted counterpane ...

Here the *which* is more of a topic picked up from the previous clause, as represented in (xii), rather than a normal participant in an English relative clause.

(xii)   {N}
         {N$_i${def}}   {N$_i$/{P{top}}\{N$_i$/{def}}}
         | |
         {N{src}}   {P//{top,def}}
           ⌐   ⌐
             { {src}}   { {abs}}   {P}
             | | ⌐
             {N}   {N$_i${top,def}} {P;N/...}
             | |
             {P;N}

         his looking-glass which her father could do quite well with the little
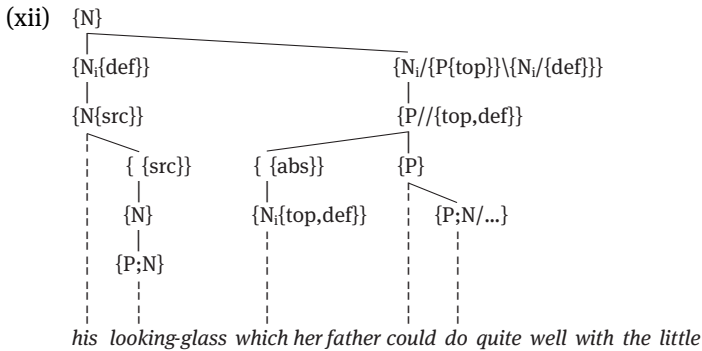
In the dislocated (xii) *which* is represented as co-indexed with a topic suggested by a listed component loosely connected with the basic {P}. The following examples are from *Philip*, vol. II, Chapter XIX.

> ... the good sleepy doctor woke up with a vengeance, when he heard his little nurse's news, and fired of a volley of angry language against Philip and his scoundrel of a father; 'which it was a comfort to hear him,' little Brandon told us afterwards.

> '... and you almost fell into the gutter, which I have seen you there before.'

These present similar complex antecedents for the relative, and the latter contains a 'retained pronominal'.

A kind of intermediate construction in which the *which* also has a corresponding pronoun in the non-topicalized position in the relative clause can also be illustrated from *Philip* (vol. II, Chapter II).

> And Rudge contrasted Philip's behaviour with the conduct of some *sneaks* which he would not name them, but which they were always speaking ill of the poor young fellow behind his back, and sneaking up to my lord, and greater skinflints and meaner humbugs never were.

These are sometimes termed a 'retained pronoun', which unfortunately suggests a derivational analysis. It is quite common and occurs with relative pronouns in general.

A further complexity is represented in (xiii).

(xiii)

```
                        {P}
                         |
    { {abs}}    {P;N/{src{abs}}{N/{P//{top}}}}
         |
    { {src{abs}}   { {abs}}
         |            |
        {N}        {N{def}}
         ┆            |
         ┆           {N}
         ┆            |
         ┆        {N/{src}}              {N/{P}\{N/{src}}}
         ┆            |                         |
         ┆         { {src}}               {P//{top,def}}
         ┆            |                         |
         ┆       {Nᵢ{time}}   { {abs}}         {P}
         ┆            ┆          ┆               |
         ┆            ┆          ┆      { {abs}}  {P;N}
         ┆            ┆          ┆         |        |
         ┆            ┆     { {loc}\{P;N}}  ┆   {P;N/{abs}}
         ┆            ┆          |          ┆        |
         ┆            ┆  {Nᵢ{top,time,def}} { {abs}} ┆
         ┆            ┆          ┆          |        ┆
         ┆            ┆          ┆         {N}       ┆
         ┆            ┆          ┆          ┆        ┆
        Bill         knew      when       Matt    died
```
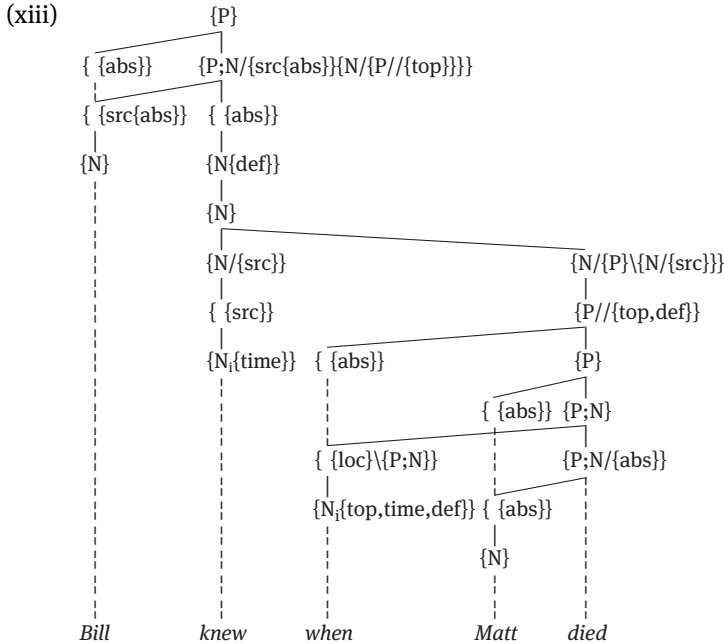
There is no overt antecedent to the relative pronouns here, such that *when* has sometimes been treated as a 'portmanteau' pronoun that realizes both antecedent and relative. This merger would be opaque, however, compared with the negation + adverb merger we look at in Chapter 41. In (xiii) the antecedent is internal.

Among mental content words, it is perhaps significant that while there is both a noun and a verb *trust*, the noun *faith*, though ending in what resembles, misleadingly, a noun-forming suffix, has no corresponding verb. *Faith*, as such, on one view, does not necessarily involve, is not necessarily the result of, any relevant mental activity, but *trust* is preferably based on assessing experience of evidence of trustworthiness.

On Chapter 38

In thinking about the non-finite verbals I have derived most help from the relevant parts of Poutsma (1926), and a range of other pedagogical grammars of English. Also helpful, not least for its bibliography of earlier work up to the time of its publication, has been Wik (1973).

A pair of examples from Poutsma, however, emphasizes the necessity for a distinction between gerund and deverbal nouns in *-ing*, which has not always been drawn.

(i)   a.   I do not like rising early
     b.   I do not like early rising

Poutsma comments in his chapter on 'the Gerund' that (ia) and (ib) 'only differ in so far as the latter emphasizes the earliness of the rising more strongly than the former. For the rest the difference is chiefly one of style' (Poutsma 1926: 471). However, while *early* in (ia) is a verb-modifying adverb, in (ib) it is attributive; and *rising* in (ia) is most obviously a gerund and that in (ib) a deverbal noun. The claimed difference in 'emphasis' may reflect a difference in which form falls under the tonic.

Poutsma (1926: 478–82) also draws attention to the construction illustrated in the text by *His nails require trimming* (which is part of my passive knowledge only), and he provides examples associated with various different circumstances in which such detransitivization is more or less likely to occur. The sequence *was being said* has displaced the compact progressive detransitivizer illustrated by 'Lady Glistonbury and Lady Sarah looked terribly grim whilst all this was saying' (Edgeworth *Vivian,* Chapter xi).

When the *-ing* form is unaccompanied by dependents or attributives, its identification as verb or noun is uncertain, though in the text I designated my above example as a noun. One indication of this is the possibility of plurality, if it is a count noun: *His nails require (frequent) trimming(s)*.

Progressive gerunds, like the progressive periphrasis, can be used in habitual sentences, as in *Building houses is fun*. However, this sentence could alternatively be a non-progressing but simply a habitual event. The difference between progressive and non-progressive non-factive gerunds reflects the distinction between the Old English 'present verbal adjective' and 'verbal noun'.

In the text the gerund in (101a) is interpreted as having its subject 'raised' rather than involving co-indexing, as in (ii).

(101)   a.   We prevented him (from) falling/beating her

(ii)

```
                        {P}
                ┌────────┴──────┐
         { {abs}}          {P;N/{src}}
            │        ┌──────────┴──────────────┐
         { {src}}  {P;N/{loc{src}}{abs}}   { {abs}}
            │        │            ┌───────────┴──────┐
          {N}        │        { {abs}}      { {loc{src}}}
            ┊        ┊           │              ┌──┴──
            ┊        ┊         {Nᵢ}            {N}
            ┊        ┊           ┊              │
            ┊        ┊           ┊          {P;N{n}}
            ┊        ┊           ┊              │
            ┊        ┊           ┊          {P;N/{abs}}
            ┊        ┊           ┊              │
            ┊        ┊           ┊           { {abs}}
            ┊        ┊           ┊              │
            ┊        ┊           ┊            {Nᵢ}
            ┊        ┊           ┊              ┊
            we    prevented     him       from falling
```
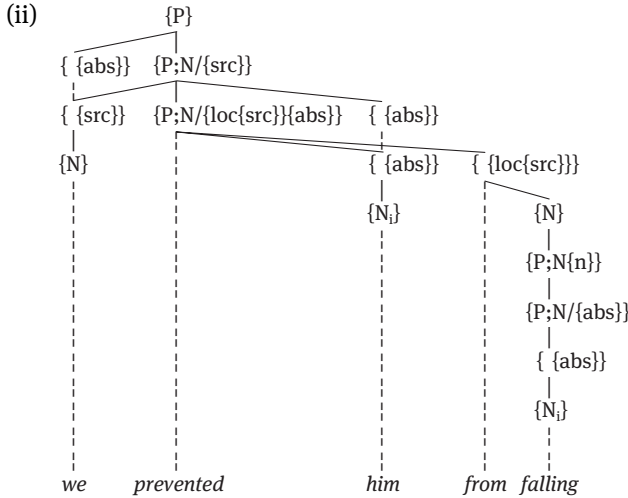
Also in the text it was suggested that each of the initial forms in the factive (104a) is a positional "subject", but not an inflectional one, nor in a finite clause, as shown in (104b).

(104)   a.   Fred/Him building his house was a great achievement

   b.

```
                                               {P/{abs{N/{fact}}}{N}}
                        ┌───────────────────────┴───────────────────────┐
                { {abs}}                                            {N/{src}}
                   │                                              ┌──────┴──
             {N/{loc/{int,e}}}                                { {src}}
                ┌──┴──────────────┐                               │
          {P;N{n}} ············· { {loc}}                    {P.N/{src}}
        ┌────┴──────────┐           │                      ┌───────┴──────┐
    { {abs}} {P;N/{src}{abs}}  {N{int,e}}               {P:N}        { {src}}
       │        ┌────┴────┐                                              │
   { {src}}   { {abs}}                                                 {N}
      │          │                                                      │
    {N}        {N}                                                   {N;P}
      ┊          ┊  ┌──┴──                                              │
      ┊          ┊  {N;P}                                            {P;N}
      ┊          ┊    ┊                                                 ┊
   Fred/him  building his house          was    a    great   achievement
```
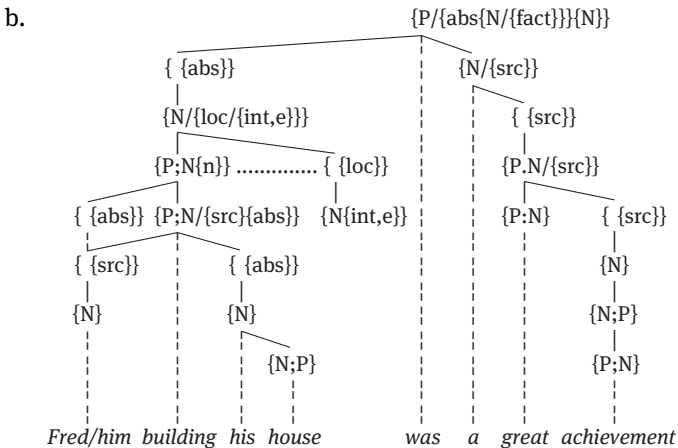
Hugh Walpole, in *The Sea Tower*, Part I, Chapter VI and Part II, Chapter I, for instance, provides examples of apparent inflectional 'subjects' of circumstantial gerunds.

> But tonight – there was Congreve, his long white nose jutting out over a drawing-pad on which he was lazily sketching. And Joe, his legs stretched out, he staring into the fire; Christina in a white dress with panniers, sitting close beside him;

> She placed hers in his and they stood hand in hand, she looking at him, laughing a little nervously.

In the second sentence of the first passage, and in the second passage, there is an initial nominative in each gerundial clause, specifically a progressive. This suggests that positional and inflectional subjects are not limited to finites. We have progressive-gerundial 'nominative-absolutes'. There is no concord in such non-finites, however.

The non-viability of (109b), as stative, is associated with verbs and (deverbal) adjectives with non-directional experiencer participants.

(109)   b.   *Harry was knowing (the answer)

It is much easier to give acceptable non-experiencer locational examples like *She is living in Rome (for the moment)* a potentially temporally restricted 'activity' sense (even in the absence of the temporal cicumstantial).

We observe in the text the destativizing of the Old English copula in perfect participial periphrases, unlike its periphrastic use elsewhere. Similarly, though elsewhere the Latin copula is associated with stativity, the familiar past passive periphrasis is specifically a perfective past, as well as (as in English) a perfect. The Old English in (110) from the *Anglo-Saxon Chronicle* is cited by Traugott (1992: 92). The history of 'auxiliaries' in English (and other languages) has attracted a lot of attention in the recent past, as exemplified by Harris & Ramat (1987), Warner (1993), Denison (1993: Part V), and many later publications. On the *be/have* distribution see e.g. Rydén & Brorström (1987). Such historical accounts illuminate the present situations.

Happen, except for lacking an expectation of agency (though it can invite a patient – as *happen to*), also shows parallels to the 'pro-verb' status of *do(ing) in* (113), as shown in (iii).

(113)   a.   That is what I want to do
        b.   That is what I want to be doing

(iii)   a.   That is what I want to happen
         b.   That is what I want to be happening

(iv)   Did he do it?

But it lacks an operative congener, like the first form in (iv), which, however, lacks a valency, except the default '/{P;N}'.

Become, as used in (va), is another overt 'pro-verb', with a different orientation from *happen* (*Sally* is not necessarily expected to be patient or agent), and which we can represent in (vb).

(v) a. What became of Sally?

b.

```
                          {P{q}//{0}}
                               |
                        {P/{loc/{N{int,e}}}}
                _____|_____
            { {abs}}      {P/{P}\{loc/{N{int,e}}}} ............................... { {loc}}
               ┆               |_____         |
               ┆          {P//{top}} ............................ { {loc}\{P}}   {N{int,e}}
               ┆            ___|_____               |
            { {abs}}    {P;N}{0ᵢ}/{{src}{abs{{gol}}}}     {Nᵢ, i < T}
               |        ___|_____
          { {abs{{gol}}}} ┆         { {loc{src}}}
               |          ┆          _____|____
          {N{top,0ᵢ}}     ┆         ┆        {N}
               ┆          ┆         ┆         ┆
             what       became     of      Sally?
```
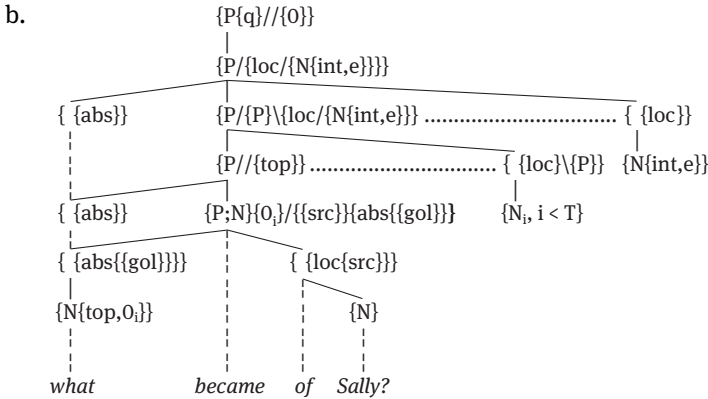
The vicariously expressed interrogative representation in (vb) omits the mood superstructure except for the abbreviated finiteness mood '{P{q}//{0}}'.

On Chapter 39

On Old English *to* as a purposive in combination with an inflected infinitive, and problems associated with interpreting the combination, see e.g. Mitchell (1985, vol. II: §§3748–3751). On various developments in the history of English infinitives, see Fischer (1990); also Los (2005).

Distinctions in the use of equatives, touched on here in relation particularly to examples (123), are given more attention in Halliday (1994: §5.4). On the constructions with *easy* etc., see Anderson (2006a: §12.2.1) for a rather different approach from that offered here.

The infinitival progressive *be* exemplified in (127a) seems to be unexceptionable.

(127) a. For Bill to be living with Gwen is disgraceful/I deplore

But many users of English are unhappy with a gerundive progressive *be*, particularly if the *be* is also gerundive, though it has not been unknown among others,

as illustrated by Austen's 'She was the first to announce it to Mr Knightley; and exclaimed quite as much as was necessary, (or, being acting a part, perhaps rather more,) at the conduct of the Churchills, in keeping him away' (*Emma*, Folio edn., p. 118). We also encounter in the same work (p. 127) a gerundive with the *be* that governs an infinitive: 'No, we should not have heard, if it had not been for this particular circumstance, of her being to come here soon'.

The 'structural blend' attributed to (129c) is of a different kind from the 'blending' that was mentioned in the commentary on Chapter 15.

(15.iii) a. Frieda resembles her great aunt
      b. Her great aunt resembles Frieda

(129) c.

```
                        {P}
            _____/          \
    { {abs}}      {P;N/{abs}  {abs}}
       |              |
    { {abs}}   {P;N/{{src}}{{gol}}}      { {abs}}
       |              |                     |
  { {{src}}{abs}}     |                { {{gol}}}
       |              |                     |
      {N}             |                    {N}
       ⋮              ⋮                     ⋮
     Frieda        resembles          her great aunt
```
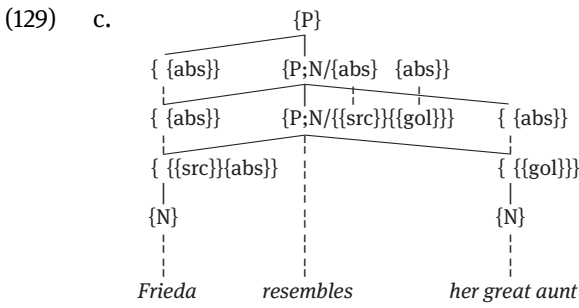
This whole sentence is viewed as simultaneously equative and directional, whereas in (129c) a lower and an upper sub-sentential construction share their exponence.

In the text (131c) the infinitive is analysed as containing a middle verb, as in (132c).

(131) c. John is easy to please

(132) c.

```
                    {P/{abs/{P;N}}{N.P}}
          _____/      |         \
  { {abs}}       {N.P}  { {abs/{P;N}}
     |             |         \
     |           {N:P}        {P;N/{abs{src}}}
     |             |              |
  { {abs{src}}}    |         {P;N/{src}{abs}}
     |             |              |
   {Nᵢ}            |        { {abs}}.....{ {src}}
     ⋮             ⋮              |         |
     ⋮             ⋮            {Nᵢ}       {N}
     ⋮             ⋮              ⋮         ⋮
   John          is  easy   to  please
```
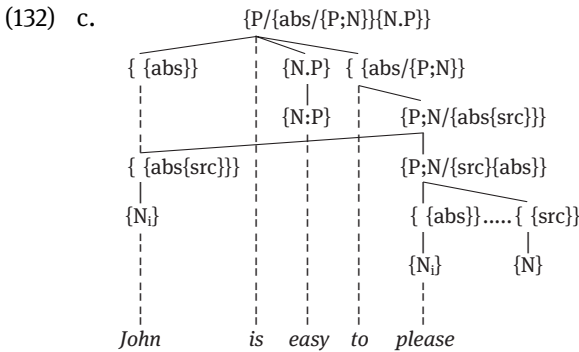
Contrast Trollope's passive structure in *Miss Waddington was not a person easy to be talked over* (*The Bertrams*, Folio Society, p. 175). The latter is also, of course, attributive; and the middle alternative would be *Miss Waddington was not a person easy to talk over*.

Thackeray makes great play of the *for to Verb* construction at the culmination of a protest against overzealous condemnation of the vagaries of youth: 'how shall I dare for to go for to say that a young man ever was a young man?' (*The Virginians*, vol. I, Chapter XLI). Also, given the observations made in the text concerning *need(s)*, it is not a surprise to find that Fowler (1926: 372) has some play with it.

We can add to the sequences in (143) involving *need(s) must* Trollope's mock heroic 'Thou hadst gotten there at any rate thy Juno's pedestal; and having that, needs was that thou shouldst stand upon it' (*The Bertrams*, Folio Society, p. 230). It contains the same archaic adverb as in (144a).

(144) a.

```
                                    {P{MODAL}/{loc/{N{int,e}}}}
                                              |
     { {abs}}                      {P}.................{ {loc}}
        |                                |                |
        |           { {loc}\{P}}   {P{MODAL}}      {N{int,e}}
        |                |            |
        |             {N{itf}}        |      {P;N/{src{abs}}}
        |                |            |              |
   { {src{abs}} {N;P}    |            |              |
        |                |            |              |
      {N}               |            |              |
        |                |            |              |
        |                |            |              |
      they             needs        must          leave
```
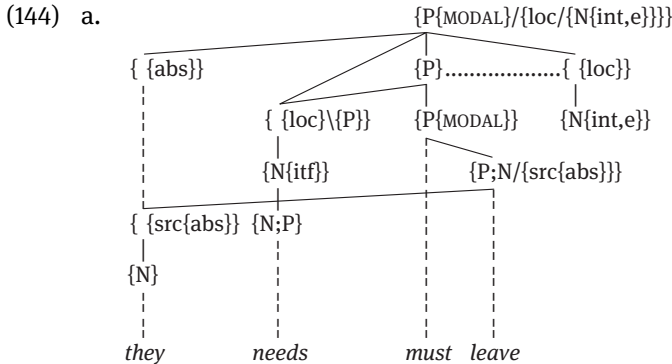
Thackeray is also a good source of modal sequences, such as 'With respect to Roundhand, I had best also speak tenderly' (*The History of Samuel Titmarsh and the Great Hoggarty Diamond* [Smith Elder edn. 1973], p. 127), or '..."I'd best, if you please, inspect the premisis" (sic) ...' (*A Little Dinner at Timmins's* [same volume], p. 156).

The text also exemplifies in (145) another, more recent, kind of compound involving a modal, here represented as in (i).

(145)   I can't seem to finish it

(i)

```
                            {P}
          ┌──────────────────┘
{ {abs}}              {P;N/{/{P;N}}}
   │         ┌──────────┴──────┐
{ {abs}}       {N/{P}}  { /{P;N}}
   ┊      ┌─────┴──┐    ┌──────┴──────┐
   ┊    {P{neg}}   ┊    ┊   {P;N/{src}{abs}}}
   ┊       │       ┊    ┊        │
{ {src}} {P{MODAL}} ┊   ┊      { {abs}}
   │       │       ┊   ┊         │
 {Nᵢ}   { {src{loc}}} ┊ ┊        {N}
   ┊       │       ┊   ┊          ┊
   ┊     {Nᵢ}      ┊   ┊          ┊
   ┊       ┊       ┊   ┊          ┊
   ┊       ┊       ┊   ┊          ┊
   I      can't   seem  to finish  it
```
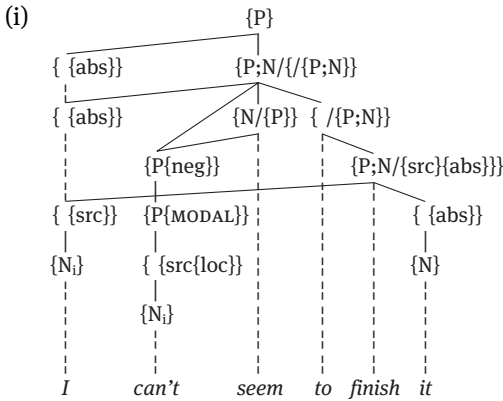
Here, despite the apparent syntax, *I can't finish it* lies within the scope of *seem*. The analysis might thus be along the lines of (i). This is a verb compound with a verb (*seem*) as head, which of course takes a *to*-infinitive rather than the 'bare' form required by core modals. The incorporated experiencer of the 'ability' *can* that is introduced by the finiteness determiner is coreferential with the subject of the verb subordinate to the compound; the subject is hosted by the free absolutives of the compound.

Another aspect of *need* distribution is illustrated by Charlotte Brontë's 'She needn't to have been' (*Shirley* [Folio edn.], 398), which seems to be a blend of the operative and main verb: *She needn't have been/She didn't need to have been.*

Given the notional adjacency, the alternation of *needn't do it* and *doesn't/didn't need to do it* may also provide a partial model for *didn't ought to do it* alongside *oughtn't (to) do it*. But the *did* in *didn't ought*, which appears to involve morphological agreement with a suffixal interpretation of the final *-t* of *ought*, is not a notionally simple past but subjunctive. Etymologically, the termination of modals, as we have seen, can be preterite subjunctive or simple preterite.

As is also familiar, and as observed in the commentary on Chapter 36, in some varieties of English what might be conceived as apparent modal compounds can be composed uniformly of modals, as suggested in (iia), which represents a typical combination, with an epistemic governing a deontic modal.

(ii) a.

```
                        {P{MODAL}}
                       /     |     \
                      /      |      \
          { {abs}}   {P{loc/{N{int,e}}}}
            |         |              \
          { {abs}}    |               {P{MODAL}/{src{loc}}}
            |         |                     |        \
          { {abs}{src{loc}}}                |         {P;N/{src{abs}}}
            |         |                     |              |
          { {src{abs}}}                     |              |
            |                               |              |
           {N}                              |              |
            |                               |              |
           they                           might        could  manage
```

b.

```
          {P{MODAL}}
          /        \
     {P{MODAL}}    {P{MODAL}}
        |          /    |    \
     { {abs}}     /     |     \
        |        /      |      \
     { {abs}}  {P/{loc/{N{int,e}}}}
        |        |              \
     { {abs}}    |               {P{MODAL}/{src{loc}}}
        |        |                     |        \
     { {abs}{src{loc}}}                |         {P;N/{src{abs}}}
        |        |                     |              |
     { {src{abs}}}                     |              |
        |                              |              |
       {N}                             |              |
        |                              |              |
      they'll                        might         could  manage
```
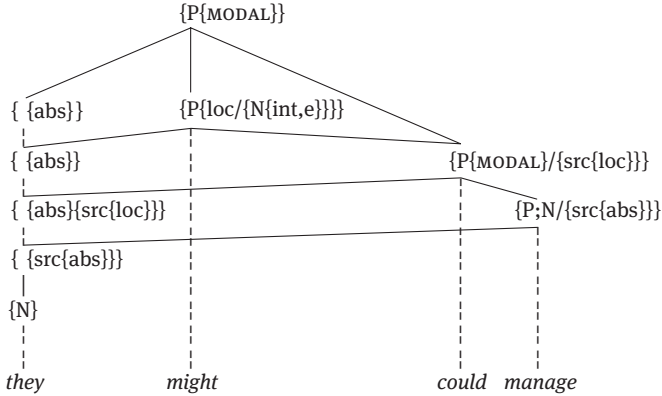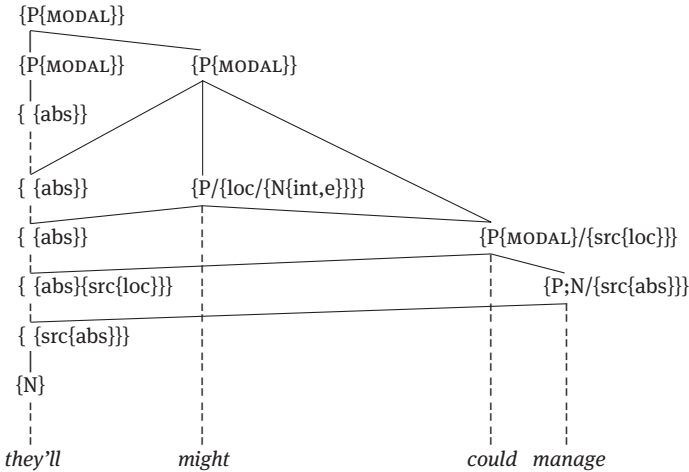
The head of the compound in (iia) is the epistemic, while the experiencer of the lower modal {P} of the compound shares its exponence with the main-verb subject. This implements the generalization that only the epistemic modals come above the others, which has already been suggested on other grounds. On such sequences as lexical units see again Di Paolo (1989).

However, given my ignorance of the limits of compound structure, and particularly the degree of syntactic isolation of compound components, I offer these suggestions very tentatively. It's tempting, nevertheless, to suggest further, even

more tentatively, that *I'll might could manage* derives in addition at the top of another epistemic, the predictive moodal realized as *will*, but here realized as a suffix to the pronoun, as in (iib). Compare *He'll can go*.

On Chapter 40

The deictic pronominals in Table XVII in the text are not marked as taking as a dependent a functor, though they do, of course, occur with functors, including, like the other pronominals, the nominal source (partitive).

Table XVII: Determiners

	definite	indefinite (specific)	nondefinite (non-spec)	negative	
article	*the* {N{def}/{N}}	*a(n)* (sg) {N{sg, spec}}	*a(n)* (sg) {N{sg}}	*no* {N{neg}}	determiner
pronominal	*this*/*those* *that*/*those* {N{def}} | { {DEIXIS}}	*some* {N}</{src}>}	*any* {N}</{src}>}	*none* {N{neg}</{src}>} | *{N}	
pronoun	*I, you*, (s)*he, it, they* {N{def}} | { {ego}} etc.	*someone* *something* {N{spec}/{src}} | { {src}} | { {GENDER}}	*anybody* *anything* {N} | { {src}} | { {GENDER}}	*nobody* *nothing* {N{neg}} | { {src}} | { {GENDER}}	pronoun

Only *those* is comfortable with a simple overt partitive rather than a possessive (as in *this/that/these/those of yours*), and this is usually co-indexed with a relative clause, as (ia), as represented in (ib).

(i) a. Those of the men whom Bill avoids

  b.   {N{det}}

```
{N{det}}
  |
{N}
  |
{N_i/{src}}                                      {N/{P//{top}}\{N/{src}}}
                                                      |
 { }  { {src}}                                     {P//{top/{def}}}
        |                                              |
      {N{def}}        { {abs}}                        {P}
        |                                              |
      {N/{src}}                          { {abs}}  {P;N/{src}{abs}}
        |                                   |
     { {src}}  { {abs}{top}}  { {src}}
        |          |            |
      {N}      {N_i{def}}      {N}
        |
     {N;P}

    those  of  the  men    whom      Bill   avoids
```
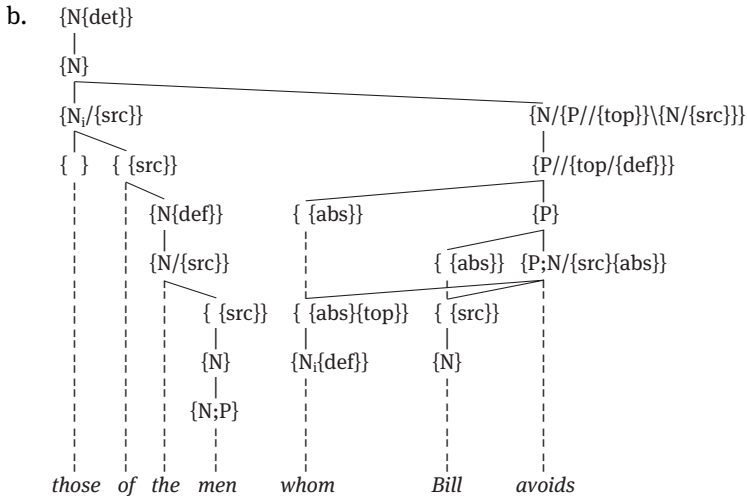
  c. Those of the men who live here whom Bill avoids

Those here behaves like a pronominal equivalent of the definite article, as *one* serves for *a(n)*. (ic) has a relative clause co-indexed with each of *those* and *the*.

The division of the determiners and pronouns in (ii) is from a rather different perspective from that in Table XVII, and I have used it to include genitives, which have both a transitive type, like the articles, and intransitive, like pronouns.

(ii)

(A) transitive only	(B) intransitive only	(C) both
a, the, no, every,	*I, (s)he, it, they, none*	*some, much/many, all, each,*
my, your, her, our, their	*some-/no-/every-one*	*both, two*
	mine, yours, hers, ours, theirs	*this/these, that/those,*
		you, we/us, (his/its)

The genitives are a special case that we'll return to; but let us firstly give some exemplification of these distributions in the other cases.

The dual distributions of sub-class (C) are illustrated in (iiia), but only the **quantifier** type illustrated by *some* allows the (iiib) environment, except for the plural distal deictic, which again normally presages an attributive.

(iii) a. some (men), two (men), this/that (man), we/you (men)
  b. some of them, each of them, two of them, those of them, …

Some of the prototypical set manifested in (iiia), the quantifiers, are de-adjectival, such as *much, many, various*, which may be predicative (as in *The excuses are many/various*); and the subset of cardinal numerals are converted from number names, which as names are used in counting. Other sub-classes characterized by occurrence in (iiia) are the **demonstratives**, and, lastly, the plural personal pronouns involving {ego} or {tu} or both; of these it is only plural *you* that appears in this class, and the singular is normally intransitive only. The plurals I shall return to.

Among the (B) set in (ii) are the intransitive genitives, which also occur in equatives such as (iv).

(iv)   The books are mine/hers/theirs/his

The (B) set otherwise consists of singular personal and indefinite (human and not) pronouns plus the plural personal pronoun *they*, all items that typically make up by themselves a participant; specifically, they are **pronouns**. The (A) set are the traditional indefinite and definite **articles** and, as additions we have made to that set, the negative article *no* and the universal *every*, plus the genitives whose structure we have looked at in some detail (see especially Chapters 19 & 29), but there is still more to observe.

Despite individual motivated deviations by individual items, the notional sets correlate with distribution. In many instances I have indicated this above by emboldening the name of the sub-class. Perhaps the most obvious apparent deviation involves *his* and *its* as pronominal as well as determinative. The (marginally) usual suffix for the others when pronominal is {z}, which is a superdeclensional addition to the normal genitive form. This suggests that the apparent absence of this with the pronominals based on simple genitive forms that end in a sibilant is the result of morphophonological frotting. The {n} of *mine* (and *thine*) is also exceptional, however. But, categorially, there is a consistent notional and syntactic distinction between **determiner genitives** and superdeclined **pronominal genitives**.

The quantifiers and demonstratives in class (C) of (ii) I take to be normally transitive, i.e. simple **determiners**, that can appear absolutely in context, particularly if deictic; the 'pronominal' use is pragmatically motivated.

(ii)	(A) transitive only	(B) intransitive only	(C) both
	a, the, no, every,	*I, (s)he, it, they, none*	*some, much/many, all, each,*
	my, your, her, our, their	*some-/no-/every-one*	*both, two*
		mine, yours, hers, ours, theirs	*this/these, that/those,*
			you, we/us, (his/its)

The personal pronouns that appear in class (C) depart from the usual personal pronominal pattern. The plural personal pronouns in the (C) class can be 'impure': they can mix SAP elements and non-SAP. And their SAP-including plurality underlies the conversion to determiner; the speaker and/or the addressee(s) are representative of all of a class denoted by the (attributes and) noun that follows, as in *we/you (expatriate) Greeks*. Non-SAP-plurals (and singulars) have, as well as (plural) *these/those*, the dedicated *the*, which has a more general use than the SAP plural determiners.

As dedicated determiners, the **articles** of (A) have been routinized. There are reasons for taking *a(n)* in English as the basic article. Thus, the overt determiner *the* typically, as in (I.89a), is converted from a partitive {N}, a partitive that on its own, when singular, is realized as *a(n)*. The preceding predicative *a(n)* is simply singular. I thus associate definites with the structures in (I.89a).

(I.89) a. {N{def}}
            |
            {N{spec,sg}/{src}//{*pl}}}
            ┌──────\
            ⋮   { {src}}
            ⋮ |
            ⋮   {N{*pl}}
            ⋮ |
            ⋮   {N;P{CNT}}
            ⋮   ⋮
        the/that   goat

        b. {N{def}}
            |
            {N{spec,pl}/{src}}
            ┌──────\
            ⋮   { {src}}
            ⋮ |
            ⋮   {N{pl}}
            ⋮ |
            ⋮   {N;P{CNT}}
            ⋮   ⋮
         the/those goats
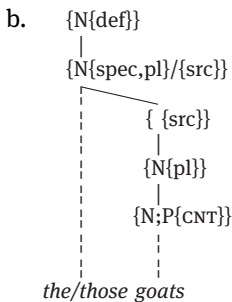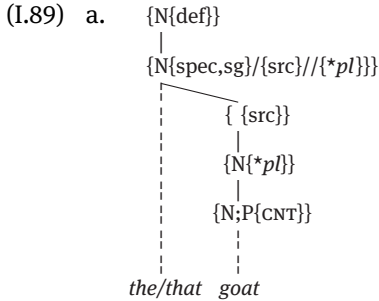
Both the specific and the non-definite are realized as *a(n)* (more emphatically, *any*, if non-definite), as in *a cat is a selfish creature*. There is no simple plural overt equivalent to *a(n)* (though *any* can be plural, and mass). *No* is similar but of course is specifically a negative article; the pronominal equivalent is *none*, which behaves as a pronominal quantifier. *No* and *none* and *nobody/nothing* thus require the complex valency in (v) – on analogy with (35a) from Chapter 35 for existential quantifiers.

(v)
$$\{P/\{\{src\}/\{N\{e\}\}\}\{abs/\{N_i/\{src\}\}\}\}$$
$$\downarrow$$
$$\{N_i/\{src\}\} \Rightarrow \{N_i/\{src\}\}$$

(35) a.
$$\{P/\{loc/\{N\{int,e\}\}\}\{abs/\{N_i/\{src\}\}\}\}$$
$$\downarrow$$
$$\{N_i/\{src\}\} \Leftrightarrow \{N_i/\{src\}\}$$
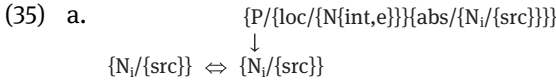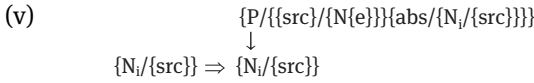
Recall that the downward arrow indicates subordination. (35a) corresponds to the subject of (33b), and (v) to the subject of (33c).

(33) b.

some   cups   are   in   the cupboard

c.

nobody   left
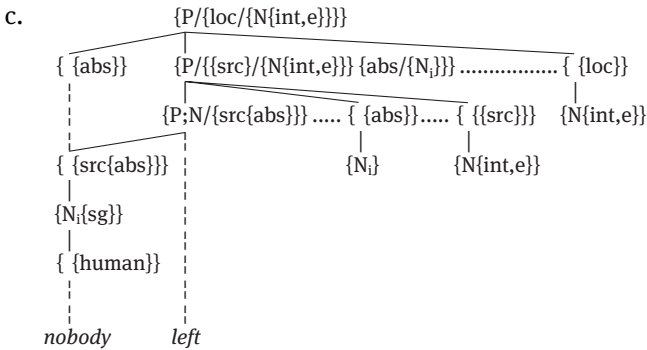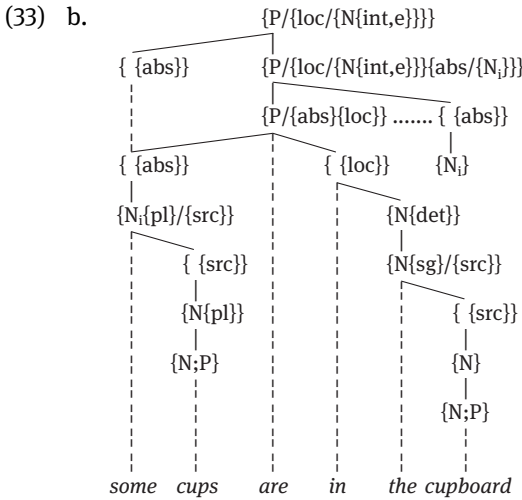
Now, the indefinite article of (via) would need something of the same valency as (33c), with a superordinate existential, no simpler than that of the negative forms, except in terms of positiveness.

(vi) a.   A man just left

b.

```
                        {P/{loc/{N{e}}}}
                              |
    { {abs}}       {P/{loc/{N{e}}}{abs/{Nᵢ/{src}}}} …….. { {loc}}
                              |                              |
               {P;N/{src{abs}}} …. { {abs}}…..{ {loc}}  {N{int,e}}
                              |                  |
    { {src{abs}}              |        {Nᵢ}         {N{int,e}}
        |
   {Nᵢ{sg}/{src}}
        |
       { {src}}
          |
         {N}
          |
        {N;P}

      a    man        left
```

c.   The man left

d.
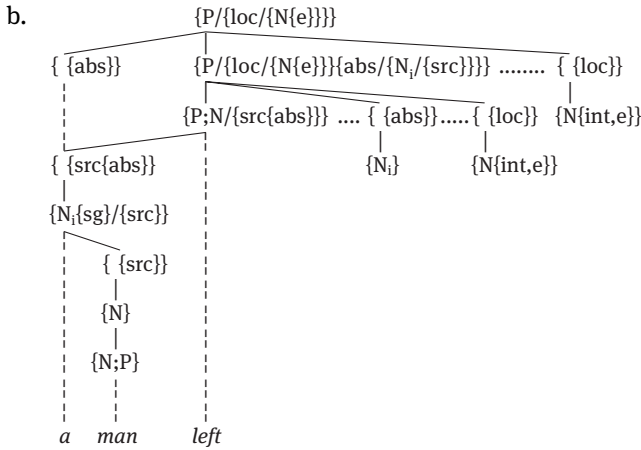
```
                    {P/{loc/{N{e}}}}
                          |
    { {abs}}       {P;N/{src{abs}}}
        |
    { {src{abs}}
        |
    {N{def}}
        |
   {N{sg}/{src}}
        |
   { {loc}}    { {src}}
      |           |
   {N{int,e}}    {N}
                  |
                {N;P}

      the       man    left
```
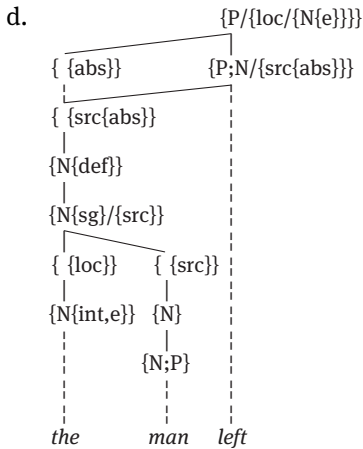
This is shown in (vib) (ignoring the adverb *just*). But when the definite is added, as in (vic), the lower existential predication in (vib) is absent: existence is assumed, as represented in (vid).

Returning to *a(n)*: as observed above, when it is predicative rather than a functor-hosted participant, as in (II.62b), from Chapter 21, there is neither predication nor assumption of existentiality (except in the case of *Bert*).

(II.62) b.

$$\{P/\{N\}\}$$

```
         {P/{N}}
      ┌────┴────┐
{ {abs}}      {N{sg}}
   |        ┌───┴──┐
 {Nᵢ}       │    {N}
   |        │     |
 { ₁}       │  {N;P/{abs}}
            │     |
            │  {P;N/…}
            │     |
            │   { {src}}
            │     |
            │    {Nᵢ}




Bert    is    a  butcher
```
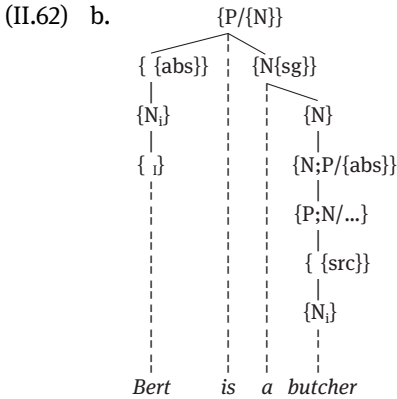
In (II.62b) *a* introduces a count noun that it marks as singular.

A(n) is the basis for a range of determiner types. It may be simply singular or singular in association with an existential predication, or non-definite. Singular *the* is based on the indefinite – and the plural and mass *the* on a non-overt existential partitive 'article'; and *the* adds an assumption that the addressee will be able to identify the referent on the basis of some type of knowledge, derived from the context or from the mental encyclopaedia. We should bear in mind that identification can take various forms. In particular, it does not mean that it is based on recognition of a particular person. This is not necessarily the case with, for instance, *The murderer may have been identified*. The non-overt generic definite shares the identity assumption with the non-generic, but in relation to denotata, not referents. I have not attempted to deconstruct 'definite' any further, however.

Every, of course, as a universally quantified determiner is even more complex in valency than the existential *a(n)* and negative *no* determiners, as shown in the redundancy in (35b).

(35) b.

$$\{P/\{\{src\}/\{N\{int,e\}\}\}\{abs/\{N_i/\{src\}\}\}\}$$
$$|$$
$$\{P/\{\{src\}/\{N\{int,e\}\}\}\}$$
$$\downarrow$$
$$\{N_i/\{src\}\} \Leftrightarrow \{N_i/\{src\}\}$$
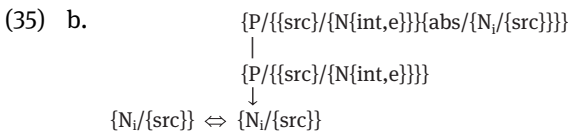
Here we have two negative existentials, an argument one above a predicational one. Further consideration of universal quantifiers was required in the text, given their apparent 'mobility' – not available, however, to *every*, which now requires our attention.

In the text we saw that universal quantifiers other than *every* can occur in circumstantial positions, specifically those associated with 'light' adverbs, as illustrated by (159) in the text and, with a different (simplified) operative, in (vii).

(vii)

```
                        {P/{loc/{N{int,e}}}}
      { {abs}}          {P/{{src}/{N{int,e}}}{abs/{Nᵢ}}}
                        {P/{{src}/{N{int,e}}}} { {abs}}
      { {abs}                                      |
                                                  {Nᵢ}
                        {P/{prog}}
      { {abs}}                          {P;N{prog}/{src{abs}}}
      { {src{abs}}}
      {N{def}}
      {Nᵢ{pl}{src}}
              { {src}}
                {N}
               {N;P}



      the  guests   are              all    leaving
```
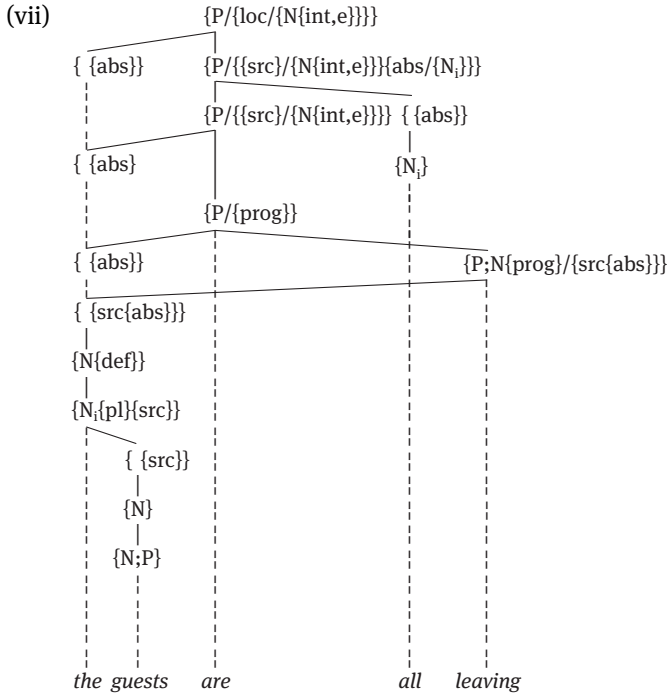
If we compare (vii) with (34a) it is apparent that *every* is a definite determiner, like generics but overtly so, and based on a universally quantified {N/{src}}, with its quantification expressed by coindexing.

(34)   a.

{P/{loc/{N{int,e}}}}
{ {abs}}   {P/{{src}/{N{int,e}}}{abs/{N$_i$}}}}
{P/{{src}/{N{int,e}}}} .... { {abs}}
{ {abs}}   {P/{loc/{N{int,e}}}{abs/{N$_j$}}}} {N$_i$}
{P;N/{src{loc}}{abs}} .... { {abs}}
{ {src{loc}}}   { {abs}}   {N$_j$}
{N{def}}   {N$_j${pl}/{src}}
{N$_i${sg}/{src}}   { {src}}
{ {src}}   {N{def}}
{N}   {N/{src}}
{N;P}   { {src}}
{N}
{N;P}

every   guest   liked   some   of   the   dishes
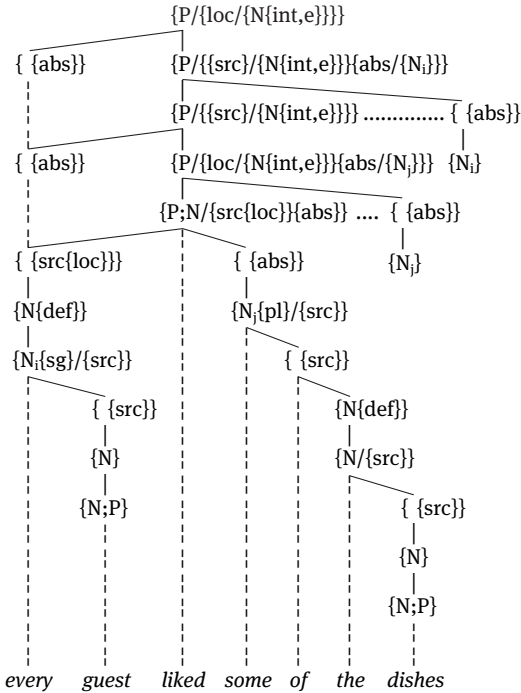
As a definite determiner, *every* cannot drift away from its phrase; it is not free to 'float' away. But the behaviour of *every* can be associated specifically with its 'article' status (Chapter 8): like the definite and indefinite articles, *every*, on which it is based, the universal article, is tied to a nominal, without overt source. Thus, **the/a/every of** ... . The quantifier in (vii) seems to have 'floated' free of the subject, but, as argued in the text, no movement is involved. And in other instances the quantifier can 'stray' even further, as we saw with reciprocal diathesis.

The indexing in (160) is intended to show that usually in my experience (160a) involves a single pair, but any number of pairs is involved in (160b).

(160) a.

where i = j.k = {2}

b.

where j.k ⊂ i = {pl}
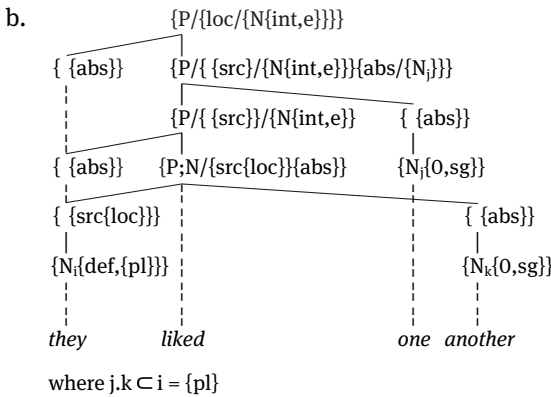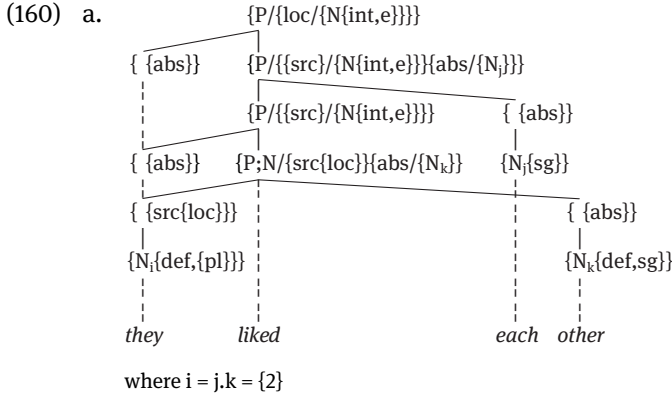
But there is some variation in usage. Not unnaturally, we find the latter construction associated with a single pair in 'Both were seeking one another', from Meredith's *Evan Harrington* (Chapter XXV), where the binarity is, of course, carried by *both*.

The discussion of pre-nominal attributives relies particularly on Bache (1978), which, however, provides a much more precise and detailed exemplification of the factors involved. On coordination, introduced in the text in relation to sequences of such attributives (specifically in relation to Bache's (§1.2) 'broken constructions'), recall, for instance, the coordination of names of Chapter 17.

(I.213) c.

```
                                              {P{past}}
        { {abs}}                    {P;N/{src{abs}}}
        { {src{abs}}}
        {N{pl}}
        {N}    { /{N\{N+{pl}}}}
               {N{pl}}
               {N}    { /{N}\{N+{pl}}}
                             {N}

      John    Bill    and    Mary         left
```
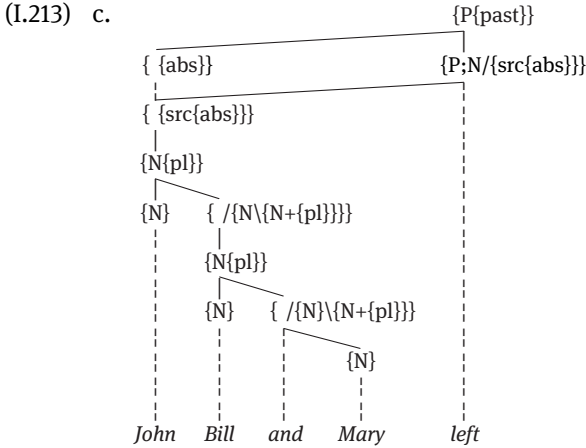
We find a similar configuration interrupting the sequence of the chain of the pre-nominal attributives. Recall (149).

(149) a.   a large, good-looking blonde boy

   b. {N{spec}/{src}}

```
          { {src}}
          {P.N}
          {P.N}              { \{P.N/{P.N}}}
          {P:N{SIZE}}        {P.N/{src}}
                             {P:N}    { {src}}
                             {P;N{n}} {P.N/{src}}
                      {P:N}   {P;N}   {N;P{COLOUR}}   { {src}}
                                                      {N}
                                                      {N;P}

      a    large   good   looking   blonde        boy
```
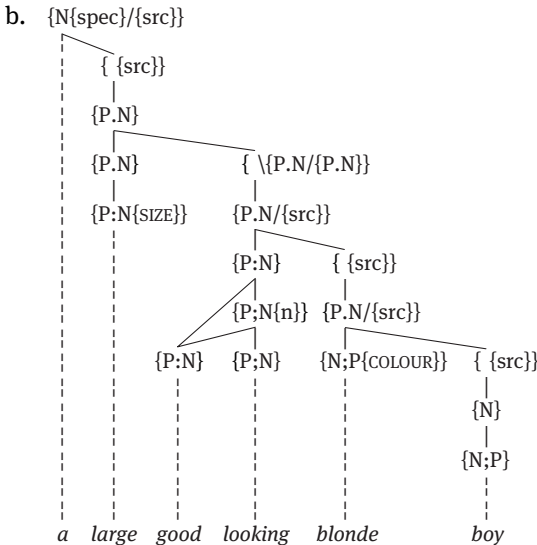
But the hierarchy of attributives is confirmed by this rather than called into question; we have coordination of hierarchically equivalent, gradient attributives (though in this instance, differentiated in 'weight'). The interaction of notional, morphological and contextual factors in the hierarchization and the scope for

innovation renders the prospects for a formulation of 'generative rules' in relation to such phenomena rather dim. Bache (1978: 12–3) quotes Chomsky's (1973: 275) judgement that they are 'inexpressible in any natural way in a transformational grammar'.

The alternative representation of postnominal attributives in (viii) avoids the mild centre-embedding of (154a), at the expense of extensive tangling.

(viii)

```
{N{def}}
   |
{N/{src}}
   |
{ {src}}
   |
{N}
   ┌─────────────────
{N/{src}}      { {loc}\{N/{src}}}
   |
{N}
   ┌──────────────────────
{N/{src}}         {N/{P}\{N/{src}}}
   |                 ┌──────────
{N}                     {P}
   ┌──────          ┌──────────────────
{N/{src}}       {P;N/...}      {N/{P}\{N/{src}}}
   ┌──            |                |
  { {src}}     { {abs}}        {P//{top}}
   |              |             ┌──────────
  {N}          {Nᵢ}  { {abs}} {P}
   |                  ┌────────────────
{N;P}              { {abs}}  {P;N}
                      |        ┌──────────
                   { {src}}       { {abs}}
                      |              |
                   {Nᵢ{top}}      {N{def}}
                                    |
                                   {N}
                                ┌──────────
                            {N/{src}} {P.N/{N/{src}}}
                                         ┌──────
                                       { {src}}
                                          |
                                         {N}
```

the girl with-red-hair that you-saw who was driving that old car

(154) a.
{N{def}}

{N}

{N_i/{src}}   {N/{P}\{N/{src}}}

{ {src}}   {P//{top}}

{N}   { {abs}} {P}

{N/{src}}   {N/{P}\{N/{src}}} { {abs}}   {P;N}

{N}   {P}   { {src}}   { {abs}}

{N/{src}}   { {loc}\{N/{src}}}   {P;N/…} {N_i{top}}   {N{def}}

{ {src}}   {N/{src}}   { {abs}}   {N/{src}}

{N}   { {src}}   {N_i}   { {src}}

{N;P}   {P.N/{src}}   {P.N/{src}}

{P:N}{ {src}}   { {src}}

{N}   {N}

{N;P}

the girl   *with red hair*   *that you-saw*   *who*   *was driving that old*   *car*

With the (viii) there is also absence of analogy with (II.32), where the hierarchy is motivated by the internal structure of the deverbal noun, and shows absence of tangling.

ported

other constructions, are 'gapped' is obscured by the variation among languages concerning to what extent functors are given overt expression either syntactically or morphologically (in so far as these can be distinguished). In English it looks as if the 'gap' is a {N}, subjoined or not to a functor.

The reader may take pleasure in a nice example of a parasitic gap offered by Thomas Hardy in *The Hand of Ethelberta*: '… it casually reflected a proof of her good judgment in a course which everybody among her kindred had condemned by calling a foolhardy undertaking' (p. 222, Folio Society edition, 1993). A different 'gap' situation is offered by Thackeray, preceded by 'gapped' subjects (which are not uncharacteristic of Thackeray's prose).

> She gave much time to them and thought; visited from house to house, without ostentation; was awe-stricken by the spectacle of the poverty which is with us always, of which the sight rebukes our selfish griefs into silence, the thought compels us to charity, humility and devotion. (*The Newcomes*, vol. II, Chapter XXIV).

On Chapter 41

The features {exc(lusive)} and {inc(lusive)} appealed to in (172c) etc. are obviously cover terms for more explicitly articulated notional representations.

Some of the earlier literature on *only* and the like is acknowledged in Anderson (2003b), where also the term 'vicarious' is introduced. The censorious proscriptive attitude to 'vicarious' *only* is well illustrated by the following interchange in Maria Edgeworth's *Belinda* (Chapter xiii, p. 203, vol. I in Dent 1893 edn.).

> "There is no secret in the world in the case, mamma," said Helena; "I only hesitate because – "
>
> "You hesitated *only* because, I suppose you mean. I suppose Lady Anne Percival will have no objection to your speaking good English?"

Compare Fowler (1926: 153) on the placement of *even*, and contrast his more accommodating remarks (p. 405) on *only*.

Fran Colman has pointed out to me a striking example where re-placing an *only* in the 'vicarious' position would greatly weaken the notional force alluded to here in the text of Chapter 41.

> We cannot assume that Boniface's letter was not written to Justus until he was already archbishop. Lacking other evidence we can say only that the letter was written in the years 619–25.

(from p. 8 of Peter Hunter Blair's 'The Letters of Pope Boniface V and the Mission of Paulinus to Northumbria', in P. Clemoes and K. Hughes (eds.) *England before the Conquest: Studies in Primary Sources Presented to Dorothy Whitelock* [Cambridge: Cambridge University Press], pp. 5–13).

Formerly, *only* could follow instead of precede its intensifiee, particularly if the latter is a name/pronoun; but now *alone*, if anything, would occupy this position: *God ?only/alone could do that*. Compare, however, Ben Jonson's.

> Drink to me only with thine eyes,
> And I will pledge with mine;

where the placement of the caesura favours the taking of *me* rather than *thine eyes* as the intensifiee (singing along could help when considering this).

Edgeworth's *Belinda* also offers the interesting intensifiers in the following.

> ... She is a *very woman – that* he could forgive her, and so could I; but she's a *mere* woman – and that he can't forgive – no more can I.

The discussion of adverb position in the text again owes a lot to Hartvigson (1969), though I have not been able to take anything approaching a full account of the wealth of observations and suggestions offered by his work. But even the illustrations of modifier positions in (I.83a) and (I.85a) take some account of such displays of Hartvigson as that in his §2.2.0.

Let us register another quite common form of ellipsis, neglected in the text. This is what one might refer to as ellipsis for **lexical economy**. This is characteristic of verbs like *enjoy* that are often complemented by expressions of an action or experience, typically gerundial. Andor (1998: §2) offers examples.

(i) a.   Peter enjoyed reading the poem
     b.   Peter enjoyed writing the poem
     c.   Peter enjoyed hearing the poem

The content of each of these can be conveyed by (ii), provided the context renders the ellipsis deducible.

(ii) a.   Peter enjoyed the poem
     b.   ?Peter enjoyed the door

There are elliptical forms, such as (iib), where deduction is unlikely to be possible, though the sentences in (iii) are quite acceptable.

(iii)   a.   Peter enjoyed playing with the door
     b.   Peter enjoyed watching the door
     c.   Peter enjoyed painting the door

Door doesn't immediately suggest an obviously enjoyable associated activity. And (iib) comes close to exhibiting pathological ellipsis. On the other hand, as Andor also observes, the sentence in (iv), with the verb *like*, which also permits this 'ellipsis', as a stative rather than process verb, is quite acceptable.

(iv)   Peter liked the door

Both such verbs have alternative valencies, one with an absolutive determiner phrase, the other with a gerund. The more economical is chosen where specifying the activity or experience that is enjoyed or liked is deducible, and the need for this is less urgent with *like*.

Variation in the expected conditions for (particularly non-overt) coreference is not uncommon.

> … and her own husband has gone off to Australia with who do you think, a *nippy* from *Lyons*. Just like him, just because she was always having her hair waved and never noticed her squint.   (Louis Malone <Louis Macneice> *Roundabout Way*, Chapter 17).

Here the *she* in the *because* clause has to skip a possible non-overt corefering nominal because of the content of the narrative.

On Chapter 42

On 'weak forms' see Obendorfer (1998), particularly §5.2, on the morphological consequences. Obendorfer (1998: Chapter 6) introduces a 'weak-form scale' (p. 185).

WEAK-FORM SCALE

0	1	2	3	4	5	0
	full vocalic syllable	semi-reduced weak vocalic syllable	syllabic schwa	non-vocalic syllable	non-syllabic segment(s)	

It had been my impression that operatives weakened further than point 2 can appear to the left of the subject only if the syllable retains the 'full' onset and coda,

as with [kəd, wəd, ʃəd, kən], but on further thought [əv] (*have*), [əz] (*has*) and [əd] (*had*), with rhyme alone can 'invert' in my usage and experience. Other forms that are still further reduced are suffixes (as in *I'll* etc.). I should also acknowledge that Obendorfer deals with 'weak forms' in general, which can be associated with other non-contentives especially. Another manifestation of iconicity: reducibility of notional weight is matched by the phonology.

Sinclair Lewis is particularly assiduous in indicating colloquial idioms and weak forms in his dialogues, as in, for instance, *Arrowsmith* and *Elmer Gantry*, exemplified compactly in 'You hadn't ought to of come here (p. 490 in the Library of America edition of the latter) or 'Jever study a kernel of wheat? Swonnerful!' (p. 500).

In the text I declared that the phenomena associated with cliticization and its possible morphologization involved 'a complex and volatile situation'. I should throw into the mix a dimension not introduced in the text, viz. variation in tempo, which, along with metricization, or metrical rhythm, further complicates the picture. Individual users of English, for instance, typically vary in degree of 'weakness' accorded to light elements. I have heard myself saying (rather pathetic-sounding) things like *'m I included*, where the form of *be* could be heard as a relatively strong, lengthened clitic to a non-vocalized ictus.

S.R. Anderson (2005) offers an optimality-theoretical account of 'clitics', which belongs to a tradition that seems to be incompatible with what is briefly suggested here, that cliticization is diachronic and thus not part of synchronic grammar. There is in (some sub-tradition of) this tradition another phenomenon frequently equated with 'cliticization' which, however, only has in common with it the involvement of 'light' forms. In some languages, pronouns, for instance, can – at least some of the time – appear in positions normally denied to 'heavy' expressions with the same function. This is true of French non-subject partici-pant pronouns, as in (ib), compared with expressions such as (ia) where the {N} is not a pronoun.

(i) a. J'ai donné le bijou à Pierre ('I gave the jewel to Peter')
     b. Je le lui ai donné ('I it to-him gave')
     c. J't'aime ('I-you-love')

Note too the result of procliticization of the subject pronoun in (ia), recognized in the spelling, associated with a language with a different rhythmic organization from English, where the 'weak' vowel [ə] is uniquely vulnerable – which brings its own complications. Compare too (ic), which recognizes further reduction of the pre-verbal pronouns. Cliticization and 'displacement' of 'weak' forms may coin-cide, but they obviously have a different result.

We find personal pronoun 'displacement' in Old English (see e.g. Fischer et al. (2000: §4.3.2.1). And some kind of cliticization has presumably occurred in the history of words like *asleep*, *aboard*, *aware*, etc., which I have interpreted as prefixed for at least some speakers – for others the forms may be opaque. We should also note that alternative expression of categories as words or part of them is not limited to the products of cliticization. As we have seen, a goal locative in Latin may be expressed by an inflection or a preposition plus an inflection.

The problem with graphical representation within (203) in the text brought to attention the empirical problem of varying overlap in adjacent contrastive units. The difficulties of attempts at strict segmentation in phonological representations are forcibly presented by Firth (1948) and in other places in the collection published as his *Papers in Linguistics 1934–1951* (1957).

It is also difficult to disagree with Firth's (1934b) 'obviously no syntactical study is possible without a system of intonation marks'. However, apart from reflecting, as usual, my own limitations, the restricted coverage of the syntax and intonation relationship here reflects the many uncertainties about this domain and its distinctiveness and internal complexity. This situation is reflected in the variety of approaches taken to the characterization of the relationship, including even in the appropriate notation in which it may be expressed. A survey of the not entirely random selection of approaches listed here (which I shall not attempt to review) confirms my impression, I think. I suggest as exemplars: Mitford (1774), Pike (1945), Jones (1960: Chapter XXXI), Halliday (1967), Crystal (1969), Bailey (1978), Ladd (1980), Beckman & Pierrehumbert (1986), Couper-Kuhlen (1986), Altenberg (1987), Cruttenden (1987), Jassem (1987), Gimson (1989: Chapters 10 & 11), Inkelas & Zec (1995), Selkirk (1996), Jun's collections (2005, 2014), Kahnemuyipour (2009), …

I have tried in this chapter to integrate the expression of tones with the phonological representations used in general in the preceding discussions of phonology, and to regulate the relation between syntactic categories and tone type and tonic placement via the co-indexing mechanism deployed elsewhere in the present chapter, and indeed throughout this work. But obviously this tentative skeleton needs to be tested and extended much more widely, before a systematic account can be formulated.

Mention of Firth brings to my attention that I have not adequately exploited here the notion of **prosody**. One excuse for this lack is the limited scope of most obvious instances of prosodies in English. Consider, for instance, voicing in successive obstruents or 'place' agreement with nasal plus plosive sequences. We can contrast these with such splendid displays as so-called 'vowel harmony' in Finnish, for instance. A brief look at such illustrates the importance of where a phonological contrast belongs.

In the Finnish word *pöytä* 'table' all the vowels can be said to 'contain' the feature **i**, and it contrasts in this respect with *pouta* 'fine weather', which lacks **i** throughout. The former item differs from the latter in the presence of an **i** attached to the word tonic, as with tones in the pre-utterance phonology, but without the indexing of the latter with a mood value. In the lexicon this could be stored as in (ii), with the prosodic feature outside the set of segments, and where, for simplicity, I ignore syllable boundaries and intra-syllabic structure.

(ii)   {i { {C{ {u}}}, { {V{a.u}}, {V{u}},{C}, {V{v}} } }

Lexically, *pouta* would lack the **i**, and so fail to show 'harmony'. In the lexical phonology structure **i** is, as anticipated, attached to the lexical tonic at the interface to lexical phonological structure, as sketched (perhaps an overstatement) in (iii).

(iii) $\{V_4\{i\}\}$
          ┊
          ┊
       [pouta]

The prosodic feature in languages can be heard simultaneously with any segment in the word with which it is compatible, potentially including non-vowels, but this varies from language to language. But what we have in such cases is the extended implementation of a single phonological contrast associated with the tonic. The apparent 'harmony' exhibits the result of implementation in time, not a phonological phenomenon – though this is not meant to demean it. The phonetic implementation accounts for gaps in the co-implementation of the prosody with particular segmental articulations, and even blocking of the implementation of the prosody. But the prosody constitutes a single (suprasegmental) phonological contrast. I return to the non-grammaticality of phonetic implementation in the Envoi to the text.

On Envoi

'I have now made a full avowal of all the plagiarisms of which I am aware myself; but I doubt not, many more may be found, of which I am at present totally unconscious.'

   ('Advertisement' from Mathew Lewis *The Monk*, 1796, Wordsworth Editions 2009). Unfortunately, there is no way that I can hope to emulate even Mr Lewis' modest claim: there have even been too many sources of help that I am aware of

for me to acknowledge. I must leave a parasitic gap. But I should acknowledge the guidance of Andreas Brandmair throughout the production of the volumes.

I have alluded throughout, as a kind of leitmotiv, to particular areas where it seems there is much left to do. But there are some much more global gaps in this work, such as the lexical/encyclopaedic relationship, and collocational relations and the scope of Sinclair's (1991) 'idiom principle'. I am aware of my failure to give due attention to contributions to difficult notional areas such as that of Wierzbicka (1995) and Sinclair's, which remain out of focus in the present work. This is an intricate and volatile area, given that language is the 'language of thought' – along with other expressive media such as music and the plastic arts.

But what I think of as the biggest gap is in my knowledge in general of the historical developments in the study of language that have contributed to present knowledge or indeed offer understandings that we are, or at least I am, not merely unaware of but that also may resolve problems we – or at least I – confront, or contradict present-day assumptions. And let us acknowledge finally another side to (not just what is) one grammarian's struggle: it's the struggle to 'make life grammatical (nature and life are so bloody anacoluthic)', according to a character in Louis Malone's *Roundabout Way*, Chapter 2 – whose title I might should also have stolen.

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