

English Resultatives

A force-recipient account

Seizi Iwata

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English Resultatives

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by Seizi Iwata

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A force-recipient account

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To Kana

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Acknowledgements

Please allow me to begin with a personal note. Although it may sound strange, I once thought of resultatives as the last topic I'd want to work on. The reason was simple: With such a vast amount of literature on resultatives already in existence, digesting it all would be nearly impossible, let alone contributing a new theory. Or so I thought. But things changed sometime in 2003, when I realized one important aspect of the resultative *The door swung open* which had been previously unexplored. As a result I eventually found myself drawn in to working on resultatives, and it was not long before realizing that this was shaping up to be a book-sized project. Such were the unanticipated beginnings of the present study. (Incidentally, my initial finding developed into a paper which appeared in *Linguistics* (Iwata 2008b), which was published later than its spin-off paper that appeared in *Language Sciences* (Iwata 2006a)).

In the course of working on resultatives over the years, my ideas kept growing, quite often in unexpected directions. But I finally managed to pull them all together into a coherent whole. I'd like to thank all those who have knowingly or unknowingly contributed to this process and who have helped me to complete this project.

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Kobe, Japan

August 2019, S. I.

Introduction

1.1 What this book is about

1.1.1 What are resultatives

This book is about resultatives in English, as exemplified in (1).¹

- (1) a. Denise hammered the metal *flat*.
- b. Evelyn wiped the dishes *dry*.
- c. Nicole pounded the meat *thin*.

Apparently, the sentences in (1) are not much different from those in (2), the sole difference being the presence of adjectives (*flat*, *dry*, and *thin*).

- (2) a. Denise hammered the metal.
- b. Evelyn wiped the dishes.
- c. Nicole pounded the meat.

The sentences in (1), however, crucially differ from those in (2) in the following respect: While the sentences in (2) say nothing about what has become of the post-verbal NP entity after the verbal event, those in (1) say that as a result of the verbal event, the post-verbal NP entity undergoes a change as specified by the adjectives. Accordingly, the simple transitive clause like (2a) can be followed by a continuation denying the change of state, as shown in (3a), but this is not possible with the resultative sentence in (1a), as shown in (3b).

- (3) a. Denise hammered the metal for 10 minutes, but the metal did not become flat.
- b. *Denise hammered the metal flat, but the metal did not become flat.

So the adjectival phrase at the end of the verb phrase in (1) (= result phrase) is far from a negligible element. It expresses a state resulting from the verbal event, even though the verb in itself does not entail a change of state.

Accordingly, resultatives can be informally characterized as follows: The verb in itself does not entail a change of state, but when this verb appears in the verb

1. The term “resultative” is generally attributed to Halliday (1967).

slot of the syntactic frame [NP Verb NP AP], the whole expression means that as a result of the verbal event, a change of state ensues.²

Note that the result phrase is not to be confused with other types of secondary predicates, like *circumstantial predicates* as in (4a) or *depictive predicates* as in (4b).³

- (4) a. John left the room *angry*.
b. John ate the meat *raw*.

(4a) roughly means that John left the room *because* he was angry, and (4b) that John ate the meat *while* the meat was raw.

Note, further, that while in (1) transitive verbs are followed by adjectival result phrases, resultatives are not limited to this type. First, the result phrase can be an NP as in (5b), a PP as in (5c), or a particle as in (5d), besides an AP as in (5a), as observed by Simpson (1983).

- (5) a. I painted the car *yellow*.
b. I painted the car *a pale shade of yellow*.
c. I cooked the meat *to a cinder*.
d. The boxer knocked John *out*. (Simpson, 1983, p. 143)

Second, there are intransitive versions of resultatives.

- (6) The kettle boiled *dry*.

Third, there are also resultatives that express causing a change of location. Thus in (7) the ball is caused to move into the field as a result of Pete hitting the ball.

- (7) Pete hit the ball *into the field*. (Jackendoff, 1990, p. 143)

1.1.2 Two questions raised by resultatives with non-subcategorized objects

One may be mildly surprised, but not shocked, to learn what has been stated in the last subsection about resultatives. After all, the resultative sentence is minimally

2. Clearly, the fact that the lexical property of the base verb undergoes a change is the primary reason why resultatives attract so much attention. So I am of the opinion that sentences like (1) primarily deserve to be called “resultatives.” Sentences like (i) are not the main target of the analysis in the following discussion: The verbs lexically specify a change of state, so there is nothing surprising about them expressing a change of state.

- (i) a. He made the metal flat.
b. It rendered them speechless.
c. He {became/got} crazy.

3. These terms are borrowed from Roberts (1988). See also Rothstein (1983), McNulty (1988), Hoshi (1992), and Himmelmann & Schultze-Berndt (2005), among others.

different from the ordinary, transitive clause with respect to the presence/absence of a result phrase, and the semantics expressed by resultatives is quite natural. Thus, when one hammers a piece of metal, the metal likely ends up being flat.

- (8) a. Denise hammered the metal *flat*.
b. Denise hammered the metal.

This impression will quickly change when one is presented with resultatives like (9), though.

- (9) a. He *laughed* himself *sick*.
b. The audience *laughed* the actors *out/off the stage*. (Rivière, 1982, p. 686)

These sentences are very strange, for *laugh* is ordinarily an intransitive verb and cannot take direct objects, as shown in (10).

- (10) a. *He laughed himself.
b. *The audience laughed the actors.

But in resultative sentences, intransitive verbs are somehow accompanied by post-verbal NPs which they do not select (=subcategorize), as shown in (9).

The same can be said of the resultatives in (11).

- (11) a. I *ate* myself *sick*.
b. He *drank* himself *into the grave/to death*. (Simpson, 1983, p. 145)

Both *eat* and *drink* may be used transitively, but the post-verbal NPs *myself* in (11a) and *himself* in (11b) are certainly not what is eaten and drunk, respectively. Here again, therefore, the post-verbal NPs are not strictly subcategorized objects of the verbs. So a natural question that arises is: Why can non-subcategorized objects appear in resultatives?

The occurrence of non-subcategorized objects in itself may be surprising, but this is not the end of the story. There are even resultatives like (12a) and (12b).

- (12) a. I *ate* him *out of house and home*.
b. She *drank* him *under the table*. (Simpson, 1983, p. 146)

These are idiomatic expressions, but they are undoubtedly instances of resultatives. (12a) means that as a result of my eating too much, he was not able to remain in his home, and (12b) means that as a result of her drinking too much, the person who was drinking with her got drunk and ended up falling under the table. Given that these resultatives, which require quite a degree of worldly knowledge (and imagination) to interpret, are actually allowed, one may well feel that anything is possible.

Not all resultatives with non-subcategorized objects are possible, though. Consider the sentences in (13).

- (13) a. *Brigid loaded the table's legs bent. (Boas, 2003, p. 125)
 b. *The bears frightened the campground empty.
 (Carrier & Randall, 1992, p. 187)
 c. *We cooled the people out of the room with the air-conditioner on too high. (Rappaport Hovav, 2008, p. 23)

It is quite easy to come up with plausible interpretations for all these sentences: That as a result of Brigid loading the table, the table's legs became bent in (13a), that as a result of the bears frightening the hikers, the campground became empty in (13b), and that as a result of our cooling the room, the people inside the room left. In fact, these interpretations are much less far-fetched than the interpretations of (12a) and (12b). Nevertheless these resultatives are not allowed. Here again, therefore, a natural question arises: Which resultatives are possible and which are not?

These two questions ("Why can non-subcategorized objects appear in resultatives?" and "Which resultatives are possible and which are not?") naturally occur to everyone interested in English grammar, be they linguists or laypeople. As a matter of fact, laypeople will undoubtedly expect that linguists can provide answers to these two questions.

But have linguists really lived up to this expectation? This is the topic addressed in the next subsection.

1.2 How resultatives have been analyzed in Generative Grammar

1.2.1 Small clause analysis

In the generative literature, a vast number of papers and books have been written on resultatives.⁴ If one chose to review all of those works, dwelling on specific details of particular analyses, one could do so indefinitely. But since the main concern of the current discussion is whether the two questions just raised are properly addressed or not, a very succinct summary will do.

As far as I know, Green (1970) is the first work to draw attention to this phenomenon in the generative framework. But the real significance of resultatives was not immediately recognized, as Green (1970) cited sentences like (14), which are resultatives with subcategorized objects.

4. See Beavers (2012) for a compendium.

- (14) a. Jesse shot him dead.
 b. She painted the house red.
 c. She kicked the door open. (Green, 1970, p. 271)

Eventually, however, the existence of non-subcategorized object cases came to attention.⁵

- (15) a. He *laughed* himself sick.
 b. He *drank* himself *senseless*. (Rivière, 1982, p. 686)

Rivière (1982) points out exactly the puzzles which resultatives with non-subcategorized objects present. First, non-subcategorized objects may appear in resultatives: In (15a), *laugh* is an intransitive verb, but an NP appears after the verb. This counts as a violation of the subcategorization requirement. Second, non-subcategorized objects which appear after transitive verbs do not express entities semantically selected by the verb: In (15b), the post-verbal NP expresses a human being that cannot possibly be the object of a drinking activity. This counts as a violation of selectional restrictions.

For these reasons, resultatives pose a challenging problem to the view that both subcategorization properties and selectional restrictions are specified in the verb's lexical entry and do not change, a prevalent view since Chomsky (1965) in the generative tradition.

One way to accommodate non-subcategorized object cases like (15) proposed in the generative framework is a small-clause analysis, which assumes that the verbs take a clausal complement, as indicated in (16).

- (16) a. They drank [_S him under the table].
 b. The audience laughed [_S the actors off the stage]. (Rivière, 1982, p. 687)

As a matter of fact, various scholars have resorted to some version of small-clause analysis (Simpson 1983, Hoekstra 1988, Kayne 1985, Kratzer 2005, to name just a few).

This, however, is not a real solution. A small clause analysis looks plausible when the verb semantically selects a proposition, like the case of *believe*. Thus in (17a) *believe* can be said to take a clausal complement, as indicated by the brackets, for what she believes is not *John* but the proposition that John is a spy, exactly like in (17b).

- (17) a. She believes [_S John to be a spy].
 b. She believes that John is a spy.

5. The existence of resultatives with non-subcategorized objects was already noted in Jespersen (1933, p. 311), though.

In the case of *drink* and *laugh*, however, there is no independent evidence to support the claim that *drink* and *laugh* take clausal complements, in the same way that *believe* takes a clausal complement: These verbs do not take a *that*-clause complement.

- (18) a. *They drank that he was under the table.
 b. *The audience laughed that the actor was off the stage.

In the syntactic literature, the appearance of *there* in the post-verbal NP position as in (19) is generally held to constitute evidence for the clausal complement (Postal 1974, Bresnan 1979).

- (19) Mary believes there to be a spy among us. (Bresnan, 1979)

In the case of (16a) and (16b), however, it is very difficult even to come up with corresponding sentences involving *there* in the post-verbal NP position.⁶

As Rivière (1982: 687) rightly points out, therefore, a small clause analysis “only shifts the problem one step further and new violations appear”:

Drink is transitive with an object NP but not with a complement clause as in [(16)].
Laugh is normally considered to be strictly intransitive, and its co-occurrence with an object clause is no improvement on its occurrence with an NP.
 (Rivière, 1982, p. 687)

In other words, a small clause analysis can be regarded as an attempt to answer the first question (“Why can non-subcategorized objects appear in resultatives?”) by saying that this is because *drink* and *laugh* have another subcategorization frame, besides the ordinary transitive and intransitive ones. But this supposed subcategorization frame is quite dubious.

As to the second question (“Which resultatives are possible and which are not?”), few serious attempts, if any, have been made to address the question at all (at least as far as I know).

1.2.2 Lexical rule approach

Another line of analysis of resultatives that has been proposed in the generative tradition is a lexical rule approach. A representative one is a lexical subordination analysis by Levin & Rapoport (1988): “Lexical subordination takes a verb in its original, or basic sense and subordinates it under a lexical predicate. The verb (...) has a complex LCS, derived from the verb’s original LCS.” (Levin & Rapoport, 1988, p. 282)

6. Still another fundamental problem with small clause analyses will be pointed out in 9.2.2.

Levin & Rapoport (1988) illustrate this process with *wipe* as follows. When *wipe*, in its basic sense, appears transitively as in (20a), it receives a lexical semantic representation in (21a) (= *wipe*₁). When this lexical semantic representation undergoes a process of lexical subordination, a new lexical semantic representation in (21b) results (= *wipe*₂), which is syntactically realized as in (20b).

- (20) a. Evelyn wiped the dishes.
 b. Evelyn wiped the dishes dry.

- (21) a. *wipe*₁: [x ‘wipe’ y]
 b. *wipe*₂: [x CAUSE [y BECOME (AT) z] by [x ‘wipe’ y]]
 (Levin & Rapoport, 1988, p. 282)

Similarly, *He laughed himself silly* would be handled by deriving the semantic representation in (22b) from that in (22a).

- (22) a. *laugh*₁: [x ‘laugh’]
 b. *laugh*₂: [x CAUSE [y BECOME (AT) z] by [x ‘laugh’]]

The lexical subordination analysis answers the first question (“Why can non-subcategorized objects appear in resultatives?”) by saying that this is because a new sense is created by a lexical rule. But this means that the verb *laugh* has a sense “to cause Y to become Z by laughing,” in addition to its original sense “to laugh.” This is quite dubious, as pointed out by Goldberg (1995).

As to the second question, lexical rule approaches seem to be powerless. To the question “Which resultatives are possible and which are not?” the answer should be that resultatives are possible when a lexical rule can apply. But this immediately invites the question: When can a lexical rule apply? Nothing is said about this question. To claim that a lexical rule can apply *because* the resultative is possible is circular and does not explain anything.

Thus neither a small clause analysis nor a lexical rule analysis can satisfactorily answer the two questions. While there are still many other analyses of resultatives conducted within the framework of Generative Grammar, the situation is basically the same: As far as I know, there are few, if any, serious studies that squarely address the two questions.

1.3 How resultatives have been analyzed in Construction Grammar

1.3.1 Goldberg (1995)

Now more than a decade after the real significance of resultatives was recognized in the generative framework (i.e. Rivière 1982), an entirely different analysis of

resultatives was proposed outside the generative framework: A constructional analysis by Goldberg (1995).

Goldberg (1995) argues that constructions are form-meaning pairings which exist independently of particular verbs, carry meaning, and specify the syntactic structure. Thus a resultative construction can be expressed as in Figure 1.1.

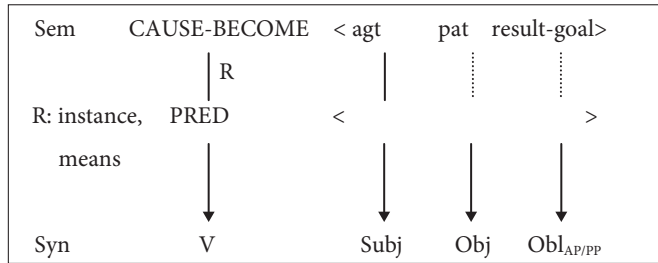


Figure 1.1 Resultative construction (Goldberg, 1995, p. 189)

CAUSE-BECOME <agt pat result-goal>, which is the semantics associated directly with the construction, is paired with the syntactic level of grammatical functions (Subj Obj Obl_{AP/PP}). PRED <> stands for the lexical verb which appears in the construction.

Significantly, constructions can override the syntax and semantics of base verbs by superimposing their own syntax and semantics on those verbs. Thus the resultative in (23) is claimed to result when the semantic roles associated with the construction <agent patient result-goal> (= argument roles) are fused with those associated with the verb *wipe* <wiper wiped> (= participant roles), as shown in Figure 1.2.

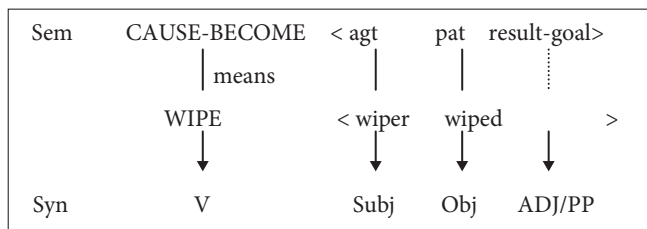


Figure 1.2 Composite structure: Resultative + *wipe* (Goldberg, 1995, p. 190)

(23) He wiped the table clean.

Similarly, the verb *talk* is integrated with the transitive resultative construction by fusing the participant role <talker> with the argument roles <agent patient result-goal>, as in Figure 1.3.

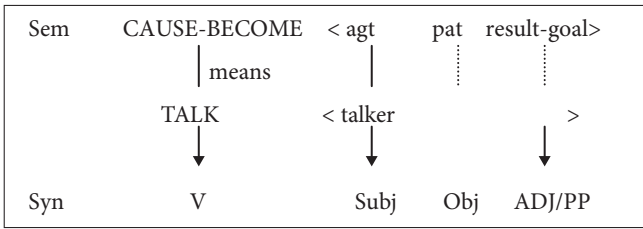


Figure 1.3 Composite structure: Resultative + *talk* (Goldberg, 1995, p. 190)

(24) He talked himself blue in the face.

Thus in her theory (24) is handled on a par with (23), because it is constructions, rather than verbs, that account for the phrasal pattern of resultatives.

Goldberg's (1995) constructional approach is very appealing, because it introduces an entirely new perspective: It is not verbs but constructions that are responsible for the observed syntax and semantics of resultatives. Accordingly, Goldberg's constructional approach answers the first question by saying that this is because the resultative construction contributes its syntax and semantics.

The second question is practically left unanswered, though: To the question "Which resultatives are possible and which are not?," logically the answer is that resultatives are possible when the verb can occur in the resultative construction, and not possible when the verb cannot occur in the resultative construction. But when can a verb occur in the resultative construction?

In a constructional approach, when a verb occurs in a certain construction, the verb and the construction must be semantically compatible. A mechanism to ensure the compatibility between verbs and constructions which is available in Goldberg's (1995) theory is the Semantic Coherence Principle:⁷

The Semantic Coherence Principle: Only roles which are semantically compatible can be fused. Two roles r_1 and r_2 are semantically compatible if either r_1 can be construed as an instance of r_2 , or r_1 can be construed as an instance of r_1 .

(Goldberg, 1995, p. 50)

Notice, however, that as stated, this principle reduces the issue of compatibility between verbs and constructions to that of the compatibility between semantic roles. That this is so is made even more explicit in Goldberg (2006):

The Semantic Coherence Principle ensures that the participant role of the verb and the argument role of the construction must be semantically compatible. In particular, *the more specific participant role of the verb must be construable as an instance of the more general argument role.* (Goldberg, 2006, p. 40, emphasis mine)

7. The Correspondence Principle is another principle in Goldberg's (1995) theory which regulates the fusion of verbs and constructions. But this principle does not do much substantial work. See Iwata (2005, pp. 382–384) and Iwata (2008a, pp. 18–19) for relevant discussion.

If we strictly follow this principle, all we can say about (23) is that the wiper can be construed as a type of agent and the wiped can be construed as a type of patient. Similarly, all we can say about (24) is that the talker can be construed as a type of agent. Period.

Obviously, the compatibility between verbs and constructions is not such a simple matter. According to Goldberg's theory, the verb *talk* can occur in the resultative construction *because the talker is a type of agent*.

(25) He talked himself blue in the face. <talker>

But as Boas (2003) points out, *speak*, *whisper*, and *grumble* cannot occur in the same resultative expression, as shown in (26), despite the fact that all these verbs have a participant role as shown in (27) which is also a type of agent.

- (26) a. *He spoke himself blue in the face.
 b. *He whispered himself blue in the face.
 c. *He grumbled himself blue in the face. (Boas, 2003, p. 105)

- (27) a. speak <speaker>
 b. whisper <whisperer>
 c. grumble <grumbler> (Boas, 2003, p. 106)

In other words, the difference between talking, on the one hand, and speaking, whispering and grumbling, on the other, cannot be captured by merely matching role labels.⁸

Thus, while Goldberg's (1995) constructional approach answers the first question by attributing the observed syntax and semantics to the resultative construction, her theory has little to say when it comes to the question of which resultatives are possible and which are not. In order to rule out certain ill-formed resultatives, Goldberg (1995) resorts to a number of additional constraints (e.g. Aspectual constraint, End-of-Scale constraint), but these constraints do not follow from the resultative construction itself.

1.3.2 Boas (2003)

Boas (2003) also presents a constructional analysis of resultatives, but unlike Goldberg's (1995) unified approach to resultatives, Boas argues that resultatives are verb-specific. Because of this different stance, Boas' (2003) theory answers the first question in a different way than Goldberg's (1995) theory does. Boas divides

8. This issue will be taken up in 3.3.2.

resultatives into conventionalized resultatives as in (28) and non-conventionalized resultatives as in (29).

- (28) a. She shattered the vase into pieces.
 b. They melted the butter to liquid. (Boas, 2003, p. 216)
- (29) a. He sneezed the napkin off the table.
 b. Dan talked himself blue in the face. (Goldberg, 1995, p. 224)

The conventionalized/non-conventionalized distinction cross-cuts the subcategorized object/non-subcategorized object distinction. Thus the resultatives with subcategorized objects in (28a) and (28b) are conventionalized resultatives, but those with non-subcategorized objects in (30a) and (30b) are also conventionalized resultatives.

- (30) a. Kim ran herself to exhaustion.
 b. He had jogged himself out of breath. (Boas, 2003, p. 246)

Significantly, Boas (2003) takes verb meanings broadly enough to include not only “lexical” information (=on-stage information) but also “encyclopedic” information (=off-stage information): On-stage information is information about an event that is immediately linguistically relevant for the interpretation of the meaning denoted by an event-frame, while off-stage information is information that does not bear mention because it is by default associated with the word.

In the case of *run*, on-stage information is information about (1) a runner and (2) an energetic movement from point A to point B; off-stage information is such information as: running necessitates the use of legs and feet, Westerners typically wear shoes to run, and energy is expended when running (Boas 2003: 172–173). Accordingly, the (simplified) event frame of *run* is represented as in Figure 1.4.

GOAL
Ag (p1) (W p2)

Figure 1.4 (Simplified) event frame of *run*

Here, “Ag” and “p1” together constitute on-stage information: “Ag” expresses an animate object moving legs quickly, and “p1” a directional PP. On the other hand, “W” and “p2” constitute off-stage information: “W” is world knowledge containing knowledge about non-prototypical event-participants of running events, and “p2” expresses a change in state or location of an event-participant from ‘W’.

When the participants contained in the on-stage information is linked to syntax, intransitive uses of *run* emerge, as shown in Figure 1.5.

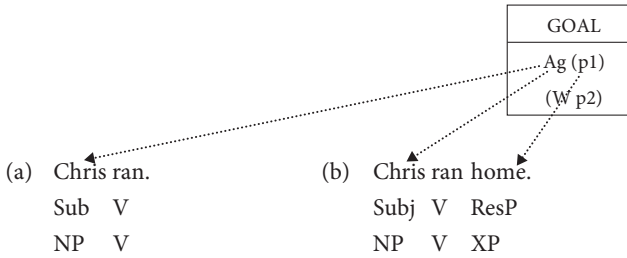


Figure 1.5 Linking from the prototypical event-frame of *run* to syntax (Boas, 2003, p. 191)

But when the off-stage information is recruited for overt expression, resultatives with non-subcategorized objects are obtained, as shown in Figure 1.6.⁹

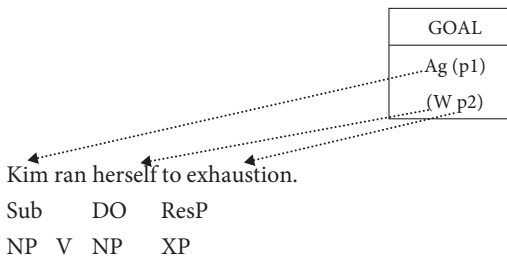


Figure 1.6 Linking from the prototypical event-frame of *run* to syntax: Perspective shift (Boas, 2003, p. 247)

Notice that Boas (2003) is making a very different claim about resultatives than Goldberg (1995) as to the origin of non-subcategorized objects. While Goldberg (1995) argues that the result phrase and the post-verbal NP are contributed by the resultative construction, Boas claims that they are ultimately due to the backgrounded part of the verb meaning (“off-stage information”) coming to the fore.

This is Boas’ (2003) great contribution. He has shown that in order to account for the observed facts of resultatives, reference needs to be made to rich background knowledge, i.e. Frame Semantics (Fillmore 1977, 1982, Fillmore & Atkins 1992, Petruck 1996).

A word’s meaning can be understood only with reference to a structured background of experience, beliefs, or practices, constituting a kind of conceptual prerequisite for understanding the meaning. Speakers can be said to know the

⁹. This account does not extend to non-conventionalized resultatives. Boas (2003) claims that the resultative in (ia) is a non-conventionalized resultative and is created on analogy with (ib).

- (i) a. Tom sneezed the napkin off the table.
b. Tom blew the napkin off the table.

(Boas, 2003, p. 269)

meaning of the word only by first understanding the background frames that motivate the concept that the word encodes. Within such an approach, words or word senses are not related to each other directly, word to word, but only by way of their links to common background frames and indications of the manner in which their meanings highlight particular elements of such frames.

(Fillmore & Atkins, 1992, pp. 76–77)

When we turn to the second question, however, Boas (2003) practically gives up answering it. As seen in the last subsection, Boas (2003) challenges Goldberg’s (1995) semantic role-based account by presenting (31) and (32).

(31) He talked himself blue in the face. (Goldberg, 1995, p. 189)

- (32) a. *He spoke himself blue in the face.
 b. *He whispered himself blue in the face.
 c. *He grumbled himself blue in the face. (Boas, 2003, p. 105)

Boas (2003) presents many further examples to the same effect, such as (33a) and (33b).

- (33) a. The audience {laughed/?giggled/*pouted} the poor guy off the stage.
 b. Evin {talked/*whispered/*giggled} herself hoarse. (Boas, 2003, p. 121)

Regrettably, Boas’ (2003) solution is to turn to “conventionalization.” According to Boas, “the data thus suggest that a verb’s ability to occur in resultative constructions is a matter of conventionalization, i.e. it cannot be explained by more general constraints.” (Boas, 2003, p. 126) In fact, Boas (2003) mostly turns to conventionalization when apparently puzzling behaviors of resultatives come up, and argues that all those idiosyncrasies need to be lexically specified.

The following data from Verspoor (1997) is further evidence for the proposal that the distribution of resultatives is to a very large degree idiosyncratic.

(Boas, 2003, p. 126)

- (34) a. He laughed himself to death.
 b. *He laughed himself dead.
- (35) a. He laughed himself to sleep.
 b. *He laughed himself {sleepy/asleep}.

That is, the type of result phrase with which the verb may occur needs to be specified in each verb’s lexical entry (= mini-construction)

But if one contents oneself by simply speaking of conventionalization, then one cannot explain why the facts are as they are, and not some other way. Thus the acceptability pattern could be quite the opposite in (34) and (35).

1.3.3 Short summary

To quickly summarize what we have seen so far, a small clause analysis and a lexical rule approach, which are two representative analyses conducted within the framework of Generative Grammar, are both unsatisfactory: The answer to the first question (“Why can non-subcategorized objects appear in resultatives?”) is rather dubious, and they hardly even address the second question (“Which resultatives are possible and which are not?”).

In contrast, Goldberg (1995) and Boas (2003), both within the framework of Construction Grammar, are far more promising. According to Goldberg (1995), the answer to the first question is “because of the construction.” But the answer to the second question is far from satisfactory. Obviously, the compatibility between verbs and constructions is not a simple matter of role labels being matched. Instead, verb meanings are to be approached in frame-semantic terms.

It might be argued, at this point, that Goldberg (1995) explicitly recognizes the need to refer to frame-semantic knowledge, as in the following passage: “Verbs, as well as nouns, involve frame-semantic meanings; that is, their designation must include reference to a background frame rich with world and cultural knowledge.” (Goldberg, 1995, p. 27)

But while Goldberg pays lip service to the importance of rich frame-semantic knowledge, the practice of merely matching role labels is unchanged in her later works (Goldberg, 2006, 2009, etc.).

As for Boas (2003), the answer to the first question is that the post-verbal NP and the result phrase ultimately come from the backgrounded part of the verb meaning. Obviously, this is a deeper explanation and is a great improvement over Goldberg’s account. Unfortunately Boas (2003) stops short of addressing the second question, though.

1.4 The analysis to be proposed in this book

1.4.1 How to answer the two questions

Thus the two questions (“Why can non-subcategorized objects appear in resultatives?” and “Which resultatives are possible and which are not?”) have still not been satisfactorily answered in previous analyses of resultatives, despite many years of study. And this is what the present book aims to do.

Basically, I am starting where Boas (2003) left off. As seen in the last subsection, Boas (2003) does a very good job in answering the first question: There are indeed resultative constructions, but the non-subcategorized object and the result

solution to the second question suggests itself: Resultatives are well-formed when the post-verbal NP is a force-recipient, and ill-formed when the post-verbal NP is not a force-recipient.

In this book, I will demonstrate that a theory which starts with this recognition can account for many apparently puzzling behaviors of resultatives. This is why I refer to the analysis to be presented in this book as a force-recipient account.

It will turn out that in order to identify the post-verbal NP as being a force-recipient or not, reference to frame-semantic knowledge is essential. It follows, therefore, that both the first question and the second question can be answered by combining the insight of a force-recipient account with a detailed frame-semantic analysis of verb meanings.

1.4.2 A lexical-constructional approach

As a matter of fact, this is a natural development of my theoretical stance taken so far: a lexical-constructional approach (Iwata 2008a). This approach shares the fundamental assumptions with Radical Construction Grammar (Croft 2001) and Cognitive Construction Grammar (Goldberg 2006): It is a non-derivational theory, as opposed to many versions of generative theory; and it is a usage-based theory, rather than a formally-oriented theory.¹⁰

But if there is one thing that differentiates my lexical-constructional approach from other versions of Construction Grammar, it is probably its emphasis on the need for a detailed study of the interaction between verbs and constructions.¹¹

The reason for this emphasis comes from my wish to avoid falling into the pitfall of the “constructions save” attitude: “Once one posits a construction, then that is the end of the story. Problem solved.” But then, positing a resultative construction will be no better than positing an additional subcategorization frame or positing a new sense in the long run: It is simply labeling the observed phenomenon (“There is a resultative construction *because* there are resultative sentences”) and does not really contribute to the progress of Construction Grammar.

One may ask how my theory differs from other similar accounts found in e.g. Faulhaber (2011), Herbst (2014), and Perek (2015). The simple answer is

10. For discussion of these two theories, see also Iwata (2006c), Boas (2014), and Iwata (2014b). My lexical-constructional approach also shares many fundamental assumptions with Cognitive Grammar (Langacker 1987, 1991, 1999, 2008; Taylor 2002). For discussion of how Cognitive Grammar differs from Cognitive Construction Grammar and Radical Construction Grammar, see Langacker (2005a, 2005b), Goldberg (2006), and Iwata (2014b).

11. See Section 8.2 of Iwata (2008a) for further differences between my lexical-constructional account and Goldberg’s (1995) theory.

that these approaches are not at all similar to my lexical-constructional account. Faulhaber (2011) is mainly interested in arguing against the view that a verb's syntactic behavior can be deterministically predicted from aspects of its meaning. Herbst (2014) is mainly interested in the unification of the Valence theory and Construction Grammar. Crucially, Herbst accepts Goldberg's (1995) role-based account of the fusion of verbs and constructions, which seems to suggest that he does not realize that Goldberg's theory cannot really answer the second question ("Which resultatives are possible and which are not?"). And Perek (2015) is mainly interested in statistical analyses, although his analysis of the conative construction is detailed enough to be called "lexical-constructional" in the sense intended here.

One more thing to be noted at this point is that the analyses of particular resultatives to be advanced in what follows are not specifically designed to match the notations employed in a particular version of Frame Semantics, e.g. FrameNet (Fillmore et al. 2003, Ruppenhofer et al. 2016, among others). This is because FrameNet is *one* implementation, not *the* implementation, of the idea of Frame Semantics. From my viewpoint, FrameNet has been mainly concerned with identifying frame elements and establishing frame-to-frame relations, but not every aspect of frame-semantic knowledge can be captured in terms of role labels. When necessary, I will make use of drawings to help identify the frame-semantic knowledge relevant to the discussion at hand. A number of figures which will be employed from the next chapter on, therefore, are to be understood as indications of what type of world knowledge needs to be incorporated into theories of Frame Semantics.

1.4.3 Methodology

The attested data from the following three corpora are mainly used: The British National Corpus (=BNC), which is a 100 million word corpus of British English; the Wordbanks Corpus (=WB), which is a subcorpus of the Bank of English, consisting of 100 million words drawn from American, Australian, British, Canadian, and South African Englishes; and the Corpus of Contemporary American English (=COCA), which is a 450 million word corpus of American English (last accessed in March of 2019).¹²

I will not conduct a strictly statistical analysis of these corpus data, as the answers to the two questions are unlikely to be found by following a strictly statistical

12. The issue of dialectal variation of English resultatives has not been addressed in this study. The objective of this book is to find answers to the two questions, following, as it were, in the footsteps of Goldberg (1995) and Boas (2003). It in no way aims to be a book which addresses every aspect of English resultatives (which is actually an impossible task).

procedure. (Statistically verifying my proposed analysis might be possible, though, which is left to interested practitioners.) Rather, I aim to find answers that are intuitively-appealing, and my basic stance can be expressed as follows: This is what the data offers, and on the basis of this we can come to the following generalization about how it all works.¹³

Still another thing to note here is that only resultatives which are attested will be analyzed. Accordingly, a number of resultative sentences cited in the literature (particularly in the generative literature) will not be discussed, because the authenticity is in doubt. Thus the resultative in (38) will not be analyzed in this book, because not a single instance of *run the pavement thin* is found in the BNC, the WB or COCA. Even on the web, few, if any, attested instances have been found (save, of course, for the ones constructed by linguists!).¹⁴

(38) The joggers have *run* the pavement *thin*. (Carrier & Randall, 1992, p. 217)

This is also where my analysis of resultatives to be presented in this book significantly departs from Goldberg (1995) and Boas (2003).¹⁵

1.4.4 Terminology

At this point, let me clarify the terminology. In what follows, I will first consider resultatives based on transitive verbs, as exemplified in (39).

- (39) a. John hammered the metal flat.
b. He wiped the table clean.

In order to distinguish the transitivity of the resultative from the transitivity of the base verb, I will use an initial capital in referring to the former. So resultatives like (39) will be referred to as Transitive resultatives based on transitive verbs.

Similarly, resultatives like (40) will be referred to as Intransitive resultatives based on intransitive verbs.

(40) The kettle boiled dry.

Now, as noted above, there are also resultatives that express causing a change of location.

13. I am grateful to Jan-Ola Östman for suggesting this characterization of my stance.

14. This resultative can be straightforwardly accounted for by the proposed force-recipient account, though. See Iwata (2014c).

15. Boas (2003) distinguishes between conventionalized resultatives and non-conventionalized resultatives, but this distinction seems to be based on the results of his asking informants.

(41) He hit the ball into center field.

This type of resultative has been called by various terms: “spatial resultatives” (Jackendoff 1990), “caused-motion sentences” (Goldberg 1995), “resultatives” (Boas 2003), or “path resultatives” (Goldberg & Jackendoff 2004). But I will refer to this type of resultative as *resultative caused-motion sentences*. This is because this type of resultative is fundamentally a sub-type of caused-motion sentences, in that it expresses causing a change of location, rather than a simple change of location, as illustrated in the contrast between (42b) and (42a).

- (42) a. The ball went into center field. (simple motion sentence)
 b. He brought the book to her. (caused-motion sentence)

The reason for this terminology will be explained in more detail in Chapter 22.

1.5 Organization of the book

The objective of this book is to develop a force-recipient account of English resultatives that is *internally coherent*: If the proposed theory can account for quite a wide range of resultatives in a coherent way, then answers to the two questions will suggest themselves. In order to develop such a theory, therefore, various aspects of English resultatives will be addressed in the following discussion, which consists of nine parts.

Part I explains the reason why I adopt a force-recipient account, by pointing out that the status of the post-verbal NP is crucial in answering the question “Which resultatives are possible and which are not?” The proposed force-recipient account is then extended to further instances of non-subcategorized object cases in Part II. Part III demonstrates that by combining the proposed force-recipient account with a detailed frame-semantic analysis of verbs, a wide range of result phrases observed can be accounted for.

It is shown in Part IV, however, that the proposed force-recipient account as initially stated cannot handle ‘change verb’ resultatives as in *He cut the meat thin*. The proposed account is accordingly modified. It is further shown in Part V that adjectival result phrases and prepositional result phrases need to be differentiated. By incorporating the distinction between different types of result phrase, the proposed force-recipient account is completed.

Part VI addresses a couple of further issues surrounding adjectival result phrases. Part VII turns to other types of resultatives that cannot be accommodated by the force-recipient account, and Part VIII examines the putative resultatives cited in the literature. Finally, Part IX discusses the Unique Path Constraint, followed by Summary and Conclusion.

PART I

A force-recipient account

The status of the post-verbal NP

2.0 Introduction to Part I

As noted in Chapter 1, the central claim of this book is that a force-recipient account of English resultatives is most promising for addressing the question of which resultative are possible and which are not. It seems appropriate, therefore, to start by showing why I choose a force-recipient account, among all other analyses proposed in the literature so far.

Part I is organized as follows. In Chapter 2, in order to identify the constructional meaning of resultatives, I will start by comparing three possible paraphrases for Transitive resultatives (i.e. ‘X’s V-ing Y causes Y to become Z,’ ‘X causes Y to become Z by V-ing’ and ‘X acts on Y’), and show that only the ‘X acts on Y’ approach can overcome the difficulty which non-subcategorized object resultatives pose. The ‘X acts on Y’ approach is none other than a force-recipient account.

Then, Chapter 3 will examine what the proposed force-recipient account has to say about resultatives with subcategorized objects, as well as Intransitive resultatives based on intransitive verbs.

2.1 Toward the constructional meaning of resultatives¹⁶

2.1.1 Boas (2003) once again

As noted in Chapter 1, Boas (2003) is rather pessimistic about the possibility of answering the question “Which resultatives are possible and which are not?” Boas (2003) observes that *eat – clean* is possible as in (1b), with the semantics as stated in (1a).

- (1) a. Jack ate his food. As a result of his eating the food, the plate became clean.
- b. Jack ate his plate clean.

16. An earlier version of 2.1 and 2.2 was presented at a symposium at the 84th General Meeting of the English Literature Society in Japan, held at Senshu University, Ikuta campus (Iwata 2012). I’d like to thank the audience for their comments.

Boas (2003) goes on to point out, however, that (2b) and (3b) are not allowed, despite the fact that the intended meanings can be expressed in the same way, as shown in (2a) and (3a), respectively.

However, *open* and *load* do not allow the same kind of event conflation as *eat* in ([1]) although the caused event is a direct result of the causing event.

(Boas, 2003, p. 125)

- (2) a. Claire opened the door. As a result of her opening the door, the key broke.
 b. *Claire opened the key to pieces.
- (3) a. Brigid loaded the table with food. As a result of her loading the table with food, the table's legs became bent.
 b. *Brigid loaded the table's legs bent.

In constructional terms, this is tantamount to claiming that (2b) and (3b) are not allowed despite the fact that they are semantically compatible with the resultative construction.

Notice, however, that Boas' reasoning crucially rests on the assumption that the paraphrases in (1a), (2a), and (3a) correctly instantiate the constructional meaning of resultatives with non-subcategorized objects. In order to see whether English resultatives are really as idiosyncratic and unpredictable as Boas (2003) claims them to be, we have to first identify the correct constructional meaning of resultatives.

2.1.2 Three possible paraphrases

But when it comes to the issue of what is the correct resultative semantics, one is struck by the fact that actually there is no resultative semantics agreed upon by all scholars. In the literature there are three types of paraphrases for Transitive resultatives, so let us have a look at them in turn. The first one is initiated by Dowty (1979) and later adopted by Carrier & Randall (1993) and Randall (2010). Specifically, Dowty (1979) represents (4a) in terms of (4b).

- (4) a. He swept the floor clean.
 b. [[He swept the floor] CAUSE [BECOME [the floor is clean]]]

(Dowty, 1979, p. 93)

This is built on the idea of "event-causation": It is the event of his sweeping the floor, rather than the agent *he*, that causes the floor to become clean. For convenience's sake, this approach is referred to as an 'X's V-ing Y causes Y to become Z'

approach.¹⁷ According to this approach, (5a) and (6a) are paraphrased as (5b) and (6b), respectively.

- (5) a. He hammered the metal flat.
- b. His hammering the metal caused the metal to become flat.
- (6) a. He hit the ball into center field.
- b. His hitting the ball caused the ball to move into center field.

The second one, referred to as an ‘X causes Y to become Z’ approach, is adopted by Levin & Rapoport (1988), Jackendoff (1990), Goldberg (1995), and Goldberg & Jackendoff (2004), among many others. Unlike the first approach, this second approach is based on the idea of “agent-causation.” Thus Transitive resultatives and resultative caused-motion sentences are characterized in terms of the semantics of “X causes Y to become Z by V-ing Y” and “X causes Y to move Z by V-ing Y,” respectively. Thus (7a) and (8a) are paraphrased as (7b) and (8b), respectively.

- (7) a. He hammered the metal flat.
- b. He caused the metal to become flat by hammering the metal.
- (8) a. He hit the ball into center field.
- b. He caused the ball to move into center field by hitting the ball.

The third one, referred to as an ‘X acts on Y’ approach, is illustrated by Rappaport Hovav & Levin (2001), who maintain that resultatives are to be approached in terms of force-transmission, along the lines of Croft (1990, 1991). Croft (1990, 1991), in line with Talmy (2000a, 2000b), represents causation in terms of force-dynamic relations among participants. Thus *Sue broke the coconut for Greg with a hammer* receives a force-dynamic representation as follows:

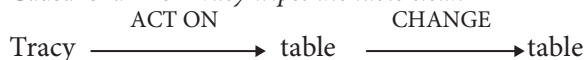
- (9) Sue broke the coconut for Greg with a hammer.
- Sue → hammer → coconut → Greg

Sue acts on the hammer (she grasps it), the hammer acts on the coconut (it impacts it), and the coconut “acts on” Greg (its breaking benefits him in some way).

Following up this idea of causal chain, Rappaport Hovav & Levin (2001) argue that in resultatives, the post-verbal NP is a recipient of a verbal force. Thus *Tracy wipes the table clean* receives a causal chain representation in (10), where the first segment represents a transmission of force originating in Tracy and directed towards the table, and the next segment represents the change of state in the table brought about by the wiping.

17. The paraphrase “He swept the floor, thereby causing the floor to become clean” also counts as an instance of the first approach.

- (10) Causal chain for
- Tracy wipes the table clean*



(Rappaport Hovav & Levin, 2001, p. 787)

This causal chain can be alternatively expressed as in (11), where “X acts on Y” corresponds to the first segment, and “Y becomes Z” to the second segment in the causal chain of (10).¹⁸

- (11) X acts on Y, and as a result Y becomes Z.

Some might feel that the three approaches are not actually different, and that they are little more than notational variants of essentially the same idea.¹⁹ Indeed, it makes little difference which approach one adopts, as long as one looks at resultatives with subcategorized objects. Thus (12) can be paraphrased as (13a), (13b), or (13c).

- (12) He wiped the table clean.

- (13) a. His wiping the table caused the table to become clean.
 b. He caused the table to become clean by wiping it.
 c. He wiped the table, and as a result it became clean.

Apparently, all the three paraphrases correctly capture the meaning of (12).

2.1.3 Problems with the first and second approaches

But the difference between the first and second approaches, on the one hand, and the third approach, on the other, becomes clear when one turns to resultatives with non-subcategorized objects. Consider (14).

- (14) He wiped the crumbs off the table.

According to the first and second approaches, (14) will have to be paraphrased with (15a) and (15b), respectively. But clearly this does not work. The correct paraphrase will be something like (16a) or (16b) instead.

- (15) a. *His wiping the crumbs caused the crumbs to move off the table.
 b. *He caused the crumbs to move off the table by wiping the crumbs.
- (16) a. His wiping the table caused the crumbs to move off the table.
 b. He caused the crumbs to move off the table by wiping the table.

18. This prose rendition will be modified later in Chapter 9.

19. Boas' (2003) paraphrasing, as shown in (1a)–(3a), might appear to be an instance of the third approach, but this is not the case, as will be shown shortly.

It is clear where the problem lies: With non-subcategorized object cases, the object of the verbal action is not identical with the post-verbal NP entity. It might be argued that this problem could be solved by having the object of the verbal action unspecified and letting it be pragmatically inferred. In other words, the identity of the object of the verbal action is not something which needs to be explicitly represented in the grammar, so the argument goes. This line of argument does not work, however. Even if the object of the verbal action is pragmatically plausible, non-subcategorized object resultatives are not always acceptable. And this is where sentences like (17) come in.

(17) *Brigid loaded the table's legs bent. (Boas, 2003, p. 125)

(17) is unacceptable, despite the fact that its paraphrases along the lines of the first and second approaches make perfect sense.

- (18) a. Brigid's loading the table with food caused the table's legs to become bent.
 b. Brigid caused the table's legs to become bent by loading the table with food.

Notice that this is exactly the problem with Boas' (2003) paraphrase noted at the outset.

- (19) Brigid loaded the table with food. As a result of her loading the table with food, the table's legs became bent.

So while Boas' paraphrasing as shown in (19) might appear to be an instance of the third approach, it is actually a variant of the first approach.

It goes without saying that (17) is far from being an isolated case. The same point can be made with further examples. Thus Carrier & Randall (1992) observe that while it is pragmatically plausible to interpret (20) with the object of the verbal action being distinct from the post-verbal NP, this interpretation is not possible:²⁰

20. Kratzer's (2005) following observation can be taken to prove essentially the same point:

Suppose my drinking all the water in the well causes your teapot to be dry. The reason is that, without any water left, there just isn't more tea to be had. (...) In such a situation, I did not drink your teapot dry. (Kratzer, 2005, p.196)

In other words, (ia) cannot be paraphrased either by (ib) or by (ic).

- (i) a. I drank the teapot dry.
 b. My drinking all the water in the well causes the teapot to become dry.
 c. I caused the teapot to become dry by drinking all the water in the well.

- (20) The bears frightened the hikers speechless. (Carrier & Randall, 1992, p. 187)

[(20)] should mean ‘The bears frightened someone or other, thereby causing the hikers to become speechless.’ ‘Someone or other’ might be the hikers, the park rangers, or anybody else. But, in fact, no indefinite object reading is possible in [(20)]. It *must* be the hikers who are frightened. (Carrier & Randall, 1992, p. 187)

Carrier & Randall further observe that (21a) is not allowed, despite the fact that its intended meaning can be plausibly expressed in the two paraphrases, as in (21b) and (21c).

- (21) a. *The bears frightened the campground empty.
(Carrier & Randall, 1992, p. 187)
- b. The bears’ frightening the hikers caused the campground to become empty.
- c. The bears caused the campground to become empty by frightening the hikers.

Similar examples can be easily found. Thus (22a), (22b), and (22c) are all unacceptable, although their corresponding paraphrases are again intelligible, as shown in (23) and (24).

- (22) a. *We cooled the people out of the room with the air-conditioner on too high.
(Rappaport Hovav, 2008, p. 23)
- b. *We dimmed the room empty. (Rappaport Hovav, 2008, p. 23)
- c. *Kim dimmed her eyes sore. (Beavers & Koontz-Garboden, 2012, p. 340)

‘X’s V-ing Y causes Y to become Z’ paraphrase

- (23) a. Our cooling the room with the air-conditioner on too high caused the people to go out of the room.
- b. Our dimming the lights in the house caused the room to become empty.
- c. Kim’s dimming the lights caused her eyes to become sore.

‘X causes Y to become Z by V-ing Y’ paraphrase

- (24) a. We caused the people to go out of the room by cooling the room with the air-conditioner on too high.
- b. We caused the room to become empty by dimming the lights in the house.
- c. Kim caused her eyes to become sore by dimming the lights.

As long as identifying the object of the verbal action is left to pragmatic inferencing alone, therefore, one cannot explain why all these sentences are not acceptable.

2.1.4 Force-recipient account

Let us now turn to the ‘X acts on Y’ account of Rappaport Hovav & Levin (2001), as illustrated in (25).

- (25) Causal chain for *Tracy wipes the table clean*
 ACT ON CHANGE
 Tracy → table → table

(Rappaport Hovav & Levin, 2001, p. 787)

What is significant about Rappaport Hovav & Levin’s (2001) analysis is that the post-verbal NP entity is a recipient of a force, besides being a host of predication. This can be more clearly expressed in (26).

- (26) X acts on Y, and as a result Y becomes Z.
 ↓ ↓
 force-recipient host of predication

The dual role of the post-verbal NP is not strictly the main reason why Rappaport Hovav & Levin (2001) adopt a causal chain analysis, but in my opinion identifying the post-verbal NP as being a force-recipient in addition to a host of predication turns out to be quite significant.

Remarkably, the ‘force-recipient’ account allows us to rule out cases like (27a) to (29a), which have been seen to be problematic for the first and second approaches. After all, the post-verbal NP is not a force-recipient, as indicated in their respective paraphrases in (27b) to (29b).

- (27) a. *The bears frightened the campground empty.
 b. The bears frightened the hikers, and as a result the campground became empty.
- (28) a. *We cooled the people out of the room with the air-conditioner on too high.
 b. We cooled the room with the air-conditioner on too high, and as a result the people went out of the room.
- (29) a. *We dimmed the room empty.
 b. We dimmed the lights in the house, and as a result the room became empty.

Thus the ‘force-recipient’ account is clearly advantageous over the ‘X’s V-ing (Y) causes Y to become Z’ approach and the ‘X causes Y to become Z by V-ing (Y)’ approach: Besides being plausible for subcategorized object cases (e.g. *hammer the*

metal flat), it rules out some non-subcategorized object cases like (27a) to (29a), which are unacceptable.

Consequently, we can now account for why (30a) and (30b) are not allowed. They are ill-formed simply because the post-verbal NP is not a force-recipient.

- (30) a. *Brigid loaded the table's legs bent.
 b. *Claire opened the key to pieces.
- (31) a. Brigid loaded the table with food, and as a result the table's legs became bent.
 b. Claire opened the door, and as a result the key broke.

So we do not have to resort to “conventionalization,” contra Boas (2003).

At the same time, there is a problem with the force-recipient account: namely, that there are still acceptable non-subcategorized object cases (e.g. *wipe the crumbs off the table*), where the post-verbal NP does not seem to be a force-recipient.²¹

- (32) a. He wiped the crumbs off the table.
 b. *He wiped the crumbs, and as a result the crumbs moved off the table.
 c. He wiped the table, and as a result the crumbs moved off the table.

Note, however, that this problem ceases to be a problem if the non-subcategorized object (the crumbs) can be shown to be a force-recipient. In that case, the ‘force-recipient’ account is definitely preferable. So it is worthwhile to reconsider the status of the non-subcategorized object from this viewpoint.

Before embarking on this task, however, it is necessary to make a slight modification on the causal chain representation. While Rappaport Hovav & Levin (2001) represent both ACT ON and CHANGE components uniformly by means of a solid arrow, the two components are rather different in nature: Transmission of force and change of state are so ontologically distinct that they cannot be collapsed into one.²² In what follows, therefore, I will represent the resultative and the resultative caused-motion as in (33) and (34).

- (33) Revised causal chain for *Tracy wipes the table clean*
- ACT ON CHANGE
- Tracy \longrightarrow table \longrightarrow clean

21. The same is true of *Jack ate his plate clean*, which is among the sentences cited at the beginning of this chapter. Why *eat - clean* is acceptable will be accounted for in Chapter 6.

22. In Chapter 9, this distinction will be seen as vitally important in properly representing the semantics of resultatives.

- (34) Revised causal chain for *He hit the ball into center field*
- ACT ON
CHANGE
- He —————→ ball —————→ into center field

The change component is expressed with a shaded, thick arrow, which indicates that a change of state or a change of location is effected.

2.2 How force is transmitted

2.2.1 *Wipe the crumbs off the table*

In order to see the post-verbal NP's status in (35) as regards force-transmission, it is first necessary to examine the scene evoked by *wipe*.

- (35) He wiped the crumbs off the table.

The verb *wipe* may appear transitively, with or without an accompanying *with* phrase, as in (36a) and (36b). Or *wipe* may take a direct object followed by a PP, as in (36c).

- (36) a. ... he *wiped* the counter, apparently deep in thought.
 b. She *wiped* his table *with a cloth*.
 c. He pulled a handkerchief out of his pocket and *wiped* it *over his face and forehead*. (all from WB)

By looking at these expressions, we can say that the verb meaning of *wipe* is something like “to move something over a surface while in continuous contact with the surface.” This means that three participants can be identified in a wiping scene: (1) the person who does the wiping action; (2) a surface; and (3) something which is moved over the surface (e.g. a towel). How the three participants are syntactically realized may be summarized as in (37).

- (37) a. NP₁ wipe NP₂. (variant 1)
 b. NP₁ wipe NP₂ with NP₃. (variant 2)
 c. NP₁ wipe NP₃ over NP₂. (variant 3)

This is still not sufficient, however. What should be emphasized here is that one does not engage in a wiping activity simply for the sake of stroking a surface. Rather, one typically wipes a surface in order to remove something from the surface. So there is a fourth participant: (4) something which is already on the surface (e.g. dirt, moisture). Consequently, a wiping scene can be depicted as in Figure 2.1.

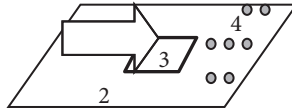


Figure 2.1 Wiping scene

The fourth participant appears overtly only with resultative caused-motion sentences, as in (38).

- (38) a. He wiped the crumbs off the table.
 b. NP_1 wipe NP_4 off NP_2 . (variant 4)

Thus we have four variants of *wipe*, as schematically illustrated in (37a), (37b), (37c), and (38b). Putting aside for the moment the issue of being resultatives or not, it seems safe to say that which of the four variants is chosen is a matter of profile shift in this conceptual scene.

2.2.2 Virtual pushing

Now by focusing our attention on this conceptual scene, we can discover a very interesting thing. If observed from the level of the table's surface, the wiping action of "wiping the crumbs off the table" can be depicted as in Figure 2.2.



Figure 2.2 Wipe the crumbs off the table

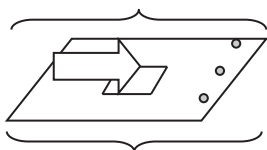
Seen in this way, wiping the crumbs off the table is practically the same as pushing the crumbs off the table.²³

This means that force is imparted simultaneously to both the table and the crumbs: One is virtually pushing the crumbs on the table, but since this pushing activity is done in continuous contact with a surface, one is exerting force onto the table as well.

In order to capture the dual nature of wiping (i.e. virtual pushing and virtual rubbing), let us represent these two facets of wiping as *WIPE-AS-PUSH* and *WIPE-AS-RUB*. By using these make-shift verbs, then, wiping can be described as a composite of two co-extensive actions: *do a 'WIPE-AS-RUB' action on the table* and *do a 'WIPE-AS-PUSH' action on the crumbs*, as shown in Figure 2.3.

23. Incidentally, note that (at least) Figure 2.1 and Figure 2.2 are necessary to represent the frame semantics of *wipe*. By comparing these figures with the mere list of participant roles <wiper wiped>, one may appreciate how poorly the latter represents the meaning of *wipe*.

He does a 'WIPE-AS-PUSH' action on the crumbs



He does a 'WIPE-AS-RUB' action on the table

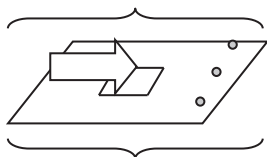
Figure 2.3 *Wipe the table*

Accordingly, the resultatives in (39) can be paraphrased as in (40).

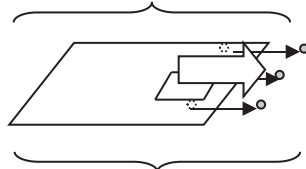
- (39) a. He wiped the crumbs off the table.
 b. He wiped the table clean.
- (40) a. He did a 'WIPE-AS-PUSH' action on the crumbs.
 + The crumbs moved off the table.
 b. He did a 'WIPE-AS-RUB' action on the table.
 + The table became clean.

(40a) and (40b) are alternatively described as in Figure 2.4.

He does a 'WIPE-AS-PUSH' action on the crumbs



The crumbs move off the table



He does a 'WIPE-AS-RUB' action on the table

The table becomes clean

Figure 2.4 *Wipe the table clean/wipe the crumbs off the table*

Consequently, the relationship between (39a) and (39b) may be captured by the two causal chains which proceed concurrently, as shown in (41).

- (41) Causal chains for (39a) and (39b)
- ```

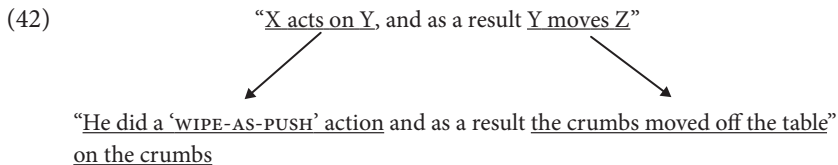
 graph LR
 He --> crumbs
 He --> table
 crumbs ==> off_the_table[off the table]
 table ==> clean

```

Both the table and the crumbs are force-recipients of the wiping activity, although they are situated on different causal chains.

(39a) can now be paraphrased as “He did a ‘WIPE-AS-PUSH’ action on the crumbs, and as a result the crumbs moved off the table.” Accordingly, the meaning of (39a) thus phrased clearly instantiates the semantics of the resultative

caused-motion construction under the ‘force-recipient’ account: “He did a ‘WIPE-AS-PUSH’ action on the crumbs” and “the crumbs moved off the table” instantiate “X acts on Y” and “Y moves Z,” respectively, as shown in (42).



Contrary to appearances, therefore, the crumbs indeed count as a force-recipient. It is just that this facet alone of wiping cannot be called ‘wiping.’ In other words, the unacceptability of (43a) is due to the fact that the fourth participant cannot stand as sole complement to *wipe*, but this is a matter of subcategorization. It in no way proves that the crumbs are not a force-recipient.

- (43) a. \*He wiped the crumbs.  
b. He wiped the table.

Rather than pose a problem, then, *wipe the crumbs off the table* actually supports the force-recipient account.

### 2.3 Further illustrations of virtual actions

So what is really crucial is whether the post-verbal NP denotes an entity that is a force-recipient in a conceptual scene, not whether it can stand as sole complement to the base verb.

Thus, when one looks at the verb in its “ordinary,” non-resultative sense, it may not be immediately obvious what counts as the force that is exerted onto the post-verbal NP entity and which is responsible for bringing about a result state. But once one identifies the relevant force (=virtual action), it is quite easy to see why the verb is accompanied by the result phrase it takes. Let us see three further cases.

#### 2.3.1 *Push oneself to one’s feet*

Consider (44).

- (44) He *pushed himself to his feet*. (BNC)

*Push oneself to one’s feet* is attested in both the BNC and the WB (12 instances and four instances, respectively). But what does it mean?

In dictionaries (e.g. COBUILD), such expressions as *get to one's feet* or *rise to one's feet* are cited as meaning “to stand up” without any explanation as to why they mean what they mean. In order to make sense of (44), then, it is first necessary to see what *to one's feet* means. Let us compare (45a) with (45b).

- (45) a. He jumped *to his feet*.  
 b. He jumped *over the fence*.

In (45b) the subject clearly shifts to a point in space which is different from the point at which he was located prior to jumping. In contrast, in (45a) the subject remains in the same location after the act of jumping.

What differentiates between the two cases is that while in (45b) the whole body undergoes the motion, in (45a) the upper part of the body is focused upon, leaving the lower part outside one's attention. Accordingly, it is possible to construe the whole body, minus the feet, as accomplishing the jumping act and thus standing on his feet as a result. Because the motion is internal to the entity, in (45a) the verb *jump* can be said to describe an *internalized translational motion*, as opposed to merely translational motion, as illustrated in (45b).<sup>24</sup>

Given this understanding of *to one's feet*, let us consider what action (44) describes. It is most likely that the subject person exerted a pushing force on parts of the chair or the bed which he had been sitting on or lying on. Such can be clearly seen in the following example:

- (46) Abruptly, he placed his hands on the arms of the big chair, *pushed himself to his feet*. [S. Gardner, *The Case of the Postponed Murder*, p. 27]

So it is the arms of the chair, rather than himself, that is the recipient of the pushing force. But the arms of the chair resist the pushing force, and the force applied is now converted into a force that effects the upward movement of his upper body, as depicted in Figure 2.5.

24. See Iwata (2004a) for details. This type of motion was originally referred to as *internal motion* in Iwata (2004a), but here the term *internalized translational motion* is employed so as to underscore its parallelism with translational motion. See also 11.1.3 for another instance of internalized translational motion.



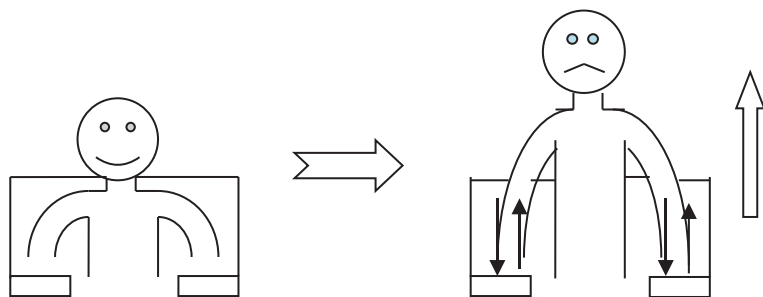


Figure 2.5 *He pushed himself to his feet*

Thus the pushing force which he applies to the arms of the chair ends up being transmitted back to (part of) his body. This sequence of force-transmissions may be expressed by the causal chain in (47).

- (47) Expanded causal chain for *He pushed the arms of the chair*  
 He  $\xrightarrow{\text{ACT ON}}$  the arms of the chair  $\longrightarrow$  he

By compressing the causal chain in (47) into a chain that originates with the subject entity and ends with himself, a causal chain for the whole sentence can be formed as in Figure 2.6.

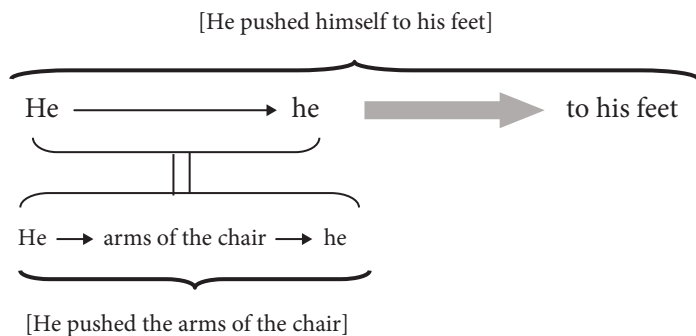


Figure 2.6 Causal chain for *He pushed himself to his feet*

Thus *himself* counts as a force-recipient, precisely because of the elasticity of causal chains. As is well-known in the literature, causal chains can be understood at whatever grain size deemed appropriate.

What is noteworthy about the characteristic or grammaticized structure of constructions that refer to causal chain in most familiar languages is that the entire medial portion of the sequence is gapped, with discontinuous windows solely on the initiatory agent and the finally resulting subevent. (Talmy, 2000a, p. 272)

When describing an event, one always chooses a grain size below which events are treated as invisible or irrelevant. For physical actions initiated by a person, muscular events and most intervening physical events are below the grain size, so that you can *break a window* with your fist or by hitting a long fly ball ... However, many verbs can be extended to yield a much more macroscopic perspective, such as in *Man reaches the moon* or *Napoleon invades Russia*.<sup>25</sup> (Pinker, 1989, p. 86)

Thus in identifying the force exerted onto the post-verbal NP entity, one needs to take into consideration the possibility that the medial portion of a sequence of force-transmissions may be gapped or a macroscopic perspective is taken.

### 2.3.2 *Laugh – off the stage*

Let us now turn to the resultative as exemplified in (48), which is among the resultatives often cited in the literature.

(48) The audience laughed the actors *out/off the stage*. (Rivière, 1982, p. 686)

Somewhat surprisingly, Rothstein (2004, 2011) argues that the resultative as in (48) is not causal. If Rothstein (2004, 2011) is right, then the resultative as in (48) will likely pose a challenge to our force-recipient account.<sup>26</sup> So let us see whether the resultative in (48) can be accommodated in our force-recipient account or not.

The data which Rothstein (2004, 2011) cites are invented ones, so let us turn to corpus data. In the corpora, similar expressions can be found with *off the stage* being replaced by *off the pitch*, *off the field*, *off the platform*, or *out of court*.

- (49) a. To his credit, Tony scored a hat-trick for the reserves on the same night that the first eleven were *jeered off the pitch*.  
 b. IPSWICH Town team manager Mick McGiven said he understood why the fans *booed* his side *off the field* after their worst display of the season at Portman Road last night.  
 c. ... at the National Union Conference a few days later, Leo Maxse was *booed off the platform*, and constituency parties everywhere passed resolutions regretting Balfour's decision.  
 d. The Canterbury monks were unprepared for these questions, stumbled in their answers, and were *laughed out of court*. (all from BNC)

25. It seems that such a macroscopic perspective can be taken when the subject entity is held as *ultimately responsible* for the occurrence of the event.

26. Strictly speaking, our proposed force-recipient account does not entail that resultatives are necessarily causal (in the narrow sense), as will be shown in Chapter 14. But this issue is put aside for the moment.

In fact, even path PPs not involving *off* or *out of* are found to occur with this type of resultative. Thus in the following attested data, *through*, *along*, and *into* appear.

- (50) a. At Great Bedwyn we stop for welcome break and *cheer the first of the singles through*.  
 b. He was *cheered along* by proud parents and his then girlfriend, Rosanne.  
 c. Over dinner he gave an enthralling account of the entire mission, their excitement at penetrating the Flow undetected, matched only by their relief at finding the way out, and of how on reaching home waters they had been *cheered into Wilhelmshaven* by the rest of the German fleet and flown to Berlin for a celebratory banquet with Hitler. (all from BNC)

So I tentatively refer to this type of resultative as a ‘laugh – off the stage’ type, for lack of a better term.

The verbs found to occur in the ‘laugh – off the stage’ type in the three corpora are summarized in Tables 2.1, 2.2, and 2.3.

**Table 2.1** BNC counts of ‘laugh – off the stage’ type expressions

|              | _____ NP PP |
|--------------|-------------|
| boo          | 12          |
| cheer        | 7           |
| laugh        | 6           |
| applaud      | 5           |
| jeer         | 3           |
| heckle, hiss | 1           |
| TOTAL        | 35          |

**Table 2.2** WB counts of ‘laugh – off the stage’ type expressions

|            | _____ NP PP |
|------------|-------------|
| applaud    | 21          |
| clap       | 3           |
| boo, laugh | 1           |
| TOTAL      | 26          |

**Table 2.3** COCA counts of 'laugh – off the stage' type expressions

|       | NP PP |
|-------|-------|
| boo   | 31    |
| laugh | 4     |
| hoot  | 2     |
| shout | 1     |
| TOTAL | 38    |

These verbs divide into two groups: The first group consists of *laugh*, *boo*, *hiss*, *hoot*, *jeer*, and *shout*, and is characterized by a negative evaluation of a performance. On the other hand, the second group consists of *applaud*, *cheer*, and *clap*. This group is characterized by a positive evaluation of a performance.

Rothstein (2004) makes essentially the same distinction, and claims that there is no causal relation between the activity and the result in the second group, but there is a causal implicature in the first. Actually, however, both of the two groups allow passivization. Thus passives are possible not only with verbs like *boo* and *jeer*, as in (51), but also with those like *applaud* and *clap*, as in (52).

(51) Meanwhile President Gorbachev has been *booed and jeered out of* Red Square today during the first May day parade not controlled by the Communist party. (BNC)

- (52) a. The South Africans were made to feel at home from the moment they entered Jamaica and they were clearly bewildered by the irony of their having been *applauded out* on to Sabina Park while Richie Richardson, the West Indies captain, was booed throughout the game. (BNC)
- b. It was amazing – I can't remember being *clapped off* by a whole stadium away from home, not even with the great Liverpool team. (WB)

In fact, in the following passive sentence, the subject is non-human.

(53) Usually horses are *applauded into the winners enclosure*. (BNC)

If a causal implicature arises with verbs like *laugh* or *boo*, but not with verbs like *clap* or *applaud*, as Rothstein (2004) claims, this is most likely because the person at whom words of derision are thrown feels so humiliated that he/she cannot help wanting to run away. But it does not seem very plausible to say that horses can properly distinguish words of a negative evaluation from those of a positive evaluation, at least not to the same extent as human beings.

This indicates that the post-verbal NP is a force-recipient, irrespective of whether the verb involves a positive evaluation or a negative evaluation. As a matter of fact, while loud voices with a negative evaluation may make people feel like

fleeing, those with a positive evaluation can be regarded as encouraging people to continue moving as the recipient of positive attention. Accordingly, both groups of the ‘laugh – off the stage’ type can be uniformly characterized in terms of the causal chain as in (54).

- (54) Causal chain for *They laughed him off the stage*  
 They  $\longrightarrow$  he  $\longrightarrow$  off the stage

Thus the ‘laugh – off the stage’ type of resultative can be accommodated by a force-recipient account.

Now notice that what is shared among all the verbs participating in this type of resultative (*boo, laugh, hiss, hoot, jeer, shout; applaud, cheer, clap*) is that loud voices (or sounds) by a large audience are directed at the singer/player, be it with a negatively evaluative attitude or a positively evaluative attitude. So it seems reasonable to suppose that loud voices (or sounds) by a large audience with some evaluative attitude are construed as having a kind of propelling force that drives the singer/players somewhere. In other words, just like a strong wind moves people somewhere, so loud voices are taken to move people somewhere.

Note further that under this construal, even sentences like (53) do not pose a problem: It is immaterial whether the loud voices are accompanied by a positive evaluation or a negative evaluation; rather, the loud voices themselves count as a metaphorical force driving horses somewhere.

Therefore, this is again a case of profile shift (though in a slightly different way than the case of *wipe the crumbs off the table*): An element inside the scene which is normally not grammatically relevant (i.e. loud voices and sounds) assumes the role of a verbal force responsible for bringing about a change of location.

### 2.3.3 Sneeze – out

Let us now turn to (55), which is Goldberg’s favorite example.<sup>27</sup>

- (55) Frank sneezed the napkin off the table. (Goldberg, 1995, p. 154)

This expression seems to aptly illustrate Goldberg’s (1995) thesis that it is not verbs but constructions that contribute the observed syntax and semantics, in that *sneeze* is ordinarily an intransitive verb and does not take a direct object.

27. Actually, Goldberg (1995) is not the first scholar to cite this type of resultative. The following example is found in Jackendoff (1990, p. 233).

- (i) Harry sneezed the handkerchief right across the room.



Specifically, in almost all the attested data, the post-verbal NP entity is propelled from inside the nose to the outside.<sup>29</sup>

(58) ... the horse *sneezed out* a golf ball-sized bung which landed at the feet of his startled owner. (WB)

- (59) a. There, the bacteria are teeming and ready to be *sneezed into the atmosphere* ...  
 b. I sucked up a great gust of air and I *sneezed it back out again, all over her*.  
 c. When my daughter was 5, she started coughing during dinner, then *sneezed a spaghetti noodle out of her nose*. (all from COCA)

(60) is the only attested data in the two corpora in which the post-verbal NP entity is not propelled from inside the nose. But obviously, (60) is about Allah's supernatural ability and therefore is not appropriate for illustrating Goldberg's point.

- (60) ... but not exactly with his Queen, who – if the truth be told – often asked Allah to *sneeze her into the afterworld* where her faith and loving kindness would be better appreciated. (COCA)

By contrast, in (55) the post-verbal NP entity is clearly outside one's body from the start. Accordingly, the force dynamics involved in the attested data is rather different from that in Goldberg's example, as described in Figure 2.7.

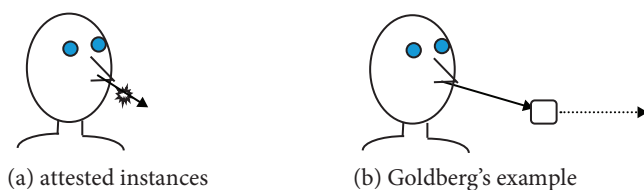


Figure 2.7 Different force dynamics between the two cases

Sneezing involves propulsion of air through the nose, and it is this propulsion of air that serves as the virtual action leading to the caused-motion. But the propulsion of air as entailed by sneezing is not typically construed as being strong enough to “blow a napkin off the table.” Hence the difficulty in making sense out of (55). Conceivably, this is why all the scholars mentioned above take a rather negative stance on the authenticity of Goldberg's data.

<sup>29</sup> (56a) does not strictly fit this characterization. But as mentioned in the previous footnote, this sentence is used in a very special setting and is far from a representative example. Still, (56a) is more similar to sentences like (57)–(59) than to (55) in that what is caused to move has been originally inside one's body, rather than outside the body.

It seems safe to conclude, therefore, that what counts as authentic data is sentences like (57), not those like (55). Accordingly, (61a) can be paraphrased as in (61b).

- (61) a. Navin *sneezed* blue pollen *onto his shirt*.  
 b. Navin did a ‘SNEEZE-AS-PUSH’ action on blue pollen, and as a result the pollen went onto his shirt.

This analysis is essentially the same as those seen so far: The propulsion of air, which is one aspect of sneezing that is normally “off-stage,” comes to the fore via a profile shift.

Note that this analysis is different from the analysis in Boas (2003), which holds that the caused-motion sentence with *sneeze* in (62b) comes from analogy to (62a).

- (62) a. Tom blew the napkin off the table.  
 b. Tom sneezed the napkin off the table. (Boas, 2003, p. 269)

Unlike Boas (2003), the target of the present analysis involves sentences like (57) to (59). These are attested in the corpora, and they are not to be analyzed in terms of analogy.

Incidentally, in discussing resultative caused-motion sentences with *sneeze*, Goldberg initially cited invented examples, which are of the type as described in Figure 2.7 (b) (Goldberg (1995, p. 9, p. 29, p. 152, p. 161); Goldberg (1998, p. 204)). The analysis in Goldberg (2004) is also based on invented examples, but the examples cited therein are different in nature. Goldberg (2004) observes that *sneeze* may appear in the implicit theme construction as in (63a), along with a number of other verbs like *blow* as in (63b) and *spit* as in (63c).

- (63) a. Pat sneezed onto the computer screen.  
 b. Chris blew into the paper bag.  
 c. Don’t spit into the wind. (Goldberg, 2004, p. 20)

Goldberg (2004) further notes that the theme may be made explicit in the corresponding caused-motion sentences in (64).

- (64) a. Pat sneezed mucus onto the computer screen.  
 b. Chris blew air into the paper bag.  
 c. Don’t spit gum into the wind. (Goldberg, 2004, p. 21)

This can be taken to indicate that the resultative caused-motion sentence with *sneeze* in (64a) is nothing other than the sentence which makes explicit the theme that is implicit in (63a). This seems to be on the right track, as implicit theme sentences with *sneeze* as exemplified in (65) indeed describe a scene as shown in



Figure 2.8, which is essentially the same as that in Figure 2.7 (a) except that no specific entity is asserted to be propelled out of the nose.

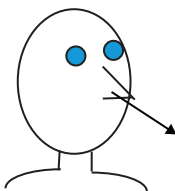


Figure 2.8 Sneezing without a foreign substance in the nose

- (65) I got a little too close to one of the boys and he *sneezed straight into my hair* shouting “gruesome perfume.” (WB)

Note, however, that sentences like (55) do not have corresponding implicit theme sentences. Thus (66b) cannot possibly be interpreted as the implicit theme sentence corresponding to (66a).

- (66) a. Frank sneezed the napkin off the table.  
b. #Frank sneezed off the table.

So Goldberg cannot justify Goldberg’s (1995) claim about caused-motion sentences with *sneeze* by referring to her analysis in Goldberg (2004). After all, the cited data are entirely different.

## 2.4 Discourse patient?

Let us get back to our main point. The crucial fact of the post-verbal NP being a recipient of verbal force is very significant since it holds the potential for shedding new light on an account of resultatives. But I am not the first person to make an observation to that effect. Essentially the same point has already been made by Jackendoff (1990). According to Jackendoff, the post-verbal NP must be a Patient not only with subcategorized object cases but also with non-subcategorized object cases like (67) and (68).

- (67) a. Fred cooked the stove black.  
b. \*Fred cooked the stove.  
c. Fred cooked on the stove.
- (68) a. Bill shaved his razor dull.  
b. \*Bill shaved his razor.  
c. Bill shaved with his razor.

(Jackendoff, 1990, p. 227)

Jackendoff demonstrates this point by using his “What X did to Y” test: Thus like subcategorized object cases, non-subcategorized object cases pass this test, as in (69).

- (69) a. What Fred did to the stove was cook on it.  
 b. What Bill did to his razor was shave with it. (Jackendoff, 1990, p. 230)

But Jackendoff also notes that there is a difference between subcategorized object cases and non-subcategorized object cases.

In [(69a) and (69b)], the Patients are probably not “grammatical Patients” – that is, Patienthood is not licensed by the verb itself. Rather, these NPs are Patients by virtue of discourse or pragmatics: a story is generated in which the Actor somehow adversely affects the Patient. Evidently, then, either grammatical or discourse Patienthood in the means clause is acceptable for a resultative.

(Jackendoff, 1990, p. 230)

Jackendoff further observes that if the Patienthood is less plausible, the resultative is less plausible as well, citing examples like (70) and (71).

- (70) a. <sup>?\*</sup>Troilus and Cressida kiss most audiences squirmy.  
 b. <sup>?\*</sup>What Troilus and Cressida did to their audiences was kiss.  
 (71) a. \*Max received the letter flat.  
 b. \*What Max did to the letter was receive it. (Jackendoff, 1990, p. 230)

What Jackendoff (1990) means by Patient is clearly a force-recipient in my account (cf. Rappaport Hovav & Levin 2001).<sup>30</sup> It might be argued, then, that Jackendoff (1990) has already made an observation which amounts to my ‘force-recipient’ account.

But as amply demonstrated in the analysis of *wipe the crumbs off the table*, both subcategorized and non-subcategorized objects are force-recipients by virtue of the verb meaning, and what differentiates between the subcategorized object case (*wipe the table clean*) and the non-subcategorized object case (*wipe the crumbs off the table*) is a profile shift. In this sense, patienthood IS licensed by the verb meaning, contrary to Jackendoff (1990).

30. In fact, (67a) and (68a) could be straightforwardly accommodated in my force-recipient account by clipping or extending the relevant causal chains, in a way similar to *push oneself to one’s feet*. But since neither *cook – black* nor *shave – dull* is attested in the BNC or in the WB, I choose not to analyze them.

## 2.5 Conclusion

This chapter has shown why a force-recipient account is promising. Starting with the three possible paraphrases for Transitive resultatives (i.e. ‘X’s V-ing Y causes Y to become Z’, ‘X causes Y to become Z by V-ing’ and ‘X acts on Y’), the third paraphrase alone has been shown to be capable of handling non-subcategorized object cases (e.g. *He wiped the crumbs off the table*). Accordingly, a force-recipient account, which develops out of the ‘X acts on Y’ approach, has turned out to be feasible for non-subcategorized object cases, if only we allow for “virtual actions.”<sup>31</sup>

Now we can account for the ill-formedness of resultatives like *\*load the table’s legs bent* without resorting to “conventionalization.” This suggests that our force-recipient account promises to properly distinguish well-formed resultatives with non-subcategorized objects from ill-formed ones on a principled basis.

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31. As noted in Section 2.1.2, the idea that the post-verbal NP is a force-recipient has already been put forth by Croft (1990, 1991) and Rappaport Hovav & Levin (2001). But they simply assume it without clarifying exactly what kind of force the post-verbal NP receives. In contrast, the present account reveals via case studies that force-transmission promises to be far more essential to accounts of resultatives than might appear at first sight. The consequences of this difference will be discussed in Chapter 17.

## Force transmission as essential to resultatives

### 3.0 Introduction

So far our discussion has focused almost exclusively on resultatives with non-subcategorized objects. In this chapter we will see what the proposed force-recipient account has to say about resultatives with subcategorized objects like (1).

- (1) a. Carefully she *wiped it clean*.
- b. If the strip becomes curled when you cut it, put it on a hard flat surface and *hammer it flat*. (both from BNC)

Additionally, there are also Intransitive resultatives as in (2).

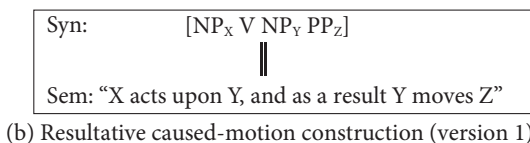
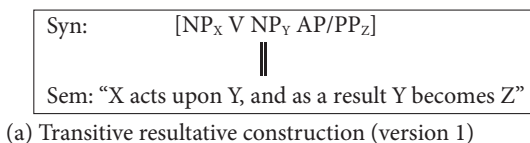
- (2) a. SAVE yourself a steam-filled kitchen and the risk of pans *boiling dry* by microwaving your Christmas pudding
- b. With a spark and a hiss the moth fell, senseless, into the grid, where it flamed momentarily, its wings curling, vanishing in an instant, its body *cooking to a dark cinder*. (both from BNC)

It is necessary to examine whether and how the proposed account can be extended to these Intransitive resultatives, which do not have post-verbal NPs in the first place.

### 3.1 Subcategorized object cases

#### 3.1.1 Post-verbal NP as force-recipient

In the last chapter, we have demonstrated that non-subcategorized objects of resultatives are force-recipients. Accordingly, we can formulate our force-recipient account by means of the two constructions in Figure 3.1, where the designated transitive syntactic frames are paired with identifiable semantics, incorporating the idea that the post-verbal NP be a force-recipient.



**Figure 3.1** Transitive resultative and resultative caused-motion constructions (version 1)

Thus our force-recipient account provides a unified account of both subcategorized object cases and non-subcategorized object cases as exemplified in (3).

- (3) a. He wiped the table clean. (resultative)  
 b. He wiped the crumbs off the table. (resultative caused-motion)

It might appear trivial that the subcategorized object is a force-recipient. Notice, however, that not all direct objects express a force-recipient (Tsunoda 1985, Levin 1999). One such case comes from path-incorporating motion verbs as exemplified in (4) (Gruber 1976, Jackendoff 1983, 1990, Talmy 1985, 2000a, 2000b).

- (4) a. He entered the room.  
 b. The train passed the station.  
 c. He crossed the street.

With these verbs, the direct object is not acted upon, as witnessed by the “What X did to Y” test.

- (5) a. ?\* What he did to the room was enter it.  
 b. \* What the train did to the station was pass it.  
 c. ?\* What he did to the street was cross it. (Iwata, 2004b, p. 274)

Rather the direct object expresses a landmark, which is confirmed by the paraphrases of *enter*, *pass* and *cross* as ‘go into’, ‘go via near’, and ‘go across’, respectively (Jackendoff 1990).

Accordingly, our force-recipient account predicts that resultatives cannot be formed from verbs like *cross*. This prediction is in fact borne out. Halliday (1994) observes that *trample – flat* is acceptable but *cross – flat* is not.

- (6) a. They trampled the field flat.  
 b. \*They crossed the field flat. (Halliday, 1994, p. 148)

This contrast is corroborated by corpus data: *trample – flat* is attested in the BNC, as shown in (7), but *cross – flat* is not in either the BNC or the WB.

- (7) Then Sharpe saw the far crops being *trampled flat* and he knew that each patch of collapsing rye betrayed the advance of a French column. (BNC)

But why the contrast? In both (6a) and (6b), the field may well be beaten by the people's feet, so *cross the field flat* should be as acceptable as *trample the field flat*.<sup>32</sup>

This is because the verb *cross* in itself does not lexically encode a force exerted onto the direct object entity. This is confirmed by dictionary definitions. Thus the COBUILD defines *trample* and *cross* as follows:

*trample*: If someone tramples something or tramples on it, they *tread heavily and carelessly on it and damage it*.

*cross*: If you cross something such as a room, a road, or an area of land or water, you move or travel to the other side of it. (COBUILD, emphasis mine)

As these definitions make clear, beating the ground with one's feet is lexically specified in *trample* but not in *cross*. That is, *trample*, but not *cross*, lexically involves a beating force.

This confirms that the identification of a post-verbal NP as a force-recipient is a significant generalization about English resultatives.

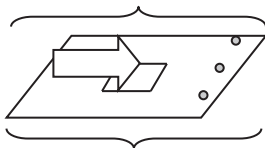
### 3.1.2 Types of force

Nevertheless it is not sufficient for the post-verbal NP to simply receive a force. More precisely, the post-verbal NP entity must receive an *appropriate type of force for bringing about a change*. This point may be appreciated by examining a couple of cases.

Let us begin with *wipe – clean* once again. As seen in Chapter 2, what is crucial is that a 'WIPE-AS-RUB' force is directly responsible for bringing about the change of state in question, as depicted in Figure 3.2.

32. This is tantamount to saying that the field being beaten by the people's feet is among the off-stage information of *cross*, and therefore should be available for recruitment for overt expression, according to Boas' (2003) theory. This issue will be discussed in Chapter 25.

He does a 'WIPE-AS-PUSH' action on the crumbs



He does a 'WIPE-AS-RUB' action on the table

Figure 3.2 *Wipe the table*

Note that bringing about the state change of becoming clean by wiping the table can be said to be almost a matter of simple physics: If a surface is rubbed, something on the surface will be removed, unless it stubbornly sticks to the position.<sup>33</sup> In other words, the change of state is nearly an automatic consequence of the force being applied.

Now, not only *wipe* but semantically similar verbs like *sweep*, *scrub*, or *scrape* may be accompanied by the result phrase *clean*.

- (8) a. Tom had *swept* the room *clean* and had fixed a lamp to a hook on the white plaster ceiling.  
 b. The roads were all *scrubbed clean* by the frost and the snow.  
 c. The two of them *scraped* their dishes *clean*. (all from BNC)

This is precisely because verbs like *sweep*, *scrub*, etc. all involve a rubbing force as their core meanings. Accordingly, the post-verbal NP receives a rubbing force in all these instances.

Basically the same thing can be said of other resultatives. Thus there are a number of verbs that are found to occur in 'V – smooth,' as summarized in Tables 3.1 and 3.2 (e.g. *rub*, *polish*, *file*), and all these verbs involve a rubbing force.

Table 3.1 BNC counts of 'V NP *smooth*'

|            | _____ NP <i>smooth</i> |
|------------|------------------------|
| rub        | 8                      |
| polish     | 6                      |
| file, sand | 5                      |
| grind      | 2                      |
| roll       | 1                      |
| TOTAL      | 27                     |

33. In force-dynamic terms, this means that a change occurs when an Agonist with a tendency to rest is overcome and forced to move by a stronger Antagonist (Talmy 2000a).

**Table 3.2** WB counts of ‘V NP *smooth*’

|              | _____ NP <i>smooth</i> |
|--------------|------------------------|
| rub          | 3                      |
| buff, polish | 1                      |
| TOTAL        | 5                      |

- (9) a. By the time he had *rubbed* the surface *smooth*, stopping periodically for a chat with Jos, his shoulder was aching.
- b. A thick tapestry hung just above the small canopied fireplace, the floor had been *polished smooth*, and the great bed was covered by a gold-tasselled counterpane. (both from BNC)

Similarly with ‘V – flat.’ Almost all of the verbs listed in Tables 3.3 and 3.4 (e.g. *press*, *squash*, *hammer*) involve a pressing force, which is likely to cause something to become flat.

**Table 3.3** BNC counts of ‘V NP *flat*’

|                                     | _____ NP <i>flat</i> |
|-------------------------------------|----------------------|
| press                               | 17                   |
| squash                              | 5                    |
| hammer, fling                       | 3                    |
| roll                                | 2                    |
| pound, beat, slam, crush, dry, suck | 1                    |
| TOTAL                               | 36                   |

**Table 3.4** WB counts of ‘V NP *flat*’

|                 | _____ NP <i>flat</i> |
|-----------------|----------------------|
| press           | 10                   |
| stretch         | 5                    |
| roll, squash    | 4                    |
| crush           | 3                    |
| beat, dry, slam | 1                    |
| TOTAL           | 29                   |

- (10) a. Press it *flat* with the seam you have sewn down the back of the head of the puppet.
- b. If the strip becomes curled when you cut it, put it on a hard flat surface and *hammer* it *flat*. (both from BNC)



To recapitulate, with these resultatives, the post-verbal NP receives the relevant type of force involved in the verb meaning.

### 3.2 Verbal force as relativized to the result state

Significantly, note in this connection that the kind of force appropriate differs depending upon the result state to be achieved. To appreciate this point, let us consider the following resultatives. The result phrases *unconscious* and *senseless* may accompany verbs like *knock* and *beat* as in (11).

- (11) a. He was *knocked unconscious*.  
 b. ... until he eventually *beat her senseless* and killed her. (both from BNC)

In fact, practically all the verbs found to take *unconscious* and *senseless* as result phrases in the two corpora are verbs of strong impact like *knock*, *beat*, or *kick*. The range of verbs found to occur with *unconscious* in the BNC and the WB is summarized in Tables 3.5 and 3.6, respectively. And the range of verbs found to occur with *senseless* in the two corpora is summarized in Tables 3.7 and 3.8.

**Table 3.5** BNC counts of 'V – unconscious'

|              | _____ NP unconscious |
|--------------|----------------------|
| knock        | 45                   |
| beat         | 11                   |
| kick         | 3                    |
| batter       | 2                    |
| strike, club | 1                    |
| TOTAL        | 63                   |

**Table 3.6** WB counts of 'V – unconscious'

|        | _____ NP unconscious |
|--------|----------------------|
| knock  | 79                   |
| beat   | 21                   |
| kick   | 7                    |
| batter | 2                    |
| strike | 1                    |
| TOTAL  | 110                  |

Table 3.7 BNC counts of 'V – senseless'

|            | _____ NP senseless |
|------------|--------------------|
| knock      | 10                 |
| beat       | 9                  |
| club       | 3                  |
| kick, flog | 2                  |
| shag       | 1                  |
| TOTAL      | 27                 |

Table 3.8 WB counts of 'V – senseless'

|            | _____ NP senseless |
|------------|--------------------|
| beat       | 14                 |
| knock      | 8                  |
| kick       | 5                  |
| club, shag | 1                  |

When we turn to resultatives involving a different result phrase, though, things are entirely different. Thus *to sleep* may accompany such verbs as *rock* and *soothe* as in (12).

- (12) a. Civilians sat on benches joking and playing cards and *rocking* screaming babies *to sleep*.  
 b. ... when he had been discovered on his bed, quaking and sick with bellyaches and headaches, and been *soothed to sleep* by Cadfael's stomachics and syrups. (both from BNC)

Both these verbs involve only a mild force. As a matter of fact, *to sleep* generally occurs with verbs involving a mild force, as confirmed by Tables 3.9 and 3.10, where the range of verbs found to occur with *to sleep* as a result phrase in the two corpora is summarized.

Table 3.9 BNC counts of 'V – to sleep'

|        | _____ NP to sleep |
|--------|-------------------|
| lull   | 11                |
| rock   | 8                 |
| sing   | 5                 |
| soothe | 3                 |
| cradle | 1                 |

Table 3.10 WB counts of 'V – to sleep'

|      | _____ NP to sleep |
|------|-------------------|
| lull | 8                 |
| rock | 6                 |
| sing | 3                 |
| drug | 1                 |

In short, *to sleep* as a result phrase appears only with verbs involving a mild force.<sup>34</sup>

Now we have a third pattern. The adjective *awake* may occur as a result phrase as in (13).

- (13) He *shook* her *awake*. (BNC)

In the two corpora, the following range of verbs is found to take *awake* as a result phrase, as indicated in Tables 3.11 and 3.12.

Table 3.11 BNC counts of 'V – awake'

|                                          | _____ NP awake |
|------------------------------------------|----------------|
| shake                                    | 31             |
| jerk                                     | 5              |
| nudge                                    | 4              |
| prod, shock                              | 3              |
| kick, jolt, startle                      | 2              |
| rock, scream, spear, stretch, slap, drum | 1              |
| TOTAL                                    | 58             |

Table 3.12 WB counts of 'V – awake'

|       | _____ NP awake |
|-------|----------------|
| shake | 14             |
| jerk  | 3              |
| nudge | 1              |
| TOTAL | 18             |

Again, verbs involving a violent force (e.g. *kick, blast, whip, spank*) are attested, apparently similar to the cases of *unconscious* and *senseless* as seen above. However, *awake* is also found to occur with verbs involving a slight force (e.g. *touch, kiss*), as shown in the following.

34. This point will be discussed in greater detail in 14.2.

- (14) a. So I get nervous until Father *pats* me *awake*.  
 b. The sound of his breath reassured her and she turned to *kiss* him  
*awake* ...  
 c. At 2: 35, as Fielder slept, Driben *tapped* Walker *awake*. (all from COCA)
- (15) For the first time in over a week I slept through the night, finally staggering out of bed when Peppy *nosed* me *awake* a little after eight.  
 [S. Paretsky, *Total Recall*, p. 324]

This is because one can be not only “half awake” as in (17) but also “fully awake” as in (16).

- (16) a. The sleep vanished, and she was *fully awake* at once.  
 b. And suddenly she was *wide awake*. (both from BNC)
- (17) a. He was only *half awake*.  
 b. It was one of those dreams that are more like daydreams; I have them when I am *half awake and half asleep* ... (both from BNC)

Only a slight force is sufficient to cause someone to become half awake, but a strong force is likely required to cause someone to become fully awake. This is why *awake* may occur not only with verbs involving a violent force but also with those involving a slight force.<sup>35</sup>

To recapitulate, *unconscious* and *senseless* appear with verbs involving a rather violent force (e.g. *beat*, *kick*); *to sleep* with verbs involving a mild force (e.g. *rock*, *soothe*); and *awake* both with verbs involving a violent force (e.g. *shake*, *jerk*) and those involving a slight force (e.g. *pat*, *kiss*). Thus the kind of force required of the verb differs depending upon the result state to be achieved.

Note that this is another way of saying that it is futile to attempt to come across a single constraint on the kind of force which all resultatives are subject to. But this is exactly what previous analyses have tended to do. Thus since Simpson (1983, p. 146) stated that in resultatives “the verb must necessarily affect the object” by citing (18), it has been generally believed that only verbs involving a rather strong force can be turned into resultatives.

- (18) \*Midas *touched* the tree *gold/into gold*. (Simpson, 1983, p. 146)

Note, however, that the ill-formedness of (18) does not mean that a touching force is too weak to bring about any change of state at all. As seen above, only a slight force is sufficient to cause someone to become awake. In fact, it is not difficult to find attested instances of *touch* – *awake* on the web.

35. A consequence of this fact will be discussed in 15.3.2.

- (19) a. ... which was when my wife *touched me awake*.  
 ([http://www.gettysburgreview.com/selections/past\\_selections/?year=2006](http://www.gettysburgreview.com/selections/past_selections/?year=2006))  
 b. I was *touched awake* by the first sunlight.  
 ([http://hiddenuances.com/blog/?page\\_id=191](http://hiddenuances.com/blog/?page_id=191))

On the other hand, *touch* cannot be accompanied by *unconscious* or *senseless* as a result phrase.

- (20) \*He touched her {unconscious/senseless}.

In these cases, it is certainly correct to say that a touching force is too weak to bring about the intended result states.

Thus the ill-formedness of (18) is due to the fact that a touching force is simply not appropriate for turning something into gold. The intended resultative \**touch – gold/into gold* lacks the “simple physics” feel that is found in *wipe – clean*.

Thus the putative affectedness constraint looks plausible only when one looks at resultatives involving transmission of a rather intense force.

### 3.3 Non-subcategorized object cases again

#### 3.3.1 So-called “unaccusative/unergative” distinction

So far, we have seen the close correlation between the kind of verbal force and the result state for subcategorized object cases. It goes without saying that the same is true of non-subcategorized object cases. Accordingly, we can expect to account for why certain resultatives with non-subcategorized objects are ill-formed from this viewpoint. Let us first consider the ill-formedness of (21), which is cited by Levin & Rappaport Hovav (1995) in relation to the Unaccusative Hypothesis.

- (21) \*During the spring thaw, the boulders rolled the hillside bare.  
 (Levin & Rappaport Hovav, 1995, p. 209)

(21) is intended as a resultative sentence, where *roll* is followed by a non-subcategorized object (*the hillside*). This sentence is unacceptable, despite the fact that the causal relation could be discerned between the rolling event and the result state of being bare, as in (22).

- (22) The boulders rolled, and as a result the hillside became bare.

Levin & Rappaport Hovav (1995, p. 209) claim that this is because “the unaccusative verb cannot assign Case to its nonsubcategorized object.”

However, the unacceptability of (21) can be accounted for without resort to the Unaccusative Hypothesis, which has already been seriously challenged by a number of scholars, most notably Kuno & Takami (2004). As should be clear by now, what is required of a well-formed resultative is that a post-verbal NP receive an appropriate type of verbal force for bringing about the result state in question. So first we should determine what kind of force *roll* exerts on its post-verbal NP.

In this connection, notice that the verb *roll* may appear both in ‘V – smooth’ as in (23a) and in ‘V – flat’ as in (23b).

- (23) a. It’s like a parking lot out there, *rolled smooth* by rocks and wave action.  
 b. In three hours we managed to get the contractors to build an earth ramp, *roll it flat*, cover it with gravel ... (both from BNC)

This might appear to be surprising, considering that in the literature it is well-known that *roll* may simply convey the turning over of a round object without implicating a change of location, as in (24) (Pinker 1989).

- (24) a. The ball rolled.  
 b. John rolled the ball.

As seen above, *smooth* and *flat* as result phrases appear with verbs involving a rubbing force (e.g. *rub*, *polish*) and a pressing force (e.g. *press*, *squash*), respectively. Clearly, however, *roll* as instantiated in (24) involves neither a pressing force nor a rubbing force.

On closer examination, however, it turns out that a pressing force and a rubbing force are indeed involved in the meaning of *roll*. In (23a) and (23b), what appears in direct object position (active) or subject position (passive) is a flat entity, which cannot possibly undergo the turning-over motion characteristic of *roll*, as exemplified in (24). Therefore, while the sentences in (23a) and (23b) may appear to be instances of non-subcategorized object case, actually they are not. Note that a flat entity may appear in direct object position of *roll* even with a non-resultative meaning, as seen in (25).

- (25) a. When you’ve got it reasonably level, *roll* the surface *with a garden roller* filling in any hollows that appear.  
 b. *Roll* out the bread lightly *with a rolling pin* after cutting off the crusts and spread thickly with the cheese filling. (both from BNC)

Here *roll* expresses a different (though related) sense than the *roll* as exemplified in (24). A rolling entity exerts a pressing force on a surface, as described in Figure 3.3 (Iwata (2002, p. 77)).

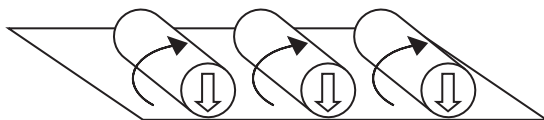


Figure 3.3 'Press'-rolling

Notice that *roll* in the 'press' sense expresses a motion while in continuous contact with a surface. Notice further that the force exerted on the surface is the very force that causes the roller to roll. This means that force is imparted simultaneously to both the roller and the field. Significantly, the force imparted to the field has a dual role: pressing the surface and rubbing the surface. It follows, therefore, that both 'press' and 'rub' components are present in the semantics of 'press' *roll*, after all.

It is now quite straightforward to explain why the verb *roll* may appear both in 'V – flat' and in 'V – smooth.' There are (at least) two facets to 'press' *roll*, pressing and rubbing. By representing these two facets by means of 'ROLL-AS-PRESS' and 'ROLL-AS-RUB,' then, (26a) and (27a) can be paraphrased as (26b) and (27b), respectively.

- (26) a. They rolled the field flat.  
 b. They did a 'ROLL-AS-PRESS' action on the field, and as a result the field became flat.
- (27) a. Rocks and wave action rolled the coral reef smooth.  
 b. Rocks and wave action did a 'ROLL-AS-RUB' action on the coral reef, and as a result the coral reef became smooth.

With the verb meaning of *roll* thus understood, let us return to (21), repeated here as (28).

- (28) \*During the spring thaw, the boulders rolled the hillside bare.  
 (Levin & Rappaport Hovav, 1995, p. 209)

- (29) The boulders rolled, and as a result the hillside became bare.

Significantly, in the situation intended to be described by (28), as paraphrased in (29), the hillside may become bare as a result of the boulders rolling off as described in Figure 3.4, but not as a result of a verbal force applied to the hillside.

Rather, in order for *bare* to appear as a result phrase, the verb must involve the sense of removal. In the BNC I have so far found 26 instances of resultatives with *bare*, almost all of which are with the verb *strip*, as summarized in Table 3.13; and in the WB all of the 31 instances of resultative with *bare* are based on *strip*, as summarized in Table 3.14.

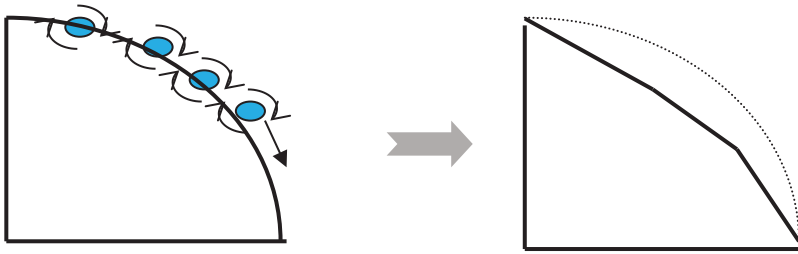


Figure 3.4 The hillside becomes bare as a result of the boulders' rolling

Table 3.13 BNC counts of 'V NP bare'

|       | _____ NP bare |
|-------|---------------|
| strip | 25            |
| eat   | 1             |
| TOTAL | 26            |

Table 3.14 WB counts of 'V NP bare'

|       | _____ NP bare |
|-------|---------------|
| strip | 31            |
| TOTAL | 31            |

- (30) a. All trees are *stripped bare*, and the sky turns to mud, clouds fall to the ground breathlessly churning.  
 b. Shops in Manila have been *stripped bare* in panic buying ...  
 (both from BNC)

(31) is the only instance of *eat – bare* found in the BNC. Clearly, *eat* is understood in its removal sense.<sup>36</sup>

- (31) In a recent widespread drought, when all pastures were *eaten bare* and it was very difficult to obtain hay ...  
 (BNC)

In short, only verbs involving the sense of removing something from a place may be acceptably followed by the result phrase *bare*. The lexical meaning of *roll* may involve a pressing force and a rubbing force, as seen above, but not a removing force.

Thus the unacceptability of (28) can be explained without any recourse to the Unaccusative Hypothesis. It is ill-formed precisely because the post-verbal NP entity does not receive an appropriate type of force for the result state to ensue.

In fact, other instances of unacceptable resultatives cited in the literature in the discussion of the so-called “unaccusative/unergative” distinction can be

36. This aspect of *eat* will be discussed in 6.1.4.



accounted for along the same lines. Thus the sentences in (32) are unacceptable, despite the fact that there is nothing wrong about the intended meanings, as seen in the paraphrases in (33).

- (32) a. \*The bomb exploded the watermelons into the air.  
 b. \*The ice melted the floor clean.  
 c. \*The water evaporated the pan dry.

(Rappaport Hovav & Levin, 2001, p. 769)

- (33) a. The bomb exploded, and as a result the watermelons went into the air.  
 b. The ice melted, and as a result the floor became clean.  
 c. The water evaporated, and as a result the pan became dry.

But the post-verbal NP entities are not recipients of the verbal forces concerned. Rather, it is the subject entities that are the direct recipients of the exploding force, the melting force, or the evaporating force. This is why all the sentences in (32) are ill-formed.

### 3.3.2 Types of force, not types of participant roles

As noted in Chapter 1, Boas (2003) cites a number of resultative sentences whose ill-formedness cannot be accounted for by Goldberg's (1995) semantic role-based account. First, according to Boas (2003), *giggle* and *pout* are not acceptable in the 'laugh – off the stage' construction.

- (34) The audience {laughed/?giggled/\*pouted} the poor guy off the stage.

(Boas, 2003, p. 121)

We have already identified the force relevant to this construction in 2.3.2: Loud voices (or sounds) by a large audience with some evaluative attitude are construed as having a kind of propelling force that drives the singer/players somewhere. It comes as no surprise, therefore, that verbs like *giggle* or *pout*, which do not involve loud voices, do not readily occur in this construction.

Next, consider (35).

- (35) Evin {talked/\*whispered/\*giggled} herself hoarse.

(Boas, 2003, p. 121)

The verbs found to occur in this construction in the three corpora are summarized in Tables 3.15, 3.16, and 3.17.

Table 3.15 BNC counts of ‘V oneself hoarse’

|                           | _____ oneself hoarse |
|---------------------------|----------------------|
| shout                     | 7                    |
| bark                      | 2                    |
| yell, cheer, scream, talk | 1                    |
| TOTAL                     | 13                   |

Table 3.16 WB counts of ‘V oneself hoarse’

|                                          | _____ oneself hoarse |
|------------------------------------------|----------------------|
| shout                                    | 6                    |
| cheer                                    | 5                    |
| yell                                     | 4                    |
| chant, holler, hurrah, laugh, roar, sing | 1                    |
| TOTAL                                    | 21                   |

Table 3.17 COCA counts of ‘V oneself hoarse’

|                                                                                                          | _____ oneself hoarse |
|----------------------------------------------------------------------------------------------------------|----------------------|
| shout                                                                                                    | 18                   |
| scream                                                                                                   | 9                    |
| yell                                                                                                     | 6                    |
| talk                                                                                                     | 4                    |
| bark, cheer                                                                                              | 2                    |
| argue, babble, campaign, crow, cry, harp, holler, pray,<br>rant, scream and shout, screech, shriek, sing | 1                    |
| TOTAL                                                                                                    | 54                   |

As can be easily seen, all the verbs involve emission of loud sounds via one’s throat. This is quite to be expected, given the way one becomes hoarse: If one is continually emitting loud sounds, one is negatively affecting one’s throat; eventually, one’s throat will become sore and one’s voice will come to sound rough and unclear. Again, therefore, it is quite natural that *whisper* and *giggle*, which do not involve emission of loud sounds, do not acceptably appear in this construction.

Lastly, let us consider the contrast between (36) and (37).

(36) He talked himself blue in the face. (Goldberg, 1995, p. 189)

(37) a. \*He spoke himself blue in the face.  
 b. \*He whispered himself blue in the face.  
 c. \*He grumbled himself blue in the face. (Boas, 2003, p. 105)

This time, not many verbs are attested in this construction. In the BNC, only one instance of *pedal oneself blue in the face* is found as in (38), and in the WB two instances of *talk oneself blue in the face* are found, as shown in (39).

- (38) Dinner: two slice of starch-reduced Ryvita with a scrape of slimmer's imitation margarine, then I *pedalled myself blue in the face* on the Exercise Machine. (BNC)
- (39) a. Gretchen had *talked herself blue in the face* ...  
 b. Claire's *talked herself blue in the face*, but none of them'll give an inch. (both from WB)

In COCA, 12 instances have been found, as summarized in Table 3.18.

**Table 3.18** COCA counts of '\_\_\_ oneself blue in the face'

|              | _____ oneself blue in the face |
|--------------|--------------------------------|
| talk         | 8                              |
| lie          | 2                              |
| argue, sniff | 1                              |
| TOTAL        | 12                             |

The idea of this resultative is that one is doing an action to the maximum point of one's effort toward a certain objective (which is not necessarily attained), as illustrated in (40).

- (40) a. My lawyer, who also happens to be my uncle James, *talked himself blue in the face* trying to persuade me to sell out and move, but he knows better than to try to make a Foley change her mind.  
 b. Kiddo, this is what your father knows. You could *talk yourself blue in the face*, but this is what your father knows.  
 c. "You can *argue yourself blue in the face*, and you're not going to change each other's minds. It's a waste of your time and my time." (all from COCA)

As one is doing so, the internal pressure is culminating in a discolored face, and the person is reaching the critical point at which the repetition of that action can no longer be sustained. That is, the blood vessels in one's face result in discoloration from becoming overly engorged when one is exerting all of one's effort.<sup>37</sup>

Accordingly, it is natural that all these verbs (i.e. *talk*, *pedal*, *lie*, *argue*, and *sniff*) denote activities which can be continued or repeated for some time, thereby

37. I am grateful to Tony Higgins for suggesting this very nice account of 'V oneself blue in the face.'

expending one's energy in increasing degrees. At the same time, there is nothing surprising about the fact that *whisper* and *grumble* are judged unacceptable as in (37b) and (37c). After all, one is unlikely to continue whispering or grumbling for a long time, and one is even more unlikely to do so until one becomes exhausted. As for *speak*, it is possible to speak for some time. But again, one is unlikely to continue speaking until one becomes exhausted.

Now some might feel that the difference between talking and speaking is not so immediately clear. Remarkably, however, there is a linguistic phenomenon which reflects the difference between talking and speaking: verb iteration. The verb *talk* may be iterated with the conjunction *and* as in (41a); the iteration may be more than once as in (41b).

- (41) a. Cassie *talked and talked* until her throat ached and her mouth was dry.  
 b. But today, he only had to listen, because the little girl *talked and talked and talked*. (both from BNC)

Clearly, this iterative use indicates that the speaker expands his/her talking beyond the acceptable limit (cf. Dirven (1982, p. 44)). Given that talking may be continued beyond the acceptable limit, then, it is quite natural that talking may be continued until one becomes exhausted.

By contrast, the verb iteration is seldom attested for *speak*, let alone for *whisper* and *grumble*, as summarized in Table 3.19.

**Table 3.19** Iterative use of *talk/speak/whisper/grumble* in the three corpora

|         | BNC | WB | COCA |
|---------|-----|----|------|
| talk    | 26  | 28 | 236  |
| speak   | 0   | 0  | 5    |
| whisper | 0   | 0  | 2    |
| grumble | 0   | 0  | 0    |

While *talk and talk* is attested 26 times in the BNC and 28 times in the WB, not a single instance of this iterative use is attested for *speak*, *whisper*, or *grumble* in these two corpora. In COCA, in contrast to the 236 instances of *talk and talk*, only five instances of *speak and speak* are found, as exemplified in (42).

- (42) a. We get to Lahor Day, and it's something special. Spread it around. An hour for burgers with Gaunch grilling them, flipping them, serving them. Plant manager gets up. He *speaks and speaks and speaks*. We hoh and boh and hob. He shakes.

- b. Hada bends over me, presses on my neck, mutters to a gleaming object in her hand and a voice comes from it. It *speaks and speaks* as she moves around me, nudging, poking, pricking. (both from COCA)

Curiously, two instances of *whisper and whisper* are found in COCA, as shown in (43).

- (43) a. The wind that was never still, and the sand that *whispered and whispered* under my foot ...  
 b. The thing is, it got spun out. Afterward, wild things were being said about me, and once they're in the ether, there's nothing you can do about it. It felt like being the new kid in the schoolyard again and the other kids are *whispering and whispering* about you and suddenly you hear what they're saying, and you think, What? (both from COCA)

As can be easily seen, these do not actually weaken my argument, though. In (42) the iteration of *speak* seems to be for the purpose of describing the environment (i.e. one in which someone's repetitive speaking is creating a background of droning noise towards which no one is paying any particular attention or interest), so nothing of the speaker's efforts are being profiled.<sup>38</sup> In (43a), the verb *whisper* describes the sound emitted by the sand when a person walks over it and thus is a repetition intended merely for poetic effect in describing the environment, having nothing to do with a person's actions. In (43b), *whisper* is used in the sense of "to rumor." That is, COBUILD gives the following two definitions for *whisper*:

1. When you **whisper**, you say something very quietly, using your breath rather than your throat, so that only one person can hear you.
2. If people **whisper** about a piece of information, they talk about it, although it might not be true or accurate, or might be a secret.

Clearly, the second sense is intended for the *whispering and whispering* in (43b). But the judgement of (37b) seems to be based on the first sense of *whisper*.

In this connection, it is to be noted that the verb iteration is attested for *argue*, *lie*, and even *pedal*, which occur in the 'V oneself blue in the face' resultative, as seen above.

- (44) a. I had a right go at him after and he just sat there *arguing, arguing and arguing*. (BNC)  
 b. "They *lied and lied* again," Mr Heslop said. (BNC)

38. Again, I am grateful to Tony Higgins for this illuminating observation.

- c. She began to *sniff and sniff* and my Mammie opened the window without saying anything. (COCA)
- d. Because, sometimes, one feels that you're like in static bicycle, *pedaling and pedaling* and you don't advance ... (COCA)

The iterative use of these verbs in the three corpora is summarized in Table 3.20.

**Table 3.20** Iterative use of *lie/argue/sniff/pedal* in the three corpora

|       | BNC | WB | COCA |
|-------|-----|----|------|
| lie   | 2   | 2  | 23   |
| argue | 2   | 2  | 19   |
| sniff | 0   | 0  | 3    |
| pedal | 0   | 0  | 3    |

Thus while the correspondence is not perfect, the verbs found to occur in 'V oneself blue in the face' are basically the same as those found to occur in 'V and V'. This confirms our claim that a verb may occur in 'V oneself blue in the face' to the extent that it is compatible with the meaning of "to continue or repeat the activity until one becomes exhausted." That is, while talking may be construed as exerting a force on oneself that will make oneself exhausted, this is not the case with speaking, whispering, or grumbling.

Again, therefore, whether a given verb can appear in a resultative construction depends upon the type of force the verb is capable of expressing, not the type of participant roles, contra Goldberg (1995).

### 3.4 Intransitive resultatives based on intransitive verbs

We have so far amply demonstrated that our proposed force-recipient account can handle resultatives with subcategorized objects as well as resultatives with non-subcategorized objects. But we have Intransitive resultatives like *boil dry* and *cook to a cinder* as well.

- (45) a. SAVE yourself a steam-filled kitchen and the risk of pans *boiling dry* by microwaving your Christmas pudding
- b. With a spark and a hiss the moth fell, senseless, into the grid, where it flamed momentarily, its wings curling, vanishing in an instant, its body *cooking to a dark cinder*. (both from BNC)

One may well wonder whether and how the force-recipient account can handle these Intransitive resultatives, which do not have post-verbal NPs in the first place.

Note, however, that these Intransitive resultatives have Transitive counterparts.

- (46) a. I was convinced that the heat of the sun would *boil* the oceans and the world *dry*.  
 b. I like my steak *burnt to a cinder* on the outside and blood red and juicy at its heart. (both from BNC)

Crucially, the Intransitive resultatives in (45) stand in a relation of causative alternation to the Transitive resultatives in (46). This means that the contrast between the Intransitive resultatives and their Transitive counterparts parallels that between (47a) and (47b).

- (47) a. The wind cleared the sky.  
 b. The sky cleared. (Levin & Rappaport Hovav, 1995, p. 104)

This brings us to the question: What is causative alternation?

Levin & Rappaport Hovav (1995) attempt to account for the causative alternation as instantiated in (47) in terms of an internal cause/external cause contrast. But Rappaport Hovav (2014) switches to a different account, arguing that lexical constraints alone are not sufficient and that certain discourse conditions need to be taken into consideration. Specifically, Rappaport Hovav (2014) mentions two cases to account for when the intransitive form is used. On the one hand, the cause argument does not appear when the cause is recoverable. This in turn has two subcases. One is that of a default cause: It is known that there is a given set of causes which does not normally change (Rappaport Hovav (2014, p. 24)). Thus in (48), days lengthen in the normal course of events, although not all speakers have scientific knowledge of exactly what causes days to lengthen.

- (48) The days lengthened. (Levin & Rappaport Hovav, 1995, p. 105)

Thus “when we say that the days lengthen ..., we imply that whatever scientists will determine as the default cause, is the cause in this case” (Rappaport Hovav (2014, p. 24)).

Alternatively, the cause may be recoverable because it is previously mentioned.

- (49) I pounded on the piggy bank and it finally broke.  
 (Rappaport Hovav, 2014, p. 25)

Here the first part of the sentence explicitly mentions the cause.

On the other hand, it may be that the speaker does not know the cause, as illustrated in (50).

- (50) The door of Henry’s lunchroom opened and two men came in.  
 (Rappaport Hovav, 2014, p. 26)

According to Rappaport Hovav (2014), the causative alternation is governed by such discourse factors, besides lexical constraints.

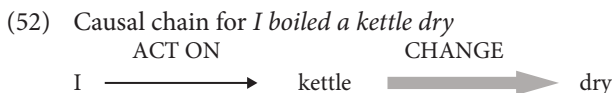
Rappaport Hovav's (2014) observations can be taken to indicate that the intransitive form is used when the cause does not have to be mentioned because it is known from our world knowledge as in (48), or from the context as in (49), or when the cause is of necessity not mentioned, say, for a dramatic effect as in (50).

Remarkably, it seems that the Intransitive resultatives seen above can be analyzed along the same lines. Consider (51) in this light once again.

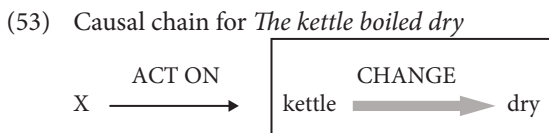
- (51) a. SAVE yourself a steam-filled kitchen and the risk of pans *boiling dry* by microwaving your Christmas pudding  
 b. With a spark and a hiss the moth fell, senseless, into the grid, where it flamed momentarily, its wings curling, vanishing in an instant, its body *cooking to a dark cinder*. (both from BNC)

In (51a) it is the burner that causes the pans to boil; and in (51b) it is the grid that causes the moth to cook. In other words, our world knowledge and the context allow us to identify the cause quite easily. So we do not have to mention the cause, which in turn means that we do not have to use the transitive verb.

It follows, therefore, that Intransitive resultatives as exemplified in (51) can be accommodated in our proposed force-recipient account without any difficulty. Take *boil – dry*. The Transitive resultative receives the causal chain in (52), like all the cases of Transitive resultatives seen so far.

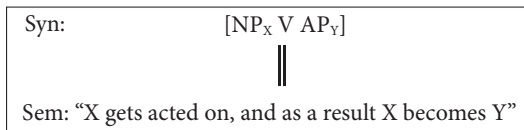


The Intransitive counterpart receives basically the same causal chain as in (53), the sole difference being that only the change component, enclosed in a box, is overtly expressed in the syntax.



Accordingly, we can posit a construction as in Figure 3.5 to accommodate Intransitive resultatives like *The kettle boiled dry*.





**Figure 3.5** Detransitivized resultative construction

Thus the subject in the Intransitive resultative serves exactly the same role as the post-verbal NP in the Transitive resultative: It receives a force, whose source is not mentioned in the same clause but which is undoubtedly responsible for bringing about the change as specified in the result phrase.

### 3.5 Conclusion

This chapter has examined what the proposed force-recipient account has to say about resultatives with subcategorized objects, and has shed new light on a number of things surrounding resultatives, like the affectedness constraint as proposed in Simpson (1983) and the discussion of the so-called “unaccusative/unergative” distinction in Levin & Rappaport Hovav (1995). This suggests that the proposed account promises to develop into a very explanatory theory of English resultatives.

Also, Intransitive resultatives like *The kettle boiled dry*, which do not have a post-verbal NP and which therefore seem to pose a challenging problem for the force-recipient account, can nevertheless be accommodated in the proposed account, once one realizes that they share basically the same causal chain with their Transitive counterparts.

PART II

## So-called idiomatic cases



## *He laughed his head off*

### 4.0 Introduction to Part II

Sentences like the following are among the resultatives cited in the literature.

- (1) a. He laughed his head off.
- b. They beat the hell out of me.

But if these are instances of resultatives, it is not very clear how the verbal event and the resulting situation are related: How come as a result of laughing, his head should move off? How come as a result of beating, “the hell” should move out of a person?<sup>39</sup> As far as I can see, no serious attempt has been made to address this issue (Jackendoff 1990, Levin & Rappaport Hovav 1995, Goldberg 1995, Boas 2003, among others).

It seems that part of the reason for this virtual neglect comes from the fact that sentences like (1) are idiomatic. But being an idiom does not necessarily mean that its syntax-semantics correspondence can be quite arbitrary. On the contrary, one significant finding in the cognitive linguistic literature is that most, if not all, idioms are actually “motivated,” as Lakoff (1987) convincingly demonstrates with idioms like *spill the beans*. Besides, labeling all these expressions as conventionalized idioms and leaving it at that (which was essentially suggested by one of the reviewers of an earlier version of this study) will be a manifestation of the “constructions save” attitude, which as mentioned in 1.4.2 does not really contribute to the progress of Construction Grammar.

In Part II, therefore, we will analyze these more recalcitrant cases of resultatives with non-subcategorized objects. Chapter 4 analyzes resultatives like (1a), and Chapter 5 those like (1b).

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39. It goes without saying that in posing these questions, I am fully aware that these expressions are hyperbolic.

#### 4.1 *V one's head off*<sup>40</sup>

##### 4.1.1 Why does his head move off?

In the literature, expressions like (2) are well-known.<sup>41</sup>

- (2) a. He laughed his head off.  
 b. She cried her eyes out.

This type of resultative apparently poses a problem to the force-recipient account. In the examples seen so far, the verbal force exerted onto the post-verbal NP is responsible for bringing about the change as described by the result phrase. But in (2a) it is not immediately obvious how the laughing event and his head's moving off are related.

Some scholars propose a non-causal analysis of resultatives based on intransitive verbs (Rothstein 2004). So perhaps a mere temporal relation is involved in (2a), in the absence of a force-transmission. In that case, (3a) will be paraphrased as (3b).

- (3) a. He laughed his head off  
 b. He laughed, until his head moved off.

Thus, intransitive verb-based resultatives like (2) apparently receive a rather different treatment than transitive verb-based resultatives like (4a), which can be paraphrased as (4b).

- (4) a. He wiped the table clean.  
 b. He wiped the table, and as a result the table became clean.

Note, however, that if two unrelated events were temporally juxtaposed in (2), this still begs the question why his head should move off after his laughing went on for some time. After all, there seems to be nothing inherent in laughing that brings about the result of a head moving off. Evidently, something more than a mere temporal juxtaposition is involved.

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40. An earlier version of 4.1 was presented at the 4th International Conference on the Linguistics of Contemporary English, held at Osnabrueck University, Germany (Iwata 2011). I'd like to thank the audience for their comments, especially Hans Christian Boas, Graeme Trousdale, and Bert Cappelle.

41. As noted in Chapter 1, in this book particles like *off* and *out* are regarded as one type of result phrase. So sentences like (2) count as instances of resultative caused-motion sentences.

#### 4.1.2 Force dynamics of ‘V one’s head off’

In order to find out what is the relation mediating between the verbal event and the ‘head-off’ event, let us consider which verbs actually occur in the V slot of ‘V one’s head off.’ In the BNC, the following verbs are found to appear in ‘V one’s head off’: *scream, shout, bark*, etc.

- (5) a. I’ll *scream my head off* if you don’t let go and I won’t stop screaming!  
 b. Sometimes I’m so frustrated that I sit on a rock and *shout my head off*.  
 c. In less than an hour’s time they would be at St Petrock’s, and Susan would be on the platform to meet her, with dear old Sambo, the Airedale, *barking his head off* with glee. (all from BNC)

Clearly, all these verbs involve emission of loud sounds via one’s throat. Notice, however, that it is not emission of loud sounds *per se*, but the head vibrating with the sounds that is significant for all these verbs. That is, all these verbs involve a motion internal to one’s head.

Once we realize this point concerning how the activity of laughing etc. is related to the ‘head-off’ event, it all boils down to simple physics: When part of an entity shakes too vigorously, it may become loose and finally become detached, as described in Figure 4.1.

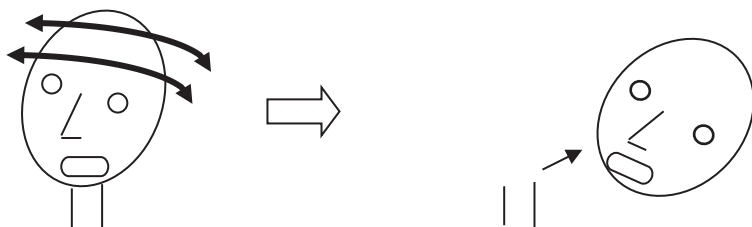


Figure 4.1 *Laugh one’s head off*

In other words, in *He laughed his head off*, his head’s moving off occurs as a result of the vibrating motion internal to his head, not as a result of a transmitted force. Given that laughing is virtually moving one’s head vigorously, this facet of laughing counts as a virtual action and is therefore represented as LAUGH-AS-VIGOROUS-HEAD-MOVING. Accordingly, (6a) can now be paraphrased as (6b).<sup>42</sup>

42. A reviewer comments as follows: “There is no head moving anywhere. NO head is coming off. This is an idiomatic phrase and should be dealt with as such.” This comment reveals three things: First, this reviewer believes that once one labels an expression as idiomatic, nothing further needs to be considered. Second, the phenomenon of hyperbole is apparently lost on the reviewer. And third, such a view reveals itself to be that of an “objectivist” in the parlance of Lakoff (1987).

- (6) a. He laughed his head off.  
 b. He did a ‘LAUGH-AS-VIGOROUS-HEAD-MOVING’ action on his head, and as a result his head moved off.

Now we can note two characteristics of *laugh one’s head off*. First, as noted in the introduction to this chapter, *laugh one’s head off* is clearly hyperbolic. Second, it involves a body-internal motion, so that the force is not transmitted to a different entity. Consequently, while *laugh one’s head off* indeed involves a force dynamic, it is not exactly one of force transmitted to a distinct entity. It may be characterized as a hyperbolic ‘force dynamics’ applied to a body-internal motion. Thus we may posit a construction as in Figure 4.2.<sup>43</sup>

|      |                                                                                                         |
|------|---------------------------------------------------------------------------------------------------------|
| Syn: | [NP <sub>x</sub> V <i>one’s head off</i> ]                                                              |
|      |                                                                                                         |
| Sem: | “X moves his/her head vigorously by emitting loud sounds,<br>and as a result X’s head becomes detached” |

Figure 4.2 ‘V one’s head off’ construction (preliminary version)

#### 4.1.3 Network of ‘V one’s head off’

However, a corpus search reveals that this is not the whole story. Specifically, a far wider range of verbs may appear in ‘V one’s head off’ than have been recognized in the literature so far. The range of intransitive verbs found to occur in ‘V one’s head off’ in the BNC, the WB, and COCA is summarized in Tables 4.1, 4.2, and 4.3, respectively.

Table 4.1 BNC counts of ‘V one’s head off’

|                                                                                        | _____ one’s head off |
|----------------------------------------------------------------------------------------|----------------------|
| laugh                                                                                  | 26                   |
| scream                                                                                 | 10                   |
| shout                                                                                  | 5                    |
| sing                                                                                   | 4                    |
| yell, smoke                                                                            | 3                    |
| talk, bawl, cheer, snore, pray                                                         | 2                    |
| bloom, sneeze, bark, shriek, act, sob, yawn, cry, worry,<br>lie, chat, puff, gas, crow | 1                    |
| TOTAL                                                                                  | 75                   |

43. To facilitate presentation, the constructional meaning will be stated by means of “to move one’s head vigorously,” rather than the cumbersome “to do a ‘LAUGH-AS-VIGOROUS-HEAD-MOVING’ action on one’s head,” from this point on.

Table 4.2 WB counts of ‘V one’s head off’

|                                                                                                                     | _____ one’s head off |
|---------------------------------------------------------------------------------------------------------------------|----------------------|
| laugh                                                                                                               | 28                   |
| scream                                                                                                              | 20                   |
| shout                                                                                                               | 6                    |
| bawl, swear                                                                                                         | 3                    |
| cheer, grin, sing,                                                                                                  | 2                    |
| fight, fish, flirt, flower, giggle, lie, rev, roar, shriek, smoke,<br>snore, squawk, vomit, whinge, yap, yawn, yell | 1                    |
| TOTAL                                                                                                               | 83                   |

Table 4.3 COCA counts of ‘V one’s head off’

|                                                                                                                       | _____ one’s head off |
|-----------------------------------------------------------------------------------------------------------------------|----------------------|
| laugh                                                                                                                 | 58                   |
| scream                                                                                                                | 57                   |
| bark                                                                                                                  | 14                   |
| talk, yell                                                                                                            | 9                    |
| bawl, cry                                                                                                             | 5                    |
| lie, work, eat                                                                                                        | 4                    |
| gobble, sing, snore, yap                                                                                              | 3                    |
| screech                                                                                                               | 2                    |
| bloom, bugle, burp, cheer, discourse, holler, howl, jabber,<br>query, shriek sleep, squeak, hiss, wonder, worry, yack | 1                    |
| TOTAL                                                                                                                 | 199                  |

In all three corpora, the most frequent verb is *laugh*, followed by *scream*, *shout*, and *bark*. Indeed, these verbs can be handled by the construction in Figure 4.2. Note, however, that there are also many verbs that do not fit the description in this construction. Consider (7). As shown in (7a) and (7b), *pray* and *wonder* may occur in ‘V one’s head off’, although neither verb necessarily involves emission of loud sounds. And in (7c), the subject entity *the gale* does not even have a head. Strictly, then, this sentence cannot be handled by the construction in Figure 4.2, either.

- (7) a. I bet that Terry Waite was *praying his head off*. (BNC)  
 b. I can *wonder my head off*. (COCA)  
 c. The gale *shouts its head off*. (COCA)

How are we to accommodate all these verbs?

It turns out that all these apparently problematic cases may be accommodated by regarding them as extensions from the prototypical cases like *laugh one’s head*



*off*. That is, a polysemous network analysis is called for (e.g. Lakoff 1987, Brugman 1988, Norvig & Lakoff 1987).

Let us start with the central sense. This class is exemplified by the sentences in (8) and can therefore be characterized as “to move one’s head vigorously by emitting loud sounds.” Verbs involving emission of loud sounds belong to this class (*laugh, scream, shout, sing, yell, bawl, cry, cheer, shriek, bark, snore, gasp, yap, crow, holler, howl, hiss, burp, yack, jabber, and squeak*).

- (8) a. Joe would *laugh his head off*.  
 b. I was afraid he’d *scream his head off*.

Next, class B is exemplified by the sentences in (9), where the subject entity is engaged in uttering without necessarily emitting loud sounds.

- (9) a. I waited them out, then pinned her in a corner and *talked my head off* for hours.  
 b. There she sat, elegant in a reasonably conservative, calf-length little black dress, smiling at him and *lying her head off* by saying none of the things that needed to be voiced. (both from COCA)

This class may be related to class A by replacing quality of sounds with quantity of sounds: By talking very much, rather than by emitting loud sounds, one may move one’s head vigorously. The verbs belonging to this class are: *talk, lie, discourse, pray, and query*.

The third class, class C, is exemplified by the sentences in (10). The verbs belonging to this class (*eat, gobble; puff, smoke; yawn*) do not necessarily involve sound emission.

- (10) a. “Take your wife, go on every ride in the place,” the editor said.” *Eat your heads off* and write a piece about what happened. And be sure to keep track of your expenses.”  
 b. ... if a hunter’s down in the bottoms, a bird can be *gobbling his head off* just over the ridge and he may not hear a thing. (both from COCA)

Nevertheless, these verbs denote a type of action which, when done to excess, involves using one’s head vigorously.

The fourth class (class D), as exemplified in (11), consists of the following verbs: *act, wonder, worry, and work*.

- (11) a. Her mood is so black I wonder if it goes beyond the bed issue, down to some remembered anger with me for bad-son behavior that occurred 30 or 40 years ago. I wonder if she is thinking, “I carried you to bed often enough!” I wonder if she still resents my putting her in this nursing home. I can *wonder my head off*.  
 b. And they’ve been *working their heads off* on doing it. (both from COCA)

These verbs do not necessarily involve physically moving one's head. But by engaging in the activity, one is likely to use one's brain intensely. Thus this class may be characterized as “functionally” affecting one's head, as opposed to all the other classes seen so far, which amount to physically affecting one's head.

With the fifth class (class E), as exemplified in (12), the focus is on emitting loud sounds. In both of the two members of this class (*shout* and *screech*), the subject entity is non-human. In fact, the subject entity need not have a head, as in (12b).

- (12) a. Make the tea, Jon, the kettle's *screeching its head off*.  
 b. The gale *shouts its head off*. (both from COCA)

This class is extended from class A by retaining the feature “to emit loud sounds” alone, dropping all the rest.

The sixth class (class F) consists of only two members (i.e. *bloom* and *flower*). Here flowers' blooming is likened to the vigorous movement of a human head.

- (13) a. There is always something to look forward to like the unworldly blue flowers of *Ceanothus thyrsiflorus* and the passion flower which *blooms its head off* all year. (BNC)  
 b. In my Washington, D.C., garden (USDA Zone 7), they (=giant pansies) *bloom their heads off* in spring but then fling in the towel. One does not count on them after June. (COCA)  
 c. This is the month for magnolias, which can be seen *flowering their exotic heads off* in public and private gardens all over the country. (WB)

Thus this class is related to class A via a metaphor based on a similarity in form.

Lastly, the seventh class (class G) consists of a single member (i.e. *fish*).

- (14) If we get a tinge of colour the river will *fish its head off*. (WB)

How a large amount of fish can be fished out of the river is again likened to the vigorous movement of a human head, as described in Figure 4.3.

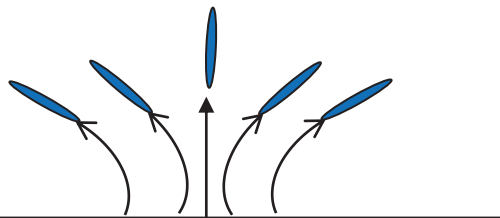


Figure 4.3 *The river fishes its head off*

So this class is like class (F) in being based on a metaphor via a similarity in form. Unlike class (F), however, the verb *fish* in (14) is used somewhat like a middle (cf. Fellbaum 1986, Hale & Keyser 1987, Fagan 1992, Iwata 1999, Hundt 2007,

among others): Normally *the river* should appear as a direct object, rather than as a subject, of the verb *fish*. Consequently, *fish its head off* means to produce a large amount of fish.

Thus we have seen seven classes of ‘V one’s head off’. The relatedness between those seven classes can now be summarized in Figure 4.4.

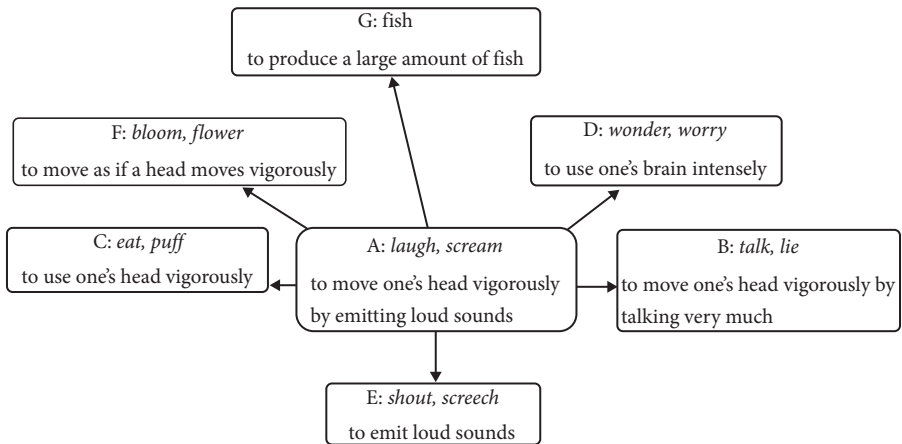


Figure 4.4 Network of ‘V one’s head off’

Only the central sense (A) follows the law of ‘force dynamics within one’s body’ in the manner described in the previous section. The other senses (B – G) are extensions from the central sense and do not strictly follow the force dynamics.

Thus the form-meaning association is different across the seven classes just seen. It follows, therefore, that we need seven constructions to handle the ‘V one’s head off’ expressions.

## 4.2 Two layers of meaning

What should be emphasized in this connection is that the finding that ‘V one’s head off’ forms a polysemous network is totally at odds with typical treatments so far. In the literature, ‘V one’s head off’ along with other similar expressions, has been associated with a non-literal, hyperbolic meaning, to the exclusion of its literal meaning. Thus Jackendoff (1997) claims that the expressions in (15a) are not really resultatives, on the ground that they are atelic as in (15b), and argues that they convey a sort of adverbial force, instead:

- (15) a. Fred talked {his head/his ass/his butt off}, but to no avail.  
 b. Sue worked her butt off {for/\*in an hour}. (Jackendoff, 1997, p. 551)

So these expressions cannot mean, even idiomatically, what a resultative interpretation would predict: [(15a)], for example, does not mean anything close to *Fred made his head come off by talking*, which is telic. Rather, in each case the NP + particle combination carries a sort of adverbial force, denoting intense and perhaps passionate activity. (Jackendoff, 1997, p. 551)

Accordingly, Jackendoff (1997) specifies the syntax and semantics of ‘V one’s head off’ as in (16).<sup>44</sup>

- (16) a. [VP V [bound pronoun]’s head off]  
 b. ‘V intensely’ (Jackendoff, 1997, p. 554)

This is tantamount to saying that the ‘V one’s head off’ construction is an idiom and there is no need for considering its internal, compositional aspect; this construction should simply be associated with the semantics “X Vs intensely.”

But our discussion has revealed that the literal meaning of ‘V one’s head off’ seems to be accessible to speakers of English for further productivity. Most importantly, extensions are related to the central sense via a similarity to the *literal* meaning of the central sense, as shown in Figure 4.4: Moving the head vigorously by emitting loud sounds (A) is extended to moving the head vigorously by talking a great deal (B); moving the head vigorously (A) is extended to using the brain intensely (D); moving the head vigorously (A) is extended to moving as if the head moves vigorously (F), and so on. Note that the relatedness among the senses cannot possibly be captured without reference to the literal meaning of these senses. Besides, the parallelism with transitive verb-based resultatives (e.g. *wipe the table clean*) can be established only by focusing on the literal meaning of ‘V one’s head off.’ All this suggests that both literal and derived meanings are to be specified as part of the constructional meaning, after all.

This is not a far-fetched idea. In fact, idioms are known to be “at the same time holistic and analyzable” (Coulmas (1979, p. 149)). Essentially the same idea is expressed by Sinclair (1991), who proposes two opposing principles: idiom principle vs. open-choice principle. Even in the context of discussing constructions, Langacker (2008) puts forth essentially the same idea in speaking of the “analyzability” of constructions: “While the composite conception is primary, it is viewed against the background of the component semantic structures at all lower levels.” (Langacker (2008, p. 61)) With this passage Langacker (2008) states that the meaning of a complex construction is accessed both as a whole and by its constituents.

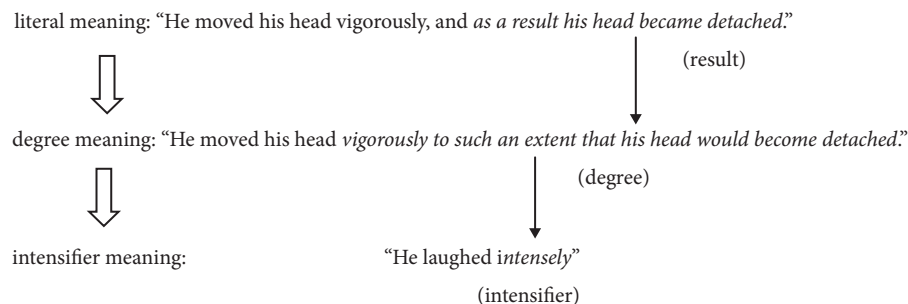
And in the psycho-linguistic literature, Titone & Connine (1999, p. 1656) argue that “idiomatic meanings are both directly retrieved and literally analyzed during comprehension.” Furthermore, Giora (1997, 2003) proposes a Graded

44. Essentially the same analysis is replicated in Jackendoff (2002a, p. 173).

Saliency Hypothesis, which means that both literal and non-literal meanings are kept in long-term memory.<sup>45</sup>

Given the feasibility of the idea that both literal and derived meanings are to be specified as part of the constructional meaning, then, let us consider how the adverbial meaning is arrived at in the case of ‘V one’s head off.’ Let us start with the literal meaning of class A, which is essentially “He moved his head vigorously, and as a result his head became detached.” But this cannot be true, because in reality one’s head does not actually become detached simply as a result of laughing.

Now according to Colston (1997, 2015) and Colston & Keller (1998), the essence of hyperbole is to inflate a degree to suggest that the degree is noteworthy. In this case, a degree can be found in the head’s vigorous movement. Accordingly, this expression can be made sense of hyperbolically by re-interpreting the result as a degree: “to such an extent that his head would become detached.”<sup>46</sup> This degree component amounts to “intensely.”<sup>47</sup>



**Figure 4.5** From literal meaning to intensifier meaning of *He laughed his head off*

45. Martinez-Manrique & Vicente (2013, pp. 314–315) argue that it is useful to distinguish three senses of salience: lexical salience, cognitive salience, and stimulus salience. What is relevant in the current context is lexical salience, of course.

46. According to Davis (2016, p. 321), hyperbole is (along with loose use, irony, and metaphor) a conventional way of conversational implicature. This means that the intensifier meaning originally arises as an implicature, which becomes conventionalized.

47. This re-interpretation is made possible by the ambivalence between result and degree, which seems to be conceptually grounded and is therefore found in a wide range of linguistic phenomena. Thus Karttunen (1971, p. 355) observes that there are a number of expressions that may be both implicative and non-implicative, one of which is *enough – to*:

- (i) a. John was clever enough to leave early. (implicative)  
 b. John was clever enough to learn to read. (non-implicative)

Note that it is quite plausible to regard the *to*-infinitival clause in (ia) as expressing a result but that in (ib) as specifying a degree.

Incidentally, note that the switch from result state to degree accounts for the emergence of an atelic reading. After all, while a result state may serve as an endpoint in the literal reading, there is nothing in the degree reading which serves that role. Thus while Jackendoff (1997) takes the atelic reading, as observed in (17), as evidence that certain expressions like ‘V one’s head off’ “do not carry typical resultative semantics,” this does not prove that those sentences are not resultatives.<sup>48</sup>

(17) Sue worked her butt off {for/\*in an hour}. (Jackendoff, 1997, p. 551)

Given this understanding of the derivation of the intensifier meaning from the literal meaning, we can now posit the constructions in Figures 4.6 to 4.12 for the seven classes of ‘V one’s head off’

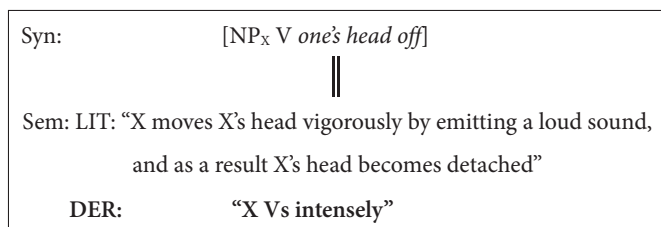


Figure 4.6 ‘V one’s head off’ class A construction

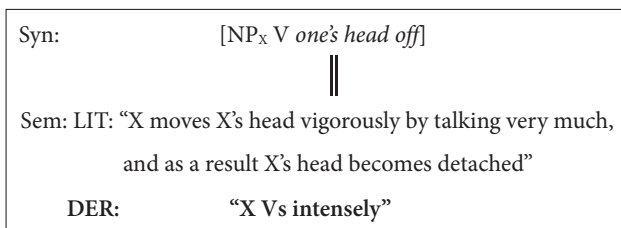


Figure 4.7 ‘V one’s head off’ class B construction

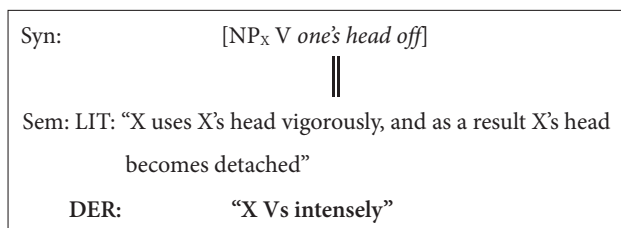


Figure 4.8 ‘V one’s head off’ class C construction

48. Besides, telicity is not an absolute requirement for resultatives, contra Jackendoff (1997). Some resultatives with non-subcategorized objects allow for an atelic reading in which the activity continues even after the result state is achieved. See Chapters 6 and 8.

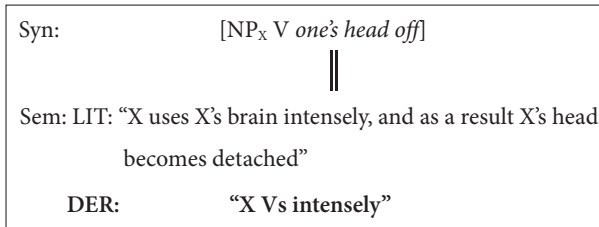


Figure 4.9 ‘V one’s head off’ class D construction

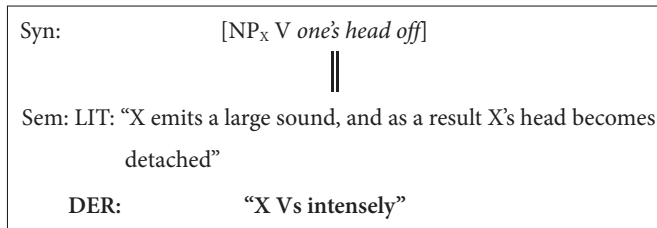


Figure 4.10 ‘V one’s head off’ class E construction

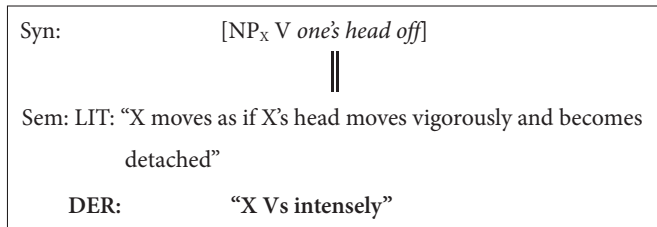


Figure 4.11 ‘V one’s head off’ class F construction

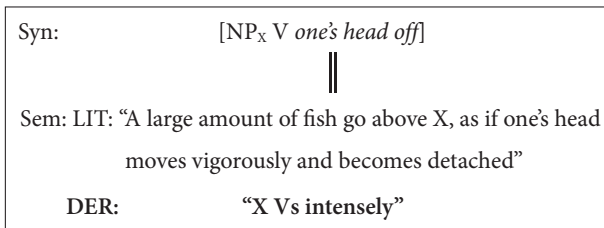


Figure 4.12 ‘V one’s head off’ class G construction

Both literal and derived meanings are specified as constructional meanings, but the derived meaning (“X Vs intensely”) is written in bold in order to indicate that this “intensifier” reading is more salient, in the spirit of Giora’s (1997, 2003) Graded Saliency Hypothesis.

To recapitulate, we have uncovered three things about ‘V one’s head off’: First, as a result of the vibrating motion internal to one’s head, the head (hyperbolically) moves off. Second, ‘V one’s head off’ forms a polysemous network structure.

Third, the literal meaning, as well as the derived meaning, should go into the constructional meaning.

### 4.3 Other related constructions

#### 4.3.1 *V one's eyes out*

There are a number of other expressions similar to 'V one's head off', all of which can be analyzed in essentially the same way. Let us begin with 'V one's eyes out', as exemplified in (18).

- (18) a. *Crying his eyes out* about that bloody poof, Rupert Brooke?  
 b. Seeing the young woman hunched up on a crate, covered in chalk dust and *weeping her eyes out*, Biff Thacker was rather at a loss what to do.  
 c. "I would *howl my eyes out*," she said.  
 d. And thanks, but I think I'd just *bawl my eyes out* all over you.

(all from BNC)

The intransitive verbs found to occur in 'V one's eyes out' in the BNC, the WB, and COCA are summarized in Tables 4.4, 4.5, and 4.6, respectively.

**Table 4.4** BNC counts of 'V one's eyes out'

|            | _____ one's eyes out |
|------------|----------------------|
| cry        | 40                   |
| howl       | 3                    |
| weep, bawl | 2                    |
| blub       | 1                    |
| TOTAL      | 48                   |

**Table 4.5** WB counts of 'V one's eyes out'

|       | _____ one's eyes out |
|-------|----------------------|
| cry   | 45                   |
| bawl  | 13                   |
| sob   | 1                    |
| TOTAL | 59                   |



Table 4.6 COCA counts of ‘V one’s eyes out’

|           | _____ one’s eyes out |
|-----------|----------------------|
| cry       | 105                  |
| bawl      | 45                   |
| sob       | 5                    |
| weep      | 2                    |
| read, sew | 1                    |
| TOTAL     | 159                  |

By far the most frequent verb is *cry*, which suggests that what is relevant to the occurrence in ‘V one’s eyes out’ may be the shedding of tears. This feature is also found in *weep* and *sob*.

Interestingly enough, the verb *bawl* may simply mean to shout in a loud voice, without shedding tears, as in (19a). Nevertheless, when this verb appears in ‘V one’s eyes out,’ it comes to mean to cry loudly, as in (19b).

- (19) a. The conductor *bawled* “Fares please!” in his ear but Nails did not move a muscle, nor make any indication of intelligence.  
 b. Kylie herself remembers the day she filmed her 542nd episode of Neighbours as being one of the worst of her otherwise happy life. “I thought I was going to *bawl my eyes out* and I did.” (both from BNC)

The same is true of *howl*, which does not entail the shedding of tears, but in (20) the subject entity is weeping, as the preceding sentence makes clear.

- (20) Marje wept as she opened her heart during interviews for the biography. “I would *howl my eyes out*,” she said. (BNC)

Thus we can give an account of ‘V one’s eyes out’ that is based on a “folk physics” parallel to that of ‘V one’s head off’: Shedding copious tears may be construed as having the effect of propelling one’s eye balls out of the eye sockets. This is why almost all the verbs found to occur in ‘V one’s eyes out’ in the three corpora are verbs involving the shedding of tears.

Now among the verbs found to occur in ‘V one’s eyes out’ in COCA, two verbs do not fit this description: *read* and *sew*.

- (21) a. In so doing, I have tried to live up to one of Emerson’s more obscure pronouncements: “Take the book, my friend, and *read your eyes out*.”  
 b. Did your mama say ‘next month’ when they wanted those dresses? No! She *sewed her eyes out*. She kept her word! She stayed up nights, working by candlelight. Her fingers are pricked from the needles. Her head hurts. But she kept her word! (both from COCA)

Clearly, neither of these verbs involves the shedding of tears. But once one realizes that both reading and sewing imply straining one's eyes, these verbs can be straightforwardly related to the cases seen above. While actions like crying affect the eyes physically as a movable object, via the shedding of tears, reading and sewing may be said to affect the eyes in their functional capacity.

Consequently, 'V one's eyes out' may well be regarded as forming a network in which class A (*cry one's eyes out*) follows the law of force dynamics within one's body, and class B (*read/sew one's eyes out*) is an extension from it, as summarized in Figure 4.13.



Figure 4.13 Network of 'V one's eyes out'

### 4.3.2 V one's heart out

Next, let us consider 'V one's heart out,' as exemplified in (22).

- (22) a. We were *singing our hearts out* when the door suddenly opened and the headmaster brought the news.  
 b. The LSO at this period was not the greatest instrument, and Elgar sometimes drives the players beyond their real capabilities but goodness, how they *play their hearts out* for him. (both from BNC)

The intransitive verbs found to occur in this expression in the three corpora are summarized in Tables 4.7, 4.8, and 4.9.

Table 4.7 BNC counts of 'V one's heart out'

|                                                     | _____ one's heart out |
|-----------------------------------------------------|-----------------------|
| sing                                                | 12                    |
| play                                                | 7                     |
| cry, run                                            | 3                     |
| sob                                                 | 2                     |
| serenade, fish, fret, drive, battle, preach, gallop | 1                     |
| TOTAL                                               | 31                    |

Table 4.8 WB counts of ‘V one’s heart out’

|                                                                               | _____ one’s heart out |
|-------------------------------------------------------------------------------|-----------------------|
| sing                                                                          | 15                    |
| run                                                                           | 14                    |
| try                                                                           | 13                    |
| play, sob                                                                     | 9                     |
| cry                                                                           | 5                     |
| bowl, work                                                                    | 4                     |
| act, race                                                                     | 3                     |
| battle, fight                                                                 | 2                     |
| cheer, dance, fish, iron, pogo, retch, sell, shout, spruik,<br>tackle, whinge | 1                     |
| TOTAL                                                                         | 90                    |

Table 4.9 COCA counts of ‘V one’s heart out’

|                                                                                                                                                                                                                                                                                                                                                                                                 | _____ one’s heart out |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| sing                                                                                                                                                                                                                                                                                                                                                                                            | 80                    |
| play                                                                                                                                                                                                                                                                                                                                                                                            | 53                    |
| work                                                                                                                                                                                                                                                                                                                                                                                            | 34                    |
| cry                                                                                                                                                                                                                                                                                                                                                                                             | 29                    |
| sob                                                                                                                                                                                                                                                                                                                                                                                             | 12                    |
| dance                                                                                                                                                                                                                                                                                                                                                                                           | 11                    |
| fight                                                                                                                                                                                                                                                                                                                                                                                           | 7                     |
| run                                                                                                                                                                                                                                                                                                                                                                                             | 6                     |
| cook                                                                                                                                                                                                                                                                                                                                                                                            | 5                     |
| scream                                                                                                                                                                                                                                                                                                                                                                                          | 4                     |
| act                                                                                                                                                                                                                                                                                                                                                                                             | 3                     |
| bawl; campaign; howl; lie; pitch; rock; row; shine; ski;<br>sweat; tweet                                                                                                                                                                                                                                                                                                                        | 2                     |
| bang; belt; blog; bloom; chat; cheer; chop, dice, sear and<br>roast; clap; color; compete; dance or croon; grin; home<br>shop; karaoke; lip-sync; lip-sync, air-guitar and dance;<br>mourn; munch; Napster; pedal; perform; piss; plot;<br>scrub; sing and dance; skate; squawk; strum; study; tap;<br>tap-dance; teach; twirl; waitress; warble; weep; write;<br>yell; yell and shout and sing | 1                     |
| TOTAL                                                                                                                                                                                                                                                                                                                                                                                           | 305                   |

The most frequent verb is *sing*, followed by *play*, *work*, *cry*, *dance*, etc. This is rather puzzling, as it is very hard to find what is shared among all these verbs.

A closer examination reveals that the occurrence of all these verbs in ‘V one’s heart out’ is far from arbitrary, however. Note that *sing* and many other verbs found to appear in ‘V one’s heart out’ as in (23) have to do with letting out a continuous stream of air (*bawl*, *cheer*, *chat*, *howl*, *croon*, *karaoke*, *serenade*, *scream*, *sob*, *swear*, *tweet*, *yell*; *lie*, *preach*, *mourn*). These verbs can therefore be grouped together as class A.

- (23) a. While Bob Marley *sings his heart out*, we watch a party in full bloom.  
 b. I do not know how much time passed as I *cried my heart out*.  
 (both from COCA)

The next most frequent verbs that do not belong to class A (i.e. *play*, *work*, and *dance*) as exemplified in (24) have to do with engaging in a strenuous activity. These verbs can be grouped together into class B (*play*, *dance*, *fight*, *run*, *battle*, *scrub*, *work*, *gallop*, *campaign*).

- (24) a. So my cousin Joey *played his heart out* in his first Little League baseball game.  
 b. The Cheerleaders vacate the court, but Natalie keeps *dancing her heart out*.  
 (both from COCA)

Significantly, these two classes are motivated differently. To see this, note that there are two aspects to the heart. On the one hand, the heart is an organ embedded inside our body. As we let out a continuous stream of air, therefore, the air stream has the effect of virtually carrying with it our heart out of our body. This seems to be the logic behind the expressions in (23). On the other hand, a heart is the organ that pumps blood around the body. By engaging in a strenuous activity, then, we are forcing the heart to beat quickly and vigorously, thereby causing the heart to, as it were, leap out of our body. This seems to be the logic behind the expressions in (24). Class A and class B are thus motivated by different logics, so neither is an extension from the other.

The remaining verbs can be easily related to one of these two classes. Thus there are a number of verbs appearing in ‘V one’s heart out’ that do not strictly involve a strenuous activity but which nevertheless can be characterized as “to spend much energy,” as instantiated in (25).

- (25) a. a. someone – many someones – are on the phone, *home shopping their hearts out*.  
 b. At last count, about 64 million people were *Napster-ing their hearts out*.  
 (both from COCA)

These verbs (*complete, cook, home shop, Napster, perform, plot, roast, study, teach, waitress*) can be grouped together into class C, an extension from class B.

Interestingly, *bloom* is also found to appear in ‘V one’s heart out,’ as in (26), parallel to ‘V one’s head off’

- (26) ... suddenly you discover the gleaming lavender-leaf sundrops – bright-yellow Arizona wildflowers, *blooming their 2-inch-tall hearts out*. (COCA)

Here the flowers in full bloom are in such a shape that their center is visible. So this class, class D, is related to class A via a metaphor based on a similarity in form.

Finally, class E consists of the following instance in (27).

- (27) When I looked out the window, I was happy to see that the early morning fog that hovers over L.A. for months on end had finally taken a powder. The sun was back in action, *shining its little heart out*. (COCA)

Strictly, the sun does not have the same body as humans do. Again, therefore, this example should be regarded as a metaphorical extension.

This class is ambivalent: On the one hand, it may be regarded as an extension from class A in that a light is emitted. On the other hand, it may well be related to class B in that the sun is engaged in a strenuous activity. At the moment, I cannot find a conclusive argument to choose between the two possibilities. Maybe class E is related to both class A and class B.

Consequently, the five classes are related as summarized in Figure 4.14.

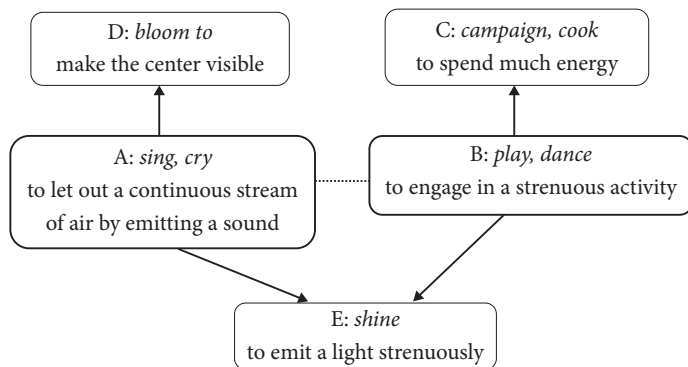


Figure 4.14 Network of ‘V one’s heart out’

### 4.3.3 V one’s guts out

Let us now turn to ‘V one’s guts out,’ as exemplified in (28).

- (28) a. I *worked my guts out* getting my Doctorate, so that I could be a member of Project Eden and be with you.  
 b. It is only because miners *sweat their guts out* that superior persons can remain superior. (both from BNC)

As Tables 4.10, 4.11, and 4.12 show, this expression is not as frequent as the three expressions seen so far.

**Table 4.10** BNC counts of ‘V one’s guts out’

|                                               | _____ one’s guts out |
|-----------------------------------------------|----------------------|
| work                                          | 6                    |
| sweat                                         | 4                    |
| sing, run, brawl, slog, cough, stretch, slave | 1                    |
| TOTAL                                         | 17                   |

**Table 4.11** WB counts of ‘V one’s guts out’

|             | _____ one’s guts out |
|-------------|----------------------|
| work        | 7                    |
| slog        | 3                    |
| flog        | 2                    |
| cough, sing | 1                    |
| TOTAL       | 14                   |

**Table 4.12** COCA counts of ‘V one’s guts out’

|                                                     | _____ one’s guts out |
|-----------------------------------------------------|----------------------|
| scream, play                                        | 4                    |
| fight                                               | 3                    |
| cry, sing                                           | 2                    |
| bawl, meditate, sob, sweat, talk, train, work, yack | 1                    |
| TOTAL                                               | 23                   |

Nevertheless, this expression can be accounted for in essentially the same way.

Like ‘V one’s heart out,’ there seem to be two different motivations for ‘V one’s guts out.’ On the one hand, a number of verbs occurring in ‘V one’s guts out’ somehow involve the sense of letting out a continuous stream of air, as illustrated in (29).

- (29) a. Lisa finally asked Sybil if she let Travis *scream his rotten little guts out* for two hours when she didn’t have three live-in baby-sitters.  
 b. I *cried my guts out* when I heard about it. (both from COCA)

This justifies positing class A, whose members include *scream, cry, sing, bawl, talk, yack, and cough*.

On the other hand, several verbs mean to engage in a strenuous activity, as exemplified in (30).

- (30) a. I *worked my guts out* getting my Doctorate, so that I could be a member of Project Eden and be with you.  
 b. I always try to defend a title but I have *sweated my guts out* in America this year to get where I am and I feel I am entitled to play.  
 c. I'd *slave my guts out* on a case and think I'd got it settled and a week later the woman would turn up in my office with the same dreary tale.  
 (all from BNC)

The logic behind this type of expression seems to be that by engaging in a strenuous activity, one is causing one's guts to come up from inside the body. These verbs can be grouped together into class B (*work, sweat, play, fight, run, slave, and slog*).

Interestingly enough, 'V one's guts out' seems to carry with it a somewhat more torturous overtone than 'V one's heart out.' Thus *sweat* and *slave*, both of which are found in this expression but not in 'V one's heart out,' mean to work so hard as to sweat and to work hard like a slave, respectively. That is, these two verbs are a metonymy for 'to work hard' and a metaphor for 'to work hard,' respectively.

There is a third class, class C, as exemplified in (31).

- (31) a. Gilly nearly tripped over herself, leaping down and grabbing up "Sarsaparilla to Sorcery" from the chair seat, *stretching her guts out* to tip the book into its place on the shelf as Trotter appeared at the door. (BNC)  
 b. I can do physical therapy till the cows come home and *meditate my guts out*, and still have a lot of pain. (COCA)

Both stretching and meditating fall short of engaging in a strenuous activity, so they cannot be included in class B. Rather, both actions simply mean to exert much effort.

Thus the network of 'V one's guts out' can be described as in Figure 4.15.

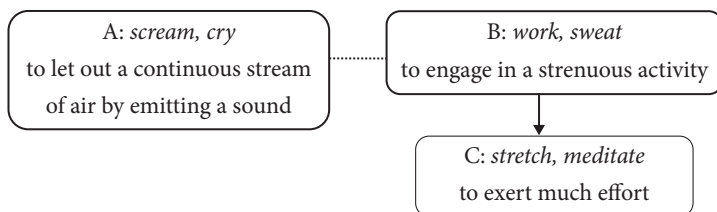


Figure 4.15 Network of 'V one's guts out'

4.3.4 *V one's lungs out*

'V one's lungs out,' as exemplified in (32), has a somewhat different story.

- (32) a. Greg smashes his guitar, shoulder-barges the others, lurches suggestively over his co-singer, Paula Kelley, as she squats on the floor *screaming her lungs out*, leads an inspired, funny and very, very noisy version of "Fight For Your Right To Party", ...
- b. She died soon after, *coughing her lungs out*. (both from BNC)

Only two instances are found in the BNC, and only five in the WB. But 39 instances are found in COCA, so the total number is not so different from that of 'V one's guts out.'

**Table 4.13** BNC counts of 'V one's lungs out'

|               | _____ one's lungs out |
|---------------|-----------------------|
| cough, scream | 1                     |
| TOTAL         | 2                     |

**Table 4.14** WB counts of 'V one's lungs out'

|                      | _____ one's lungs out |
|----------------------|-----------------------|
| scream               | 2                     |
| holler, shriek, sing | 1                     |
| TOTAL                | 5                     |

**Table 4.15** COCA counts of 'V one's lungs out'

|                        | _____ one's lungs out |
|------------------------|-----------------------|
| scream                 | 20                    |
| cough                  | 6                     |
| yell                   | 4                     |
| cheer                  | 3                     |
| sing                   | 2                     |
| cry, gasp, laugh, pant | 1                     |
| TOTAL                  | 39                    |

However, the range of verbs found in 'V one's lungs out' is clearly different from that in 'V one's guts out.' Specifically, all the verbs found in 'V one's lungs out' have something to do with breathing out air. Thus the verbs found to appear in 'V one's lungs out' are either (1) verbs of sound emission, as exemplified in (33) (*scream*,



*laugh, sing, yell, cry, and cheer*), or (2) verbs involving breathing out air quickly and loudly, as in (34) (*pant, cough, and gasp*).

- (33) a. Hysterical, she *screams her healthy lungs out*.  
 b. He comes to Broncos home games, tailgates in a nearby parking lot – even if he’s not going to the game – and *cheers his lungs out* for the home team. (both from COCA)
- (34) a. He’s *coughing his lungs out*, but the pro has scheduled a rare interview and will not disappoint.  
 b. He lands on the hardwood floor, *panting his lungs out* after the run. (both from COCA)

Thus while the distinction between the class characterized as “letting out a continuous stream of air” and that characterized as “engaging in a strenuous activity” is clear in the case of ‘V one’s guts out’ (or ‘V one’s heart out’ as well, for that matter), the distinction is far less clear in the case of ‘V one’s lungs out.’ This is because lungs are the very organ which serves to breathe the air in and out.

Anyway, by recognizing the two classes A and B, which are instantiated by the sentences in (33) and (34) respectively, we can describe the network of ‘V one’s lungs out’ as in Figure 4.16.

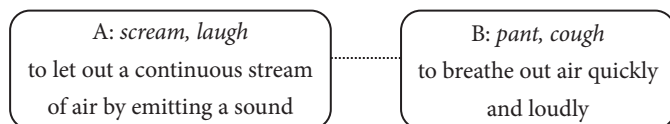


Figure 4.16 Network of ‘V one’s lungs out’

#### 4.3.5 V one’s socks off and V one’s butt off

Lastly, let us consider ‘V one’s socks off,’ as exemplified in (35).

- (35) a. “I expect she would *laugh her socks off* if she found you here in royal regalia!”  
 b. He has *worked his socks off* and he’ll get his reward. (both from BNC)

Only two instances are found in COCA, but ten in the BNC and as many as 180 in the WB, as the following Tables indicate.

**Table 4.16** BNC counts of ‘V one’s socks off’

|        | _____ one’s socks off |
|--------|-----------------------|
| laugh  | 5                     |
| work   | 4                     |
| freeze | 1                     |
| TOTAL  | 10                    |

**Table 4.17** WB counts of ‘V one’s socks off’

|                                                          | _____ one’s socks off |
|----------------------------------------------------------|-----------------------|
| work                                                     | 141                   |
| run                                                      | 10                    |
| act, laugh                                               | 9                     |
| graft                                                    | 2                     |
| cook, dance, overact, play, ride, sing, talk, wail, walk | 1                     |
| TOTAL                                                    | 180                   |

**Table 4.18** COCA counts of ‘V one’s socks off’

|             | _____ one’s socks off |
|-------------|-----------------------|
| dance, talk | 1                     |
| TOTAL       | 2                     |

Again, the verbs found to appear in this expression are apparently disparate.

One thing that most of these verbs (particularly *laugh*, *work*, and *dance*) have in common is that they describe strenuous activities, which naturally lead to agitated bodily movement. Accordingly, it seems to be this overall bodily movement that causes the socks to fall off.

Now one apparently problematic case is that of *freeze*, as exemplified in (36).

- (36) No matter what time of year it is, you can *freeze your socks off* in winter or be boiling to death in summer, and the Ipswich to Debenham bus is always late.  
(BNC)

Certainly, one cannot say that *freeze* denotes a strenuous activity in the same way that *laugh*, *work* and *dance* do. But *freeze* might not be so different from all these verbs. Tony Higgins (personal communication) suggests that when one is freezing, one naturally moves one’s body (especially the limbs) in an attempt to keep the blood flowing and thus to stay warm (whether intentionally or automatically, as when shivering). Seen in this way, then, *freeze* may fit the description “to engage in a strenuous activity,” like other verbs.

Interestingly enough, basically the same account applies to ‘V one’s butt off’ as exemplified in (37).

- (37) a. They *work their butts off* all week to get ready to play.  
 b. I expect our team to *play their butts off*.  
 c. In case you haven’t noticed, we’re *freezing our butts off* out here.  
 Is there any reason we can’t come inside? (all from COCA)

The number of attested data in the three corpora is larger than that of ‘V one’s socks off’, as shown in Tables 4.19, 4.20, and 4.21.

**Table 4.19** BNC counts of ‘V one’s butt off’

|             | _____ one’s butt off |
|-------------|----------------------|
| freeze      | 2                    |
| work, graft | 1                    |
| TOTAL       | 4                    |

**Table 4.20** WB counts of ‘V one’s butt off’

|        | _____ one’s butt off |
|--------|----------------------|
| work   | 19                   |
| freeze | 1                    |
| TOTAL  | 20                   |

**Table 4.21** COCA counts of ‘V one’s butt off’

|                                              | _____ one’s butt off |
|----------------------------------------------|----------------------|
| work                                         | 146                  |
| freeze                                       | 24                   |
| play                                         | 18                   |
| laugh                                        | 12                   |
| fight, run                                   | 6                    |
| pitch, sweat                                 | 3                    |
| battle, dance, grind, hustle. Lip-sync, walk | 2                    |
| bike, coach, compete, pedal, practice, train | 1                    |
| TOTAL                                        | 236                  |

All the verbs found in ‘V one’s butt off’ somehow involve strenuous activities (*work, play, laugh*, etc.), suggesting that ‘V one’s butt off’ can be handled in basically the same way as ‘V one’s socks off’.

One may wonder why ‘V one’s socks off’ and ‘V one’s butt off’ should behave similarly. This may be related to the fact that both socks and butts are located at the extreme ends of our body.<sup>49</sup>

#### 4.4 Discussion

We have uncovered the following two things about resultatives involving body-parts. First, as for the verbal force responsible for bringing about a change, it is a hyperbolic ‘force dynamics,’ to the effect that if a body-part undergoes a vigorous motion, it will eventually become detached. The force responsible for the change is a vigorous motion of the body-part in the case of ‘V one’s {head/butt/socks} off’; a propelling of the eye balls out of the sockets (shedding tears) in the case of ‘V one’s eyes out’; and (a) letting out a continuous stream of air, which propels the body-part/organ outside the body or (b) a vigorous motion of the body-part/organ (beating of the heart (heart), breathing (lungs), or agitation of the body (guts)), which causes the body-part/organ to become movable in the case of ‘V one’s {heart/lungs/guts} out.’<sup>50</sup>

49. Also, we have ‘V one’s ass off’ and similar expressions. According to Culicover (2013, p. 50), the following synonyms of *ass* may appear in the place of *ass*: buttocks, nates, arse, butt, back-side, bum, buns, can, fundament, hind end, kiester, posterior, prat, rear, rear end, rump, stern, seat, tail, tooshie, tush, bottom, behind, derriere, fanny.

50. The relevance of some of these force dynamics to an adequate account of resultatives involving body-part terms also seems to be recognized by a number of studies (Mateu & Espinal (2007, p. 39), Mateu & Espinal (2013, p. 292), Espinal & Mateu (2010, p. 1406), and Cappelle (2014, pp. 269–270)). Incredibly, however, these studies resort to metaphor, not hyperbole. Thus Espinal & Mateu (2010, p. 1406) claim that “the intensity associated with these idioms is metaphorically activated,” where the relevant metaphor is the one stated in (i):

- (i) (AN EXTREME) INTENSITY IS (AN EXCESSIVE) CHANGE OF LOCATION  
(Espinal & Mateu, 2010, p. 1406)

Few scholars working on figurative language would confuse hyperbole with metaphor: The essence of metaphor is to understand one thing in terms of another, whereas hyperbole inflates a degree (Gibbs 1994, Colston 1997, 2015, Colston & Keller 1998, Claridge 2011, and Gibbs & Colston 2012, among many others). The difference between the two figures of speech can be illustrated by the following pair, both of which are intended to convey that the temperature is very low outside.

- (ii) a. hyperbole: It is freezing cold outside.  
b. metaphor: It is a refrigerator outside. (adapted from Davis, 2016, p. 321))

See also Carston & Wearing (2015) and Neuhaus (2016) for related discussion.

Here “body-part” terms need not be strictly ‘inalienably possessed’ body-parts like heads or eyes. We have already seen that ‘V one’s socks off’ behaves like other resultatives involving inalienably possessed body-parts, despite the fact that socks are not strictly a body-part. Also, in the following attested example, guitars are treated like body-parts of the guitar players.

- (38) “Happy Game,” for instance, has a chorus about celebrating the end of an unhappy relationship, a state of affairs that in “Immigrants ...” days would have seen the band *crying their guitars out* at high speed for three minutes or so. (BNC)

Still another interesting thing about the resultatives involving body-part terms is that more than one construction may be simultaneously available, as long as the relevant movements are not incompatible. The following example is a conflation of ‘V one’s eyes out’ and ‘V one’s heart out.’

- (39) And the memory of that day in August, 20 years ago, when I stayed up all night crying *my eyes and heart out* while listening to the radio stations playing his music and saying the King was gone. (COCA)

The second finding is that ‘body-part *out/off*’ resultatives exhibit a polysemous network category, where only the central sense follows the law of (hyperbolic) ‘force dynamics within one’s body’; the other senses do not need to, as they are simply extensions from the central sense. Thus while all the resultatives seen in Part I instantiate the semantics “X acts upon Y, and as a result Y becomes/moves Z,” there are resultative expressions that depart from this semantics because they are extensions.<sup>51</sup>

From these two findings, we can draw the following conclusions. First, in order to properly account for ‘body-part *out/off*’ resultatives, we need to refer to folk models of human physiology: When you cry a lot, your head moves rather vigorously, etc. With knowledge of such folk models, we can see that the determination of which verb appears in which construction is a motivated one.

---

In fact, hyperbolic expressions which refer to body-parts are often cited as such in the literature.

- (iii)a. work one’s fingers to the bone (Norrick, 2004, p. 1730)  
 b. His eyes nearly popped out of his head. (Nemesi, 2004, p. 354)

51. Relatedly, the fact that different sets of verbs appear in the V slot of resultatives involving different body-parts (head, eye, lung, etc.), as well as the fact that all those resultatives display different polysemy structures, confirms that the literal meaning is accessible to speakers of English; these facts cannot possibly be accounted for by referring “to V intensely” alone. This in turn argues (once again) against dismissing ‘body-part *out/off*’ resultatives as mere idioms.

Second, ‘body-part *out/off*’ resultatives cannot be accounted for in a unified way. Given that resultative constructions are kept in long-term memory, it is no wonder that they display a polysemous category structure, where members dynamically interact with each other via extension. Thus a polysemous network approach to resultatives is virtually unavoidable.



## *They beat the hell out of me*

### 5.0 Introduction

This chapter is concerned with resultatives like (1a) and (1b).

- (1) a. They're beating the hell out of Jones.
- b. She scares the hell out of me. (Hoeksema & Napoli, 2008, p. 352)

Apparently, these sentences look the same as those like (2).

- (2) a. Let's get the hell out of this cow town.
- b. Back the hell off! (Hoeksema & Napoli, 2008, p. 352)

Hoeksema & Napoli (2008) argue, however, that they are fundamentally different: The post-verbal NP in the former cannot be deleted, as shown in (3a), but that in the latter can be, as shown in (3b).

- (3) a. They scared \*(the hell) out of me.
  - b. They got (the hell) out of the car.
- (adapted from Hoeksema & Napoli, 2008, p. 352)

Hoeksema & Napoli (2008) call the former construction a BEAT-THE-HELL-OUT construction or B-construction, and the latter a GET-THE-HELL-OUT construction or G-construction. It is the B-construction which is the object of study in this chapter.

In previous studies on 'V the hell out of', its idiomatic nature has tended to be emphasized, as if this expression cannot be assimilated to any other expression, at least not synchronically (Gross 1994, Moon 1998, Taylor 2012, Hoeksema & Napoli 2008, Napoli & Hoeksema 2009, Perek 2016, among others). So here is the first issue to be addressed in this chapter: Is it really not possible to relate 'V the hell out of' to any other expression in present-day English?

Also, note that there are a number of other related expressions, as is well-known in the literature. Thus Taylor (2012) observes that the following expressions are attested in the BNC.



- (4) beat the hell  
 bash the hell  
 beat the living daylights  
 smash the living daylights  
 hit the life  
 kick the shit  
 blow the hell  
 blast the hell  
 spank the daylights
- } out of someone

(Taylor, 2012, p. 79)

All these expressions are apparently synonymous. Thus Gross (1994), citing the examples in (5), argues as follows: “They are all synonymous. Substituting one noun for another in the object position will not modify the meaning ...” (Gross, 1994, p. 253)

- (5) Max will
- |       |          |               |                      |
|-------|----------|---------------|----------------------|
| beat  | the hell | } out of Bob. |                      |
| whale |          |               |                      |
| lick  |          |               |                      |
|       |          |               | the shit             |
|       |          |               | the living daylights |
|       |          |               | the daylights        |
|       | the tar  |               |                      |

(Gross, 1994, p. 253)

This seems to suggest that the post-verbal NP *the hell* is a simple place-holder that can be replaced with whatever item is available in the inventory. Similarly, Taylor (2012, pp. 77–79) claims that these are idioms that permit a degree of variation. But are all these expressions really synonymous? This is the second issue to be addressed in this chapter.

Since the number of items that may potentially appear in the post-verbal position in question is rather large, it is realistic to limit our discussion to a selected few of them. So I will concentrate on the following expressions in (6), in addition to ‘V the hell out of.’

- (6) a. It still *scares the shit out of me*.  
 b. Quite the contrary, he *scares the living daylights out of me*.  
 c. You *frightened the life out of us*, Daddy. (all from BNC)

These three expressions (‘V the shit out of,’ ‘V the daylights out of,’ and ‘V the life out of,’) are chosen because together with ‘V the hell out of,’ they constitute the four most frequent expressions, judging from the number of attested data in the three corpora as summarized in Table 5.1.

**Table 5.1** BNC, WB, and COCA counts of ‘V – out of’ expressions

|                          | BNC | WB  | COCA |
|--------------------------|-----|-----|------|
| V the hell out of NP     | 54  | 129 | 1089 |
| V the shit out of NP     | 37  | 29  | 455  |
| V the daylight out of NP | 32  | 43  | 147  |
| V the life out of NP     | 55  | 105 | 197  |

In what follows, therefore, we will first examine whether ‘V the hell out of’ cannot be related to any other expression, and then to examine whether the four expressions behave identically or not.

## 5.1 A construction which *beat the hell out of* is related to

### 5.1.1 Perek (2016)

In addressing the first issue, Perek (2016) is a good starting point. Perek (2016) observes that ‘V the hell out of’ cannot be assimilated to the removal construction as exemplified in (7), despite the identical syntax [NP V NP *out of* NP].

- (7) He took the gun out of the holster.

Perek (2016) claims that this type of expression constitutes a totally distinct construction, saying as follows:

While the *hell*-construction probably arose from a literal meaning of removal, there is evidence that it developed into a construction that no longer patterns semantically and syntactically like instances of the removal construction.

(Perek, 2016, p. 166)

Perek (2016) presents the following arguments to prove his thesis. First, only *out of* is allowed as the PP; other prepositions suitable for the sense of removal (*off*, *from*) are not allowed.

- (8) a. \*He kicked the hell off/from me.  
 b. He took the gun off/out of/from her hands. (Perek, 2016, p. 166)

Second, *the hell* is not referential, as shown in (9).

- (9) \*He scared the hell out of Sam, and kicked it out of Bill too.  
 (Perek, 2016, p. 167)

Based on these arguments, Perek (2016) concludes that “... the pattern cannot be derived compositionally from any other constructions in the language, and therefore forms its own generalization.” (Perek, 2016, p. 167)

Perek's (2016) position seems to be consonant with the view of other scholars who regard 'V the hell out of' as an idiomatic expression (Gross 1994, Moon 1998, Taylor 2012).

### 5.1.2 'Beat – out of' construction

Up until the last chapter, it has been amply demonstrated that the post-verbal NP of a resultative is a force-recipient. Given that 'V the hell out of' is a resultative, then, it follows that the post-verbal NP *the hell* in (10) should also be a force-recipient in some sense.

(10) They beat the hell out of John.

Apparently, the post-verbal NP *the hell* does not receive a beating force. This is particularly clear when one compares (10) with (11), where John is indeed a force-recipient.

(11) They beat John out of the room.

Rather, it is the NP appearing after *out of* (i.e. John) that seems to be the recipient of a beating force in (10).

Actually, however, it is possible for a seeming recipient of a verbal force to appear after *out of*, as shown in (12).

- (12) a. Not one piece of evidence. The cops decided he did it, *beat a confession out of him*, and now they're going to kill him. (COCA)  
 b. Or do you want me to *beat* the truth *out of* you? (BNC)

As a matter of fact, the following range of nouns are found to occur in the post-verbal position of 'beat – out of' in the three corpora, as summarized in Tables 5.2, 5.3, and 5.4.

**Table 5.2** BNC counts of 'beat – out of'

|                                                                                  | beat _____ out of |
|----------------------------------------------------------------------------------|-------------------|
| hell                                                                             | 11                |
| it                                                                               | 8                 |
| shit                                                                             | 7                 |
| daylights                                                                        | 5                 |
| confession, crap, fuck                                                           | 3                 |
| devil, expectation, evil, French, habit, nonsense, stiffness, truth, whereabouts | 1                 |
| TOTAL                                                                            | 49                |

**Table 5.3** WB counts of ‘beat – out of’

|                                            | beat _____ out of |
|--------------------------------------------|-------------------|
| hell, shit                                 | 11                |
| crap, daylight                             | 6                 |
| confession                                 | 2                 |
| devil, expletive, fuck, heck, it, stuffing | 1                 |
| TOTAL                                      | 42                |

**Table 5.4** COCA counts of ‘beat – out of’

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | beat _____ out of |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| hell                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 188               |
| shit                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 159               |
| crap                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 129               |
| heck                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 38                |
| it                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 23                |
| confession                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 21                |
| daylight                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 20                |
| tar                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 17                |
| bejeezus                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 9                 |
| devil, expletive, stuffing                                                                                                                                                                                                                                                                                                                                                                                                                                              | 8                 |
| fuck, snot                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 7                 |
| piss                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 5                 |
| truth                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 4                 |
| dust, something, what                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 3                 |
| attitude, behavior, bleep, breath, innocence, language, life, love, rebellion, that, them                                                                                                                                                                                                                                                                                                                                                                               | 2                 |
| answer, appetite, arrogance, baby, beast, blood, borscht, contract, creativity, culture, curiosity, death, defiance, desire, dirt, divorce, earnestness, fight, goodness, humanity, idea, idealism, identity, info, information, kuso, meltdown, memory, money, nearsightedness, notion, opinion, plumb, poetry, poop, reputation, sand, sass, selfishness, sin, snow, spirit, stew, stream, thing, ticket, trap, understanding, weakness, whey, wrinkle, you-know-what | 1                 |
| TOTAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 727               |

This strongly suggests that there is a ‘beat – out of’ construction in present-day English.

There is no doubt about the fact that *beat the hell out of* is idiomatic. But the ‘beat – out of’ construction is very much alive, and seems to sanction such expressions as *beat a confession out of her* or *beat the truth out of you*. Now it seems quite strange to claim that *beat the hell out of* is to be kept apart from all these expressions simply because *beat the hell out of* is idiomatic. In other words, to claim that the form-meaning correspondence suddenly becomes opaque when *the hell* appears in the post-verbal position of the ‘beat – out of’ construction does not make sense.

It seems reasonable, therefore, to analyze the ‘beat – out of’ construction closely and then to examine how *beat the hell out of* is related to the ‘beat – out of’ construction.

## 5.2 Five types of *beat – out of*

### 5.2.1 ‘Content coming out of a container’ type

A close examination reveals that the nouns found to occur in ‘beat – out of’ in the three corpora divide into five types. The first type, the ‘content coming out of a container’ type, is exemplified in (13) and consists of the following nouns: *blood*, *dirt*, *dust*, *sand*, *snow*, *stuffing*, and *tar*.

- (13) a. Anna Scott was *beating the dust out of a rug* in Mrs. Lessing’s side yard.  
 b. ... dozens of people rhythmically swung items over their heads and onto concrete slabs, literally *beating the dirt out of clothing and bedding* that was then spread on the stairs above to dry in the sun. (both from COCA)

In (13a), Anna Scott beat a rug, thereby forcing the dust inside the rug to move out. Crucially, by beating a rug, Anna Scott was applying a force to the dust inside it, as schematically represented in Figure 5.1.

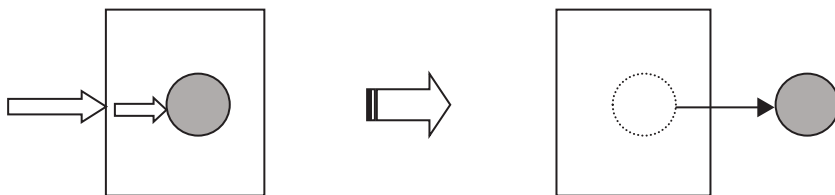
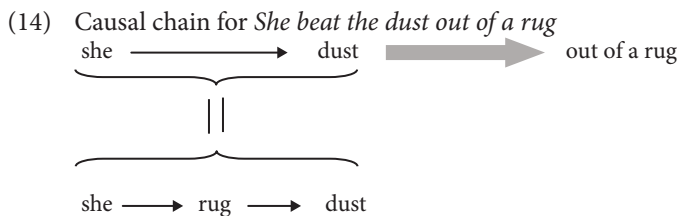


Figure 5.1 ‘beat the content out of a container’ schema

Accordingly, *She beat the dust out of a rug* can be represented in terms of a causal chain as in (14).



The sequence of force-transmissions that flows from *she* to *the rug* and to *the dust* is compressed into a force-transmission segment that starts with *she* and ends with *the dust*, thereby conferring the status of a force-recipient upon *the dust*. Alternatively, (15a) can be paraphrased with (15b).

- (15) a. She beat the dust out of a rug.  
 b. She did a ‘BEAT-AS-PUSH’ action on the dust inside a rug, and as a result the dust moved out of the rug.

In short, a strong force applied to a container causes what is inside the container to be propelled out.

Thus, the first type qualifies as a full-fledged resultative in that the post-verbal NP is indeed a force-recipient.

### 5.2.2 ‘Get rid of’ type

The second type is exemplified in (16) and (17) and consists of the following nouns: *appetite, arrogance, attitude, baby, beast, behavior, breath, creativity, culture, curiosity, defiance, desire, devil, earnestness, fight, French, goodness, habit, humanity, idea, idealism, identity, innocence, language, life, love, meltdown, memory, nearsightedness, nonsense, notion, opinion, plumb, poetry, rebellion, reputation, sass, selfishness, sin, spirit, stew, stiffness, stream, weakness, and wrinkle*.

- (16) a. We beat those attitudes out of them.  
 b. You can beat the rebellion out of some, but the really strong ones never surrender.  
 c. ... the Kremlin is using batons to beat out of Russian citizens the very idea of mass protests. (all from COCA)
- (17) a. His memories had been beaten out of him ...  
 b. The only reason why I didn’t beat that baby out of you was because you kept the pregnancy from me! (both from COCA)

At first glance, this second type seems to be no different from the first type. But while the content entity moves out of the container entity as a result of the beating in the first type, this is not the case with the second type: The content entities

(attitude, rebellion, idea, memory, baby) do not move to some other place. Rather, they cease to exist. Accordingly, this type can be characterized by means of the ‘content-removing’ schema in Figure 5.2.

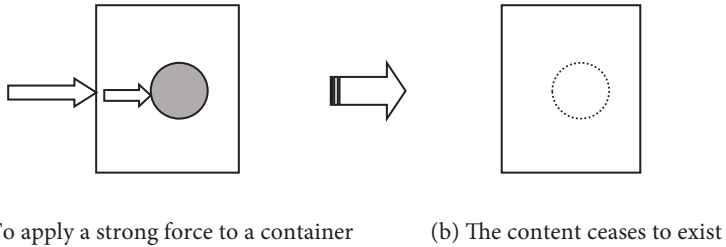


Figure 5.2 ‘Content-removing’ schema

So this second type is referred to as the ‘get rid of’ type.

But how come the content entity ceases to exist, rather than moving to some other place? This is because the *out of*-PP is understood metaphorically. Lakoff (1990) states about the EXISTENCE IS LOCATION HERE; NONEXISTENCE IS LOCATION AWAY metaphor as follows: “Since change is motion to a bounded area, and existence is metaphorized as a bounded area around where we are, something can *come into* existence or *go out of* existence ...” (Lakoff 1990: 62) Given this metaphor, moving out of a container is understood as going out of existence.

### 5.2.3 ‘Get by coercion’ type

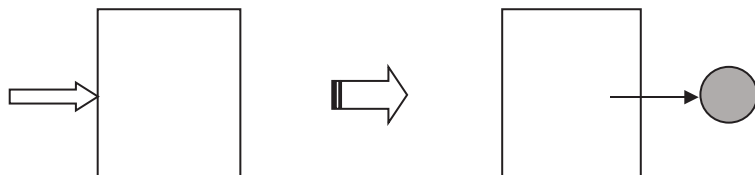
The third type, as exemplified in (18), consists of the following nouns: *answer*, *borscht*, *confession*, *contract*, *divorce*, *info*, *information*, *money*, *ticket*, *trap*, *truth*, and *whereabouts*.

- (18) a. Not one piece of evidence. The cops decided he did it, *beat a confession out of him*, and now they’re going to kill him. (COCA)  
 b. I’ll *beat the truth out of the maniac*. (BNC)  
 c. ... but his mother had guessed as much and *beaten her daughter’s whereabouts out of him* with a belt. (BNC)  
 d. We’ll *beat the information out of the little wench!* (COCA)

This type sharply contrasts with the previous two types in that what comes out of a person as a result of the beating is not necessarily inside the person prior to the beating. Take *beat a confession out of him*, for example. A confession is not something present inside a person. Rather, all one has inside one’s head is information or a secret, and it is only when that information or secret comes out of one’s mouth that a “confession” comes into existence. That is, the post-verbal NP entities express something that is effected by the beating.

Note also that the entity being beaten out of a person is not necessarily lost to the person. Thus while the money beaten out of a person may no longer be in the possession of that person, this is not the case with information. After all, even after some information is beaten out of a person, that person still knows that information.<sup>52</sup>

Accordingly, this type is referred to as the ‘get by coercion’ type. This third type may be characterized by the ‘effect-inducing’ schema in Figure 5.3.



- (a) To apply a strong force to a “container”      (b) Something comes out of the “container”

Figure 5.3 ‘Effect-inducing’ schema

In (18) what is asserted to move out of a person may be information or something having to do with information. In that case, something moving out of a human is understood in terms of the “conduit metaphor” in the sense of Reddy (1979), according to which thoughts and feelings are ejected by speaking or writing into an external “idea space,” as illustrated in (19).

- (19) Mary poured out all of the sorrow she had been holding in for solong.  
(Reddy, 1979, p. 291)

But not all instances of the ‘get rid of’ type can be characterized in this way. Thus the sentences in (20) seem to instantiate the ‘effect-inducing’ schema in Figure 5.3, but they are not amenable to a conduit metaphor-based characterization.

- (20) a. ... then Mr. Winn came over, hollering about the rent. Said it hadn’t been paid in three months and he wanted his money right then or he’d put us out in the street and *beat the money out of us*.  
b. You want me to *beat that fucking contract out of him* right now?  
c. ... she gave Lute *the divorce he had beaten out of her* ... (all from COCA)

52. This is a characteristic of information transfer. See Jackendoff (1990, p. 27) and Iwata (1995, p. 185) for discussion.



### 5.2.4 ‘Physiological effect’ type and ‘emotional effect’ type

The fourth type, as exemplified in (21), consists of the following words: *crap*, *kuso*, *piss*, *poop*, *snot*, and *whey*.

- (21) a. In fact, he’d *beaten the crap out of two bailiffs* ... (BNC)  
 b. *Beat the piss out of her!* (COCA)  
 c. ... she would have *beat the poop out of all of them* ... (COCA)

Most of these words are scatological terms. Note, however, that *snot* as in (22) is not strictly feces.

- (22) Told him he didn’t live there anymore, then proceeded to *beat the snot out of him*. (COCA)

Nevertheless, all these words have one thing in common: When people are subjected to a very strong physical force, such normally unmentionable things may be triggered. So this fourth type is referred to as the ‘physiological effect’ type. Like the third type, the fourth type is characterized by the ‘effect-inducing’ schema in Figure 5.3.

Lastly, the fifth type is exemplified in (23) and consists of the following words: *fuck*, *bejesus* (*bejeezus*), and *heck*.

- (23) a. Derek stares at Seth, ready to *beat the fuck out of him*.  
 b. And then one day they decide to *beat the living bejesus out of your dear friend*.  
 c. I knew my neighbor would *beat the heck out of his wife* and then go to church. (all from COCA)

Crucially, all these words are taboo interjections, as illustrated in (24).

- (24) a. “Fuck,” Tony swore, and ran to the chute controls.  
 b. Holy bejesus, it’s worse than I thought.  
 c. “Heck, there’s no doubt in my mind about that,” Cal said. (all from COCA)

One interesting fact, then, is that various strategies are employed to avoid directly mentioning the word: *you-know-what* as in (25a); omission of part of the word as in (25b); *bleep* (= a short, high-pitched sound, often used in TV programs to drown out the taboo word) as in (25c); and an indication of an expletive word being deleted as in (25d).

- (25) a. Because he thinks you are a terrorist, and he’s going to *beat the you-know-what out of you*.  
 b. If I had been there, I would have *beat the f- out of every one of them*.

- c. He told me that he was going to *beat the bleep out of me* ...  
 d. He is just going to *beat the expletive deleted out of me*. (all from COCA)

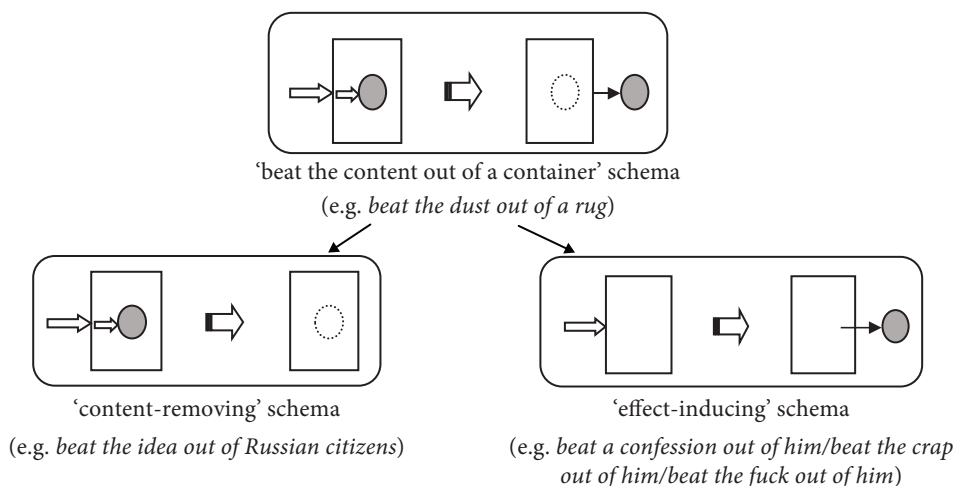
It comes as no surprise, therefore, that these words appear in ‘beat – out of.’ After all, these interjection words are likely to be uttered by a person who has been beaten strongly. Since these interjection words express emotional effects of a person having been beaten strongly, this fifth type is referred to as the ‘emotional effect’ type, contrasting with the fourth type, which expresses physiological effects of being beaten. But like the fourth type, the fifth type is characterized by the ‘effect-inducing’ schema in Figure 5.3.

### 5.2.5 What the three schemas tell us

To sum up the discussion so far, the five types of ‘beat – out of,’ as exemplified in (26), can be characterized in terms of the three schemas: the ‘beat the content out of a container’ schema for (26a); the ‘content-removing’ schema for (26b); and the ‘effect-inducing’ schema for (26c), (26d), and (26e).

- (26) a. She beat the dust out of a rug.  
 b. They beat the idea out of Russian citizens.  
 c. They beat a confession out of him.  
 d. They beat the crap out of him.  
 e. They beat the fuck out of him.

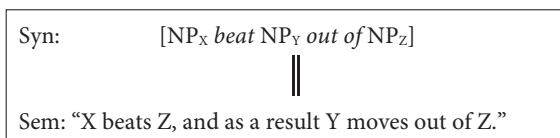
The three schemas in turn can be related as shown in Figure 5.4.



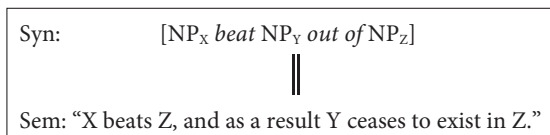
**Figure 5.4** Relations between the schemas for ‘beat – out of’

With the ‘beat the content out of a container’ schema, as a result of the force being applied to the content entity, the content entity moves out of the container. This result component actually comprises two aspects: That of the content moving to a place outside the container, and that of the content being no longer inside the container. With the ‘content-removing’ schema, focus is on the second aspect. With the ‘effect-inducing’ schema, by contrast, focus is on the first aspect. Thus the relatedness among the five types can be captured by means of the three schemas.

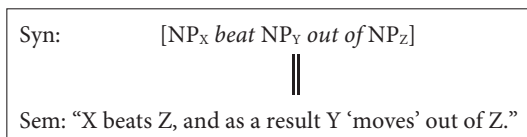
We thus seem to be justified in positing (at least) the following three constructions to accommodate the five types of ‘beat – out of’ constructions: That in Figure 5.5 for the ‘content coming out of a container’ type; that in Figure 5.6 for the ‘get rid of’ type, and that in Figure 5.7 for the remaining three types.



**Figure 5.5** ‘Content coming out of a container’ type of ‘beat – out of’ construction



**Figure 5.6** ‘Content-removing’ type of ‘beat – out of’ construction



**Figure 5.7** ‘Effect-inducing’ type of ‘beat – out of’ construction

Relatedly, we are now in a position to identify the status of the post-verbal NP entity from the viewpoint of the proposed force-recipient account. In (26a), which is understood in terms of the ‘beat the content out of a container’ schema, the post-verbal NP *the dust* is indeed a force-recipient, in that (27a) can be paraphrased with (27b), as seen in 5.2.1.

- (27) a. She beat the dust out of a rug.  
 b. She did a ‘BEAT-AS-PUSH’ action on the dust inside a rug, and as a result the dust moved out of the rug.

Something similar can be said of (26b), where the content entity is construed as being acted upon (though metaphorically).

But in the other three sentences (26c), (26d), and (26e), the post-verbal NPs are not strictly force-recipients, at least not in the schemas described. Nevertheless, because these schemas are related to the ‘beat the content out of a container’ schema, the force-recipient status of the post-verbal NP seems to be carried over. Conceivably, this is why passives are allowed for these extensions.

- (28) a. Gilmour says a *confession was beaten out of him* by police. (BNC)  
 b. Mike Petrov was getting *the crap beaten out of him*. (COCA)  
 c. Then I get *the heck beat out of me* ‘cause I’m helping my daughter. (COCA)

### 5.3 From *beat the hell out of* to ‘V the hell out of’

#### 5.3.1 Beat the hell out of as the ‘emotional effect’ type

Having identified the five types of ‘beat – out of’ constructions, we are now in a position to determine which type *beat the hell out of* belongs to. Obviously, *beat the hell out of* belongs to the ‘emotional effect’ type, as *hell* is a prime facie interjection word.<sup>53</sup>

- (29) “What the hell!” (BNC)

In previous studies on interjections (Ameka 1992, Meinard 2015), two types of interjections are distinguished: Primary interjections, which can be used only as interjections (e.g. *ouch, wow, argh*), and secondary interjections, which originally belong to lexical categories like verbs or nouns but which are used as interjections (e.g. *damn, god, hell*). Crucially, when nouns and proper names are used as secondary interjections, they lose their semantic content. Meinard (2015) observes that “one does not mean *hell*, the place where bad people burn after death when one says: ‘Hell! I forgot my keys once again.’” (Meinard, 2015, p. 154)

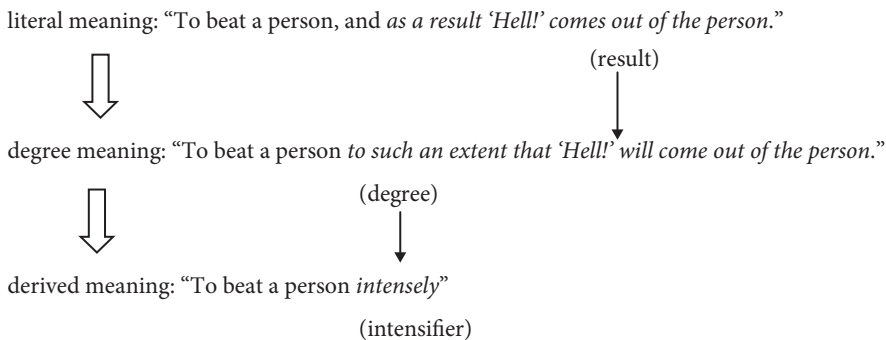
Meinard (2015) goes on to say as follows: “Thus, one can say that words used as secondary interjections lose their exact referential value, but still keep some illocutionary features, like the ability to express strong feelings.” (Meinard, 2015, p. 154)

Given this characteristic of secondary interjections, it is no wonder that native speakers of English cannot pin down the exact referent of *the hell* in *beat the hell out of*.

53. Haik (2012) characterizes the meaning of the ‘V the hell out of’ construction as “The event I am describing is so intense that it causes me to utter ‘Hell!’”. But it is the post-verbal NP entity, rather than the speaker, who utters “Hell!”

### 5.3.2 From literal meaning to intensifier meaning

Now that the literal meaning of *beat the hell out of* is identified, let us next consider how the intensifier meaning arises. This follows essentially the same procedure as with *laugh one's head off* in the last chapter. Thus *beat the hell out of* literally means “to beat a person, and as a result ‘Hell!’ comes out of the person.” The result component of this literal meaning is then re-interpreted as a degree: “to such an extent that ‘Hell!’ will come out of the person.” This degree component is then taken to mean “intensely.”



**Figure 5.8** From literal meaning to intensifier meaning of *beat the hell out of*

Consequently, a ‘beat the hell out of’ construction will look something like Figure 5.9.

|                                                                                           |                                                                |
|-------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Syn:                                                                                      | [NP <sub>X</sub> <i>beat the hell out of</i> NP <sub>Y</sub> ] |
|                                                                                           |                                                                |
| Sem: LIT: “X gives a strong physical impact to Y, and as a result ‘Hell!’ comes out of Y” |                                                                |
| DER:                                                                                      | “X Vs Y <i>intensely</i> ”                                     |

**Figure 5.9** ‘Beat the hell out of’ construction

### 5.3.3 Polysemy network of ‘V the hell out of’

Now the ‘V the hell out of’ construction allows for various verbs to appear in the V slot. The range of verbs attested in this construction in the BNC, the WB, and COCA are summarized in Tables 5.5, 5.6, and 5.7, respectively.

**Table 5.5** BNC counts of 'V the hell out of'

|                                                                                                                          | _____ the hell out of NP |
|--------------------------------------------------------------------------------------------------------------------------|--------------------------|
| beat                                                                                                                     | 10                       |
| knock                                                                                                                    | 6                        |
| kick, scare                                                                                                              | 4                        |
| bash, surprise                                                                                                           | 3                        |
| play, frighten, irritate, annoy                                                                                          | 2                        |
| slug, practice, muddle, mark, tear, envy, bolt, depress, blast, smash,<br>shake, frustrate, confuse, blow, rake, scratch | 1                        |
| TOTAL                                                                                                                    | 54                       |

**Table 5.6** WB counts of 'V the hell out of'

|                                                                                                                                                                                                                                                         | _____ the hell out of |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| scare                                                                                                                                                                                                                                                   | 31                    |
| beat                                                                                                                                                                                                                                                    | 25                    |
| knock                                                                                                                                                                                                                                                   | 8                     |
| frighten                                                                                                                                                                                                                                                | 5                     |
| annoy, bug, irritate                                                                                                                                                                                                                                    | 4                     |
| impress, kick                                                                                                                                                                                                                                           | 3                     |
| bash, bomb, resent, surprise, thump                                                                                                                                                                                                                     | 2                     |
| batter, belt, blast, blow, bore, clean, confuse, depress, eat, embarrass,<br>enjoy, exploit, frustrate, furiate, hitch-hike, intimidate, lay, leather,<br>love, market, miss, play, plug, pound, rev, rock, shock, smack, spray,<br>study, tease, whack | 1                     |
| TOTAL                                                                                                                                                                                                                                                   | 129                   |

**Table 5.7** COCA counts of 'V the hell out of'

|               | _____ the hell out of |
|---------------|-----------------------|
| scare         | 301                   |
| beat          | 196                   |
| knock         | 27                    |
| annoy         | 25                    |
| bomb, impress | 23                    |
| surprise      | 21                    |
| kick          | 19                    |
| bother        | 17                    |
| enjoy         | 16                    |

*(continued)*

Table 5.7 COCA counts of ‘V the hell out of’ (*continued*)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | _____ the hell out of |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| confuse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 14                    |
| bore, shock                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 13                    |
| bug                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 12                    |
| blow                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 11                    |
| irritate                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 10                    |
| depress, pound                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 9                     |
| slap                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 8                     |
| frighten, intimidate, kill                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 7                     |
| blast, embarrass, play, respect, worry                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 6                     |
| admire, frustrate, love, miss, shoot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5                     |
| burn, cover, cut, read, resent, sell, spook, startle, tax, whack                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 4                     |
| amuse, appreciate, harass, hit, investigate, punch, sing, sue, tear                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3                     |
| advertise, aggravate, bang, bite, complicate, cook, disappoint, hammer, infuriate, insult, irk, jerk, market, murder, mutate, pinch, promote, pump, push, puzzle, regulate, scratch, shake, smack, smash, spoil, squeeze, suck, wear, whip                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2                     |
| abuse, accelerate, affect, alienate, amaze, appeal, attack, batter, bawl, beep, belt, boil, bum, butt, captivate, catch, chase, claw, clear, coach, conduct, cream, criticize, dance, date, dig, discuss, disgust, disturb, drill, drive, drug, eat, engineer, entertain, excite, excuse, explain, fascinate, fear, fine, flatter, frack, fraternize, freak, fry, furlough, Google, grip, habeas, hail, increase, interview, ionize, jinx, kiss, like, listen, lose, micromanage, mince, motivate, nuke, nurse, offend, plan, plug, polish, praise, process, prosecute, randomize, report, repress, research, ride, rip, romance, sack, scheme, scoop, scoot, scrub, sensationalize, shame, shampoo, skate, slam, slice, sodomize, spam, spray, stain, sting, stir, stomp, stroke, strum, study, tantalize, Taser, tease, tend, terrify, tit-twist, torment, torture, train, tranquilize, trash, trust, twist, want, watch, whup, win, wind, work, zap | 1                     |
| TOTAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 1089                  |

As can be easily seen, verbs of physical impact (e.g. *beat, kick, knock*) and verbs of psychological impact (e.g. *scare, frighten*) are invariably among the most frequent verbs across the three corpora. Therefore, it seems likely that verbs of physical impact (e.g. *beat, knock, kick, bash, slug, blast, smash, shake, blow*) form class A, with the meaning of “to give a strong physical impact.”

- (30) a. Well, first we’re gonna *beat the hell out of you*.  
 b. *Knocking hell out of each other* in the interview-room, I think.

(both from BNC)

Class A forms a verb-class-specific construction (Croft 2003, 2012, Iwata 2008a) with *beat the hell out of* as its central member.

Metaphorically related to class A is class B (e.g. *scare, surprise, frighten, irritate, annoy, depress, frustrate, confuse*), with the meaning of “to give a strong psychological impact.”

- (31) a. The gonk *scared the hell out of me*.  
 b. I knew Jackson was going to *surprise the hell out of a whole lot of people*.  
 (both from BNC)

Now some verbs (e.g. *play, practice, scratch, muddle, rake, bolt, tear*) do not strictly involve giving a strong impact, but rather mean “to affect someone or something very much.”

- (32) a. I liked it so much that I used it (= a guitar) for the show and *played the hell out of it*, it sounded so good.  
 b. I came up with a lot of very hard guitar parts for this album and I had to *practise the hell out of them* so I could pull them off. (both from BNC)

This is class C.

Still other verbs (e.g. *envy, mark*) do not even possess the sense of affecting anybody. Rather, they mean “to do to a great degree.”

- (33) a. I recall saying to Peter Revson at the time that I really *envied the hell out of him*.  
 b. You won’t have any trouble with her, Mike, so give Patrick all the back-up heneeds and both *mark the hell out of Randy*. (both from BNC)

This is class D.

These four classes are related to each other, as shown in Figure 5.10.

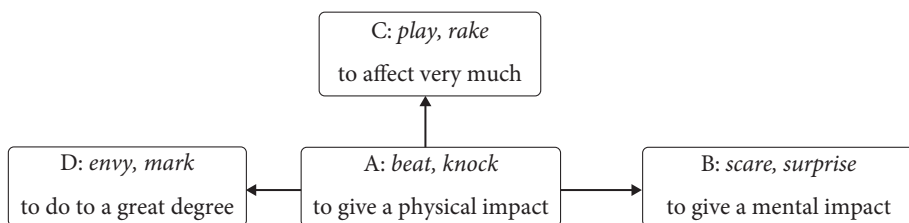


Figure 5.10 Network of ‘V the hell out of’

Consequently, we can posit the following four constructions for ‘V the hell out of’:



|           |                                                                                 |
|-----------|---------------------------------------------------------------------------------|
| Syn:      | [NP <sub>X</sub> V <i>the hell out of</i> NP <sub>Y</sub> ]                     |
|           |                                                                                 |
| Sem: LIT: | “X gives a strong physical impact to Y, and as a result ‘Hell!’ comes out of Y” |
| DER:      | “X Vs Y intensely”                                                              |

Figure 5.11 ‘V the hell out of’ class A construction

|           |                                                                                      |
|-----------|--------------------------------------------------------------------------------------|
| Syn:      | [NP <sub>X</sub> V <i>the hell out of</i> NP <sub>Y</sub> ]                          |
|           |                                                                                      |
| Sem: LIT: | “X gives a strong psychological impact to Y, and as a result ‘Hell!’ comes out of Y” |
| DER:      | “X Vs Y intensely”                                                                   |

Figure 5.12 ‘V the hell out of’ class B construction

|           |                                                               |
|-----------|---------------------------------------------------------------|
| Syn:      | [NP <sub>X</sub> V <i>the hell out of</i> NP <sub>Y</sub> ]   |
|           |                                                               |
| Sem: LIT: | “X affects Y greatly, and as a result ‘Hell!’ comes out of Y” |
| DER:      | “X Vs Y intensely”                                            |

Figure 5.13 ‘V the hell out of’ class C construction

|           |                                                                                         |
|-----------|-----------------------------------------------------------------------------------------|
| Syn:      | [NP <sub>X</sub> V <i>the hell out of</i> NP <sub>Y</sub> ]                             |
|           |                                                                                         |
| Sem: LIT: | “X internally acts to a great degree towards Y, and as a result ‘Hell!’ comes out of Y” |
| DER:      | “X Vs Y intensely”                                                                      |

Figure 5.14 ‘V the hell out of’ class D construction

This polysemous structure is based on the force dynamics of *beat the hell out of* (i.e. ‘effect-inducing’ schema), with varying degrees of force dynamics being discerned. Thus with class A and class B, the notion of a strong force being exerted is still present and, therefore, passives are possible. Thus in the BNC, two *get*-passives are attested as shown in (39).

- (34) a. Then on the other hand you go home and do all your stupid humour on your wife and *get fookin’ hell kicked out of you*.  
 b. *I got the hell beat out of me* and I’ve been a Mexican ever since.  
 (both from BNC)

In the WB, only one *have*-passive is attested.

- (35) I was evacuated to Hertfordshire during the war, but I didn’t like being an evacuee and I ran away – only to have *the hell beaten out of me* and sent back!  
 (WB)

And in COCA, five *have*-passives and 11 *get*-passives are attested, with the range of verbs as summarized in Tables 5.8 and 5.9.

**Table 5.8** *Have*-passives of ‘V the hell out of’ in COCA

|                    | have the hell _____ -en out of |
|--------------------|--------------------------------|
| beat               | 2                              |
| kick, pound, scare | 1                              |
| TOTAL              | 5                              |

**Table 5.9** *Get*-passives of ‘V the hell out of’ in COCA

|       | get the hell _____ -en out of |
|-------|-------------------------------|
| kick  | 6                             |
| beat  | 5                             |
| TOTAL | 11                            |

- (36) a. Another fellow and I was caught stealing wood, and really had *the hell pounded out of us*, especially me.  
 b. People are having *the hell scared out of them*. (both from COCA)

With classes C and D, by contrast, the notion of the force dynamics is rather tenuous. In particular, with class D, even intransitive verbs may appear.

- (37) I’ve been listening the hell out of your tape. (COCA)

#### 5.3.4 Interim conclusion

We are now in a position to evaluate whether the claim that the ‘V the hell out of’ construction cannot be related to “any other construction in the language” (Perek 2016) is true or not. The answer is already obvious: This construction CAN be related to a well-established pattern. It is just that the pattern is exemplified by (38), not by (39).

- (38) a. Anna Scott was *beating the dust out of a rug* in Mrs. Lessing’s side yard. (COCA)  
 b. Gilmour says a confession was *beaten out of* him by police. (BNC)

- (39) He took the gun out of her hands.

Significantly, all the three schemas characterizing the five types of ‘beat – out of’ make essential reference to a container. Accordingly, the ‘beat – out of’ construction is compatible with the *out of*-PP alone.

- (40) a. \*Gilmour says a confession was *beaten off/from* him by police.  
 b. \*Or do you want me to *beat* the truth *off/from* you?

It is no wonder, therefore, that only the *out of*-PP is allowed in the ‘V the hell out of’ construction.<sup>54</sup>

- (41) \*He kicked the hell *off/from* me.

Also, it is no wonder that *the hell* is not referential, in that interjections are non-referential. Thus neither of the two arguments advanced by Perek (2016) is valid.

## 5.4 ‘V the shit out of’ and ‘V the daylight out of’

### 5.4.1 Which types do beat the shit out of and beat the daylight out of belong to?

It is now time to address the second issue, i.e. are all the ‘V – out of’ expressions really synonymous? Let us start with ‘V the shit out of’ and ‘V the daylight out of’, as exemplified in (42).

- (42) a. It still *scares the shit out of* me.  
 b. Quite the contrary, he *scares the living daylight out of* me.

(both from BNC)

These two expressions can be analyzed in the same way as ‘V the hell out of’. Thus our analysis starts by identifying which types of ‘beat – out of’ *beat the shit out of* and *beat the daylight out of* belong to.

Clearly, *beat the shit out of* belongs to the ‘physiological effect’ type. One thing that needs to be mentioned in this connection is that sometimes the distinction between the ‘physiological effect’ type and the ‘emotional effect’ type is blurred.

54. Thus Haïk’s (2012) analysis, which characterizes the *out of*-PP in terms of the aspectual particle *out* meaning “exhaustion,” is doubly problematic. On the one hand, the *out of*-PP in question cannot be reduced to the particle *out* as in (i), but true aspectual particles cannot be followed by a PP as in (ii).

- (i) a. They beat the hell out of me.  
 b. \*They beat the hell out.  
 (ii) a. John ate the cake up.  
 b. John ate the cake up [<sub>pp</sub> into/onto/to??].

(Jackendoff 2002b)

On the other hand, this analysis fails to see that the *out of*-PP marks a source, exactly like ordinary *out of*-PPs.

Thus *shit* and *crap* are ambivalent between these two types, as scatological terms are often used as (secondary) interjections.

- (43) a. “Oh, shit!”  
 b. “Crap,” she said. (both from BNC)

What about *beat the daylight out of*, then? Note in this connection that there is a folk understanding in English according to which when one is hit on the head strongly, one sees flashes of light. This folk understanding is the basis for the expression *see stars*:

- (44) a. With the blow on his head, Anton *saw stars*: flashing, exploding in his eyes: blue and red and colours he had not known existed. (BNC)  
 b. One of Anderton’s mates was hit hard in the face and *saw stars*. (WB)

It seems reasonable to suppose, then, that this folk understanding is also behind *beat the daylight out of*. Accordingly, *beat the daylight out of* also belongs to the ‘physiological effect’ type.

#### 5.4.2 Polysemous networks of ‘V the daylight out of’ and ‘V the shit out of’

Let us next see which verbs may appear in the V slot of ‘V the shit out of’ and ‘V the daylight out of’. The range of verbs found to occur in ‘V the daylight out of’ in the three corpora is summarized in Tables 5.10, 5.11, and 5.12.

**Table 5.10** BNC counts of ‘V the daylight out of’

|                                                                                                | _____ the daylight out of NP |
|------------------------------------------------------------------------------------------------|------------------------------|
| scare                                                                                          | 9                            |
| beat                                                                                           | 5                            |
| frighten                                                                                       | 4                            |
| terrify, run, tax, knock, crush, shut, train, hammer, shake, kiss,<br>spank, smash, bash, kick | 1                            |
| TOTAL                                                                                          | 32                           |

**Table 5.11** WB counts of ‘V the daylight out of’

|                                                | _____ the daylight out of NP |
|------------------------------------------------|------------------------------|
| scare                                          | 16                           |
| beat, frighten                                 | 8                            |
| kick                                           | 4                            |
| bash, hype, knock, pester, pound, punch, whack | 1                            |
| TOTAL                                          | 43                           |

**Table 5.12** COCA counts of ‘V the daylight out of’

|                                                                                                                                                                                                                                                     | _____ the daylight out of NP |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| scare                                                                                                                                                                                                                                               | 76                           |
| beat                                                                                                                                                                                                                                                | 20                           |
| kick                                                                                                                                                                                                                                                | 6                            |
| bomb, knock, pound                                                                                                                                                                                                                                  | 3                            |
| slap, thrash, whack                                                                                                                                                                                                                                 | 2                            |
| aggravate, annoy, bite, blitz, bore, bother, bug, burn, chew,<br>correct, develop, drain, fender, frighten, frustrate, murder,<br>nag, offend, permit, promote, punch, scour, schwag, slaughter,<br>slice, squeeze, startle, surprise, tickle, whip | 1                            |
| TOTAL                                                                                                                                                                                                                                               | 147                          |

The range of verbs found to occur in ‘V the shit out of’ in the three corpora is summarized in Tables 5.13, 5.14, and 5.15.

**Table 5.13** BNC counts of ‘V the shit out of’

|                                                                      | _____ the shit out of NP |
|----------------------------------------------------------------------|--------------------------|
| scare                                                                | 10                       |
| kick                                                                 | 8                        |
| beat                                                                 | 6                        |
| knock                                                                | 3                        |
| push, bend, love, tear, irritate, beat, frighten, pound, punch, blow | 1                        |
| TOTAL                                                                | 37                       |

**Table 5.14** WB counts of ‘V the shit out of’

|                                           | _____ the shit out of NP |
|-------------------------------------------|--------------------------|
| beat                                      | 9                        |
| kick                                      | 8                        |
| scare                                     | 6                        |
| blow, fuck, irritate, shake, shock, whale | 1                        |
| TOTAL                                     | 29                       |

Table 5.15 COCA counts of ‘V the shit out of’

|                                                                                                                                                                                                                                                                                                                                                                                                                      | _____ the shit out of NP |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| beat                                                                                                                                                                                                                                                                                                                                                                                                                 | 162                      |
| scare                                                                                                                                                                                                                                                                                                                                                                                                                | 116                      |
| kick                                                                                                                                                                                                                                                                                                                                                                                                                 | 41                       |
| slap                                                                                                                                                                                                                                                                                                                                                                                                                 | 8                        |
| knock                                                                                                                                                                                                                                                                                                                                                                                                                | 7                        |
| smack                                                                                                                                                                                                                                                                                                                                                                                                                | 6                        |
| bomb, pound                                                                                                                                                                                                                                                                                                                                                                                                          | 5                        |
| blow, fuck, sing, whip                                                                                                                                                                                                                                                                                                                                                                                               | 4                        |
| blast, bore, bug, shock                                                                                                                                                                                                                                                                                                                                                                                              | 3                        |
| annoy, freak, irritate, kick and beat, love, shoot, spoil, startle, strangle, sue, tear, watch, worry                                                                                                                                                                                                                                                                                                                | 2                        |
| abuse, beat and bite, bite, bleed, bother, burn, carve, chew, collect, coordinate, cut, dent, direct, drop, drown, embarrass, embrace, frighten, gouge, hassle, hit, insult, irk, lead, log, miss, negotiate, peck, play, protect, punch, puzzle, rip, sandblast, sell, shell, shrink, smoke, snake, starch, sting, study, subpoena, surprise, sweat, test-screen and micromarket, toss, track, vibrate, wail, whack | 1                        |
| TOTAL                                                                                                                                                                                                                                                                                                                                                                                                                | 455                      |

Looking at these tables, it seems safe to say that both ‘V the daylights out of’ and ‘V the shit out of’ follow the same pattern as ‘V the hell out of’: Both verbs of physical impact (*beat*, *kick*) and verbs of psychological impact (*scare*, *surprise*) are among the most frequent verbs. A network may be formed around these representative verbs, like ‘V the hell out of’.

To recapitulate, the three expressions (‘V the hell out of’, ‘V the daylights out of’, and ‘V the shit out of’) behave essentially the same way, apparently supporting the claim that all these idiomatic expressions are synonymous.

In a sense, this is quite understandable. On the assumption (adopted here) that the basic character of the form-meaning correspondence of ‘V the hell out of’ and its related expressions can be traced back to the ‘beat – out of’ construction, there is nothing mysterious about the appearance of *the hell*, *the daylights*, and *the shit* in these idiomatic expressions, for they all express entities construed as moving out of a strongly impacted person. Accordingly, it is no less unsurprising that all these three expressions are basically the same.

## 5.5 Possible origins of ‘V – out of’ idioms

### 5.5.1 *Beat the devil out of*

Remarkably, this conclusion sharply contrasts with the view of Hoeksema & Napoli (2008), who suggest *beat the devil out of* as a possible origin of ‘V the hell out of’ and its related constructions:

It is likely that one origin of the B-construction is exorcism: beating the devil out of somebody. Most early occurrences of *beat the devil out of X* describe either actual exorcism of the devil or a beating meant to rectify a rebellious or wayward spirit. (Hoeksema & Napoli, 2008, p. 371)

Note, however, that *beat the devil out of someone* as exemplified in (45) belongs to the ‘get rid of’ type in our classification, along with *beat the evil out of*, *beat the beast out of* and *beat the sin out of*, as shown in (46).

(45) I got to *beat the Devil out of you*, child. (COCA)

(46) a. I waited all evening for the shout of anger, for him to come bursting in and *beat the evil out of the liar*. (BNC)

b. ... it seemed the preacher was *beating the unholy beast out of the man*. (COCA)

c. The shame Thrasher evokes here is layered: he is shamed for the supposed *sin of sexual desire*, which Sister Gilbert seeks to *beat out of his body* ... (COCA)

As can be easily seen, these expressions tend to be used literally or semi-literally in contexts where the evil or the beast is actually believed to reside inside the person to be beaten.

### 5.5.2 *Beat the stuffing out of*

But this does not mean that all the ‘V – out of’ idiomatic expressions exclusively belong to either the ‘physiological effect’ type or the ‘emotional effect’ type. We have *beat the stuffing out of* and *beat the tar out of*, as exemplified in (47).

(47) a. These days, in sports, youth often *beats the stuffing out of its elders*.  
 b. But I’d be damned if I’d tell them, and they *beat the tar out of me* for keeping that secret. (both from COCA)

These expressions seem to evoke a scene in which the content is inside the container prior to the beating, and then the content is caused to move outside by the beating. So they should belong to the first type, i.e. the ‘content coming out of a container’ type.

We have now arrived at the classification summarized in Table 5.16:

**Table 5.16** Idiomatic uses and their types

|                                          |                                |
|------------------------------------------|--------------------------------|
| 'content coming out of a container' type | stuffing, tar                  |
| 'physiological effect' type              | crap, piss, shit               |
| 'emotional effect' type                  | bejesus (bejeezus), heck, hell |

## 5.6 'V the life out of'

Let us now return to the original discussion. So far the three expressions 'V the hell out of,' 'V the daylight out of,' and 'V the shit out of' have been shown to be basically the same. What about 'V the life out of' as exemplified in (48) ?

(48) *You frightened the life out of us, Daddy.* (BNC)

The range of verbs found to appear in this expression in the three corpora is summarized in Tables 5.17, 5.18, and 5.19.

**Table 5.17** BNC counts of 'V the life out of'

|                                                 | _____ life out of NP |
|-------------------------------------------------|----------------------|
| frighten                                        | 24                   |
| scare                                           | 9                    |
| squeeze                                         | 5                    |
| choke, plague                                   | 3                    |
| crush, worry                                    | 2                    |
| hit, hug, kick, shake, shock, terrify, throttle | 1                    |
| TOTAL                                           | 55                   |

**Table 5.18** WB counts of 'V the life out of'

|                                                                                                                | _____ the life out of NP |
|----------------------------------------------------------------------------------------------------------------|--------------------------|
| scare                                                                                                          | 33                       |
| frighten                                                                                                       | 22                       |
| squeeze                                                                                                        | 20                       |
| choke                                                                                                          | 5                        |
| strangle                                                                                                       | 4                        |
| frustrate, intimidate, stifle                                                                                  | 2                        |
| beat, crush, drive, Google, irritate, pester, plague, pound, shake, shock, smack, tackle, tear, terrify, wring | 1                        |
| TOTAL                                                                                                          | 105                      |



Table 5.19 COCA counts of ‘V the life out of’

|                                                                                                                                                                                                                                                                          | ___ the life out of NP |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| squeeze                                                                                                                                                                                                                                                                  | 56                     |
| choke                                                                                                                                                                                                                                                                    | 35                     |
| scare                                                                                                                                                                                                                                                                    | 28                     |
| crush                                                                                                                                                                                                                                                                    | 12                     |
| shake                                                                                                                                                                                                                                                                    | 7                      |
| strangle                                                                                                                                                                                                                                                                 | 6                      |
| frighten, squash, wring                                                                                                                                                                                                                                                  | 3                      |
| beat, choke and batter, cut, hug, snuff, throttle                                                                                                                                                                                                                        | 2                      |
| annoy, blast, bleed, bludgeon, bore, chew, claw, cleanse, cook, fear,<br>filter, grill, grind, jiggle, knock, pound, practice test, press, pump,<br>ring, rip, scrub, shock, shoot, smash, smother and strangle, squelch,<br>suction-dredge, thrash, twist, wash, wheeze | 1                      |
| TOTAL                                                                                                                                                                                                                                                                    | 197                    |

These tables reveal that ‘V the life out of’ significantly differs from all three of the other expressions. The most frequent verbs are basically the same across ‘V the hell out of,’ ‘V the daylight out of,’ and ‘V the shit out of,’ as Table 5.20 shows: Verbs of physical impact (*beat, knock, kick*) and verbs of psychological impact (*scare, frighten*) are invariably found among the five or six most frequent verbs in the three expressions across the three corpora.

Table 5.20 Frequent verbs in ‘V the hell out of,’ ‘V the daylight out of,’ and ‘V the shit out of’

|                         |                                          |      |
|-------------------------|------------------------------------------|------|
| ‘V the hell out of’:    | beat, knock, kick, scare, bash, surprise | BNC  |
|                         | scare, beat, knock, frighten, annoy      | WB   |
|                         | scare, beat, impress, annoy, surprise    | COCA |
| ‘V the daylight out of’ | scare, beat, frighten                    | BNC  |
|                         | scare, beat, frighten                    | WB   |
|                         | scare, beat, kick, bomb, knock, pound    | COCA |
| ‘V the shit out of’     | scare, kick, beat, knock                 | BNC  |
|                         | beat, kick, scare                        | WB   |
|                         | beat, scare, kick, slap, knock           | COCA |

This is not the case with ‘V the life out of,’ however. While verbs of psychological impact (*scare, frighten*) are among the frequent verbs, verbs of physical impact (i.e. *beat, kick, or knock*) are conspicuously absent, as clearly seen in Table 5.21.

**Table 5.21** Frequent verbs in ‘V the life out of’

|                     |                                           |      |
|---------------------|-------------------------------------------|------|
| ‘V the life out of’ | frighten, scare, squeeze, choke, plague   | BNC  |
|                     | scare, frighten, squeeze, choke, strangle | WB   |
|                     | squeeze, choke, scare, crush, shake       | COCA |

As a matter of fact, *beat the life out of* is found only once in the WB and COCA. The situation is essentially the same with *kick the life out of* or *knock the life out of*, as seen in Tables 5.17 to 5.19.

Still another point of departure is that several verbs like *squeeze*, *choke*, or *strangle*, which are found frequently in ‘V the life out of,’ along with *scare* and *frighten*, are not found in the V slot of ‘V the hell out of,’ ‘V the daylight out of,’ or ‘V the shit out of.’ And herein lies a crucial difference between ‘V the life out of,’ on the one hand, and the three other expressions, on the other. Note that what these verbs (i.e. *squeeze*, *choke*, and *strangle*) have in common is that the actions denoted may actually bring about one’s death. Thus in the attested examples, the person or animal that undergoes the action of choking the life out of or of squeezing the life out of actually comes to die, as seen in the following.

- (49) a. Now, I did eventually get my father to tell me this; and, according to him, it was just as he *choked the last struggling life out of the dog* that he heard another scream ...
- b. The body of the creature began to wind around him. Although Thomas didn’t know whether it was poisonous, the creature surely had enough power to *squeeze the life out of him*. (both from BNC)
- (50) a. DOTING dad Alan Burgess fell asleep cuddling his baby – and *crushed the life out of her*. Tragic six-day-old Natalie died of a brain haemorrhage when Alan slumped forward, squeezing her skull.
- b. “I knew it all along. Knew it!” snapped Duvall ... and leaned down to take the monster by the throat and *throttle the life out of it*.
- c. The policemen knocked him to the ground and *kicked the life out of him*. (all from BNC)
- (51) But, charged by her courage, I drew a new strength and applied myself to nothing at all on earth except *wringing the life out of the monster* in my hands. (WB)

Thus ‘V the life out of’ has two types, depending upon whether the literal reading is actualizable or non-actualizable. It is only when the literal reading is non-actualizable as in (52) that ‘V the life out of’ can be said to be synonymous with other expressions like ‘V the hell out of.’

- (52) ... and resisted when he'd have *hugged the life out of her*. (BNC)

Contrary to Gross (1994), therefore, not all the 'V – out of' expressions are strictly synonymous.

## 5.7 Two types of complement alternation

### 5.7.1 *To death and shitless*

It has been shown in 5.2 and 5.3 that contrary to Perek (2016), the 'V the hell out of' construction is related to a well-established pattern in English, i.e. the 'beat – out of' construction. Then it has been shown in 5.4 through 5.6 that contrary to Gross (1994), not all the expressions concerned are strictly synonymous: At least, sometimes 'V the life out of' is completely literal. Thus while the idiomatic character of these expressions has tended to be emphasized in the previous studies, their form-meaning correspondence is regulated by the same mechanism responsible for those of ordinary, non-idiomatic expressions. One fact that seems to further support this view comes from the complement alternation which 'V the life out of' and 'V the shit out of' may exhibit.

Recall from Chapter 2 that it is possible to form two resultatives based on the verb *wipe* as in (53): Either a surface or the things that have been on the surface may be realized as a post-verbal NP.

- (53) a. He wiped the crumbs off the table.  
b. He wiped the table clean.

A similar alternation is possible with the resultatives based on *squeeze*: Either a container or the liquid that has been in the container may be realized as a post-verbal NP, as in (54).

- (54) a. She squeezed juice out of the lemon.  
b. She squeezed the lemon dry.

Now note that when 'V the life out of' is paired with resultatives accompanied by *to death* as in (55) and (56), these pairs may well be regarded as instances of complement alternation, exactly parallel to (53) and (54).<sup>55</sup>

- (55) a. You nearly *scared the life out of me!*  
b. It *scares me to death*.

55. Note that the complement alternation exhibited by resultatives has been little discussed either in previous studies on resultatives or in those on complement alternation (Dowty 1991, Huddleston 2002, Iwata 2008a, among others).

- (56) a. You *frightened the life out of* us, Daddy.  
 b. ... you *frightened me to death*.

It is also possible to pair ‘V the shit out of’ with resultatives accompanied by the result phrase *shitless* as in (57).

- (57) a. It still *scares the shit out of* me.  
 b. His nerve went totally, and now his own shadow *scares him shitless*.  
 (both from BNC)

These instances of complement alternation are not rare. Thus in the BNC, there are 10 instances of *scare the shit out of*, and 13 instances of *scare – shitless*; 10 instances of *scare the life out of*, and 18 instances of *scare – to death*; and 24 instances of *frighten the life out of*, and 29 instances of *frighten – to death*. Similarly in the WB, there are 33 instances of *scare the life out of*, and 42 instances of *scare – to death*; and there are 22 instances of *frighten the life out of*, and 21 instances of *frighten – to death*.

These facts seem to confirm that ‘V the life/shit out of’ is an ordinary resultative with a non-subcategorized object, in a larger system of argument structure constructions in English.<sup>56</sup>

### 5.7.2 *Out of one’s wits*

Lastly, notice that we have ‘V the wits out of’ as exemplified in (58).

- (58) People especially like to pat foals, and unfortunately usually on their face or head, which *scares the wits out of* them. (BNC)

This expression is attested in both the BNC and the WB, although the number is small and it is limited to verbs of psychological impact like *scare* or *frighten*, as shown in Tables 5.22 and 5.23.

**Table 5.22** BNC counts of ‘V the wits out of NP’

|                   | _____ the wits out of NP |
|-------------------|--------------------------|
| scare             | 5                        |
| frighten, terrify | 1                        |
| TOTAL             | 7                        |

<sup>56</sup> ‘V the hell out of’ and ‘V the daylight out of’ do not enter into complement alternation, but this is simply because there are no adjectival or prepositional expressions available which express the state or process of an interjection word (‘Hell!’) being uttered or the daylight coming out of a person, parallel to *shitless* or *to death*.

**Table 5.23** WB counts of ‘V the wits out of NP’

|          | _____ the wits out of |
|----------|-----------------------|
| scare    | 12                    |
| frighten | 2                     |
| TOTAL    | 14                    |

Interestingly enough, ‘V – out of one’s wits’ is also attested, as shown in (59).

- (59) a. Suddenly, I heard a loud crash near me, *scaring me out of my wits*.  
 b. No wonder you’re *frightened out of your wits*. (both from BNC)

Note that the person and the wits exchange their places between the two expressions: *scare the wits out of me* and *scare me out of my wits*.

‘V – out of one’s wits’ is slightly more frequent than ‘V the wits out of,’ but is practically limited to verbs of psychological impact like *scare* or *frighten*, as shown in Tables 5.24 and 5.25.

**Table 5.24** BNC counts of ‘V – out of one’s wits’

|          | _____ NP out of one’s wits |
|----------|----------------------------|
| frighten | 9                          |
| scare    | 8                          |
| terrify  | 6                          |
| knock    | 2                          |
| startle  | 1                          |
| TOTAL    | 26                         |

**Table 5.25** WB counts of ‘V – out of one’s wits’

|                      | _____ NP out of one’s wits |
|----------------------|----------------------------|
| frighten, scare      | 6                          |
| terrify              | 2                          |
| bore, shock, startle | 1                          |
| TOTAL                | 17                         |

Apparently, this complement alternation is rather different from the complement alternation just seen. Why is such a complement alternation possible with *wits*?

The key lies in the fact that *out of wits* is a predicative expression. Thus it may appear after a copula verb as in (60). In fact, it may be contrastively used together with *in wits* as in (61).

(60) Besides, he's *out of his wits*. (BNC)

(61) He looked better, but he'd been *in and out of his wits* so many times in the past weeks there was no knowing. (BNC)

Thus *out of one's wits* is a full-fledged predicative expression which indicates that the person lacks wits, rather than that the person is out of an abstract container (*wits*). In this respect, *out of one's wits* may be similar to *out of money* in (62), which means "lacking in money."

(62) a. I ran *out of money* and places to stay.  
b. I'd be *out of money* before I left. (both from BNC)

Thus the apparent alternation between *scare the wits out of me* and *scare me out of my wits* is a consequence of the fact that an *out of* phrase may serve either as a source expression or as a predicative expression. (63) is an instance of a resultative, like *beat the hell out of*.

(63) People especially like to pat foals, and unfortunately usually on their face or head, which *scares the wits out of* them. (BNC)

In contrast, *out of my wits* in (64a) is an instance of a result phrase accompanying subcategorized objects. If anything, it is virtually the same as *witless* as exemplified in (64b), the sole difference being the category of the result phrase (PP vs. AP).

(64) a. Suddenly, I heard a loud crash near me, *scaring me out of my wits*.  
b. Time was when the Richardson clan could *scare* this area *witless*. (both from BNC)

That *scare the wits out of me* may thus exhibit a complement alternation seems to indicate, again, that we should not overemphasize the idiomatic character of expressions like *beat the hell out of*. After all, individual parts of these expressions are still meaningful in their own right.

## 5.8 Conclusion

'V the hell out of,' along with 'V the shit out of' and 'V the daylight out of,' appears to be a pure idiom with *the hell* being a meaningless place holder. But all these expressions are motivated force-dynamically, in that *the hell*, *the daylight*, and *the shit* all express entities coming out of a person who has been strongly beaten. It is just that these expressions are hyperbolically used, leading to an intensifier meaning.

Additionally, while ‘V the hell out of’ forms a polysemous network structure, which is basically the same as that of ‘V the shit out of’ and that of ‘V the day-lights out of,’ the same network is not displayed by ‘V the life out of.’ So all these apparently synonymous expressions are not really synonymous. Rather, parts of the individual expression contribute to the meaning of the expression as a whole, exactly like other, “ordinary” expressions.

PART III

## Resultatives and domains





## Resultatives with verbs of eating and drinking I

### 6.0 Introduction to Part III

In Part I it has been demonstrated that the status of the post-verbal NP is crucial in answering the question “Which resultatives are possible and which are not?” Thus the sentences in (1) are ill-formed because the post-verbal NP is not a force-recipient.

- (1) a. \*Brigid loaded the table’s legs bent.  
 b. \*The bears frightened the campground empty.

This does not constitute a complete answer to the question, however, in that this question is stated in such general terms that it may cover a wide range of more concrete questions.

In this connection, notice that the verb *eat* may appear with result phrases which are semantically unrelated. Consider (2).

- (2) a. I can just sit there and *eat* myself *full* until I can’t take another bite.  
 b. The culprit is the Nile perch. Since its introduction in the 1960s, this predator has been *eating* the lake *clean* – wiping out the major constituents of the lake’s native fauna that range in length from a few inches to a foot. (both from COCA)

Note that *full* is virtually the opposite of *clean*, considering that *clean* means the state of being free of any substance. What is more, *sick* may also appear as a result phrase after *eat*.

- (3) I *ate* myself *sick*. (Simpson, 1983, p. 145)

This easily invites the question: Why can *eat* be accompanied by such semantically unrelated result phrases?

The same goes for the resultatives based on *drink*:

- (4) a. They *drank* the pub *dry*. (Rappaport Hovav & Levin, 2001, p. 789)  
 b. He *drank* himself *into the grave/to death*. (Simpson, 1983, p. 145)  
 c. He *drank* himself *senseless*. (Rivière, 1982, p. 686)

Again, one may wonder why *drink* can be accompanied by such a disparate set of result phrases as *dry*, *into the grave*, and *senseless*? So here we have another manifestation of the question “Which resultatives are possible?”

It goes without saying that the variety of result phrases allowed by *eat* and *drink* cannot be satisfactorily handled in Goldberg’s (1995) role-based theory. According to Goldberg’s theory, all these resultatives with *eat* are supposed to be obtained uniformly by integrating the resultative semantics <agent patient result-goal> with the verb meaning, say, <eater eaten>. In other words, the three resultatives in (2a), (2b), and (3) cannot be distinguished from each other in Goldberg’s theory. The same is true of (4): One cannot do justice to the variety of result phrases observed by representing the verb meaning of *drink* simply as <drinker drunk-theme>.

Rather, the variety of result phrases possible for *eat* and *drink* suggests that the meanings of these verbs are so rich and intricately organized, far from being adequately captured by a mere list of semantic roles. In other words, a detailed examination of the frame semantics of eating and drinking is essential, in order to do justice to the variety of result phrases possible for *eat* and *drink*.

While our discussion so far has amply demonstrated that reference to our world knowledge is indeed essential to uncovering how a certain verb may be followed by a certain result phrase, Part III discusses cases that argue even more strongly for the necessity to refer to rich frame-semantic knowledge.

Part III is organized as follows. Chapter 6 discusses resultatives with verbs of eating and drinking, as illustrated in (2) to (4), by drawing upon the eating frame proposed in Croft (2009). Chapter 7 then extends the analysis to the resultatives in (5).

- (5) a. I ate him out of house and home.  
 b. She drank him under the table. (Simpson, 1983, p. 146)

Chapter 8 analyzes the resultative in (6).

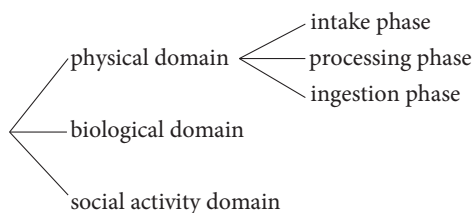
- (6) He laughed himself silly.

While the resultative in (6) is not based on either *eat* or *drink*, it will turn out that certain aspects of it can be accounted for only by reference to one of the domains uncovered in the course of analyzing resultatives based on *drink*.

## 6.1 How to analyze resultatives with *eat* and *drink*

### 6.1.1 Croft (2009)

As noted at the outset, a detailed examination of the frame semantics of eating and drinking is essential, in order to do justice to the variety of result phrases possible for *eat* and *drink*. In this connection, Croft (2009) presents a very illuminating frame-semantic analysis of eating verbs. According to Croft (2009), the EAT frame has (at least) three domains: the purely physical domain, the biological domain, and the social activity domain. Of these three domains, the physical domain further consists of three phases: intake, processing and ingestion (Croft, 2009, p. 12).



**Figure 6.1** EAT frame in Croft (2009)

Physical domain:

The first is the purely physical frame which was described in the three phases above: intake, processing and ingestion which includes the destruction of the object. This domain in the EAT matrix involves both spatial concepts (movement into the body) and material concepts (the material breaking down and destruction of the food). (Croft, 2009, p. 14)

Biological domain:

The second domain is the biological domain, in particular, the nutritional cycle. Food is nutrition: it nourishes the person or animal. However, nutrition is used up and so the nutritional process must be iterated regularly. (Croft, 2009, p. 15)

Social activity domain:

The third domain is the domain of social activity. There are certain culturally defined combinations of food. Eating is typically performed at particular times (i.e., meals). Eating is also often performed with other people. Finally, eating is generally associated with certain places (restaurants, dining areas). (Croft, 2009, p. 15)

Croft observes that there do not seem to be specialized verbs in English for simply putting something in one's mouth; *eat* and *drink* are general verbs that appear to cover the entire process, but other verbs profile only one of the three phases.

Now the distinction among the three phases allows us to capture a very interesting generalization. Levin (1993) gives a sub-classification of verbs of eating based on their distribution in English argument structure alternations. Thus Levin's *Chew* verbs, *Gobble* verbs, and *Devour* verbs include the following members in (7) to (9).

(7) *Chew* verbs: chew, chomp, crunch, gnaw, lick, munch, nibble, pick, peck, sip, slurp, suck (Levin, 1993, p. 214)

(8) *Gobble* verbs: bolt, gobble, gulp, guzzle, quaff, swallow, swig, wolf (Levin, 1993, p. 214)

(9) *Devour* verbs: consume, devour, imbibe, ingest, swill (Levin, 1993, p. 215)

Significantly, Croft observes that *Chew* verbs as in (7) profile the processing phase, while *Gobble* and *Devour* verbs in (8) and (9) profile the ingestion phase.

Croft goes on to argue that by taking into account the different phases profiled by these verb classes, we can account for the difference as to the possibility of entering into the Conative alternation as in (10) and (11).

(10) a. Cynthia ate at the peach.  
b. Cynthia nibbled at/on the carrot.

(11) a. \*Cynthia gobbled at/on the pizza.  
b. \*Cynthia devoured at/on the pizza. (Levin, 1993, pp. 213–15)

As the initial phases (intake and processing) can be done incrementally, part of the food has not begun the process. This is why *Chew* verbs, as well as *eat*, can enter into the Conative alternation as in (10). By contrast, ingestion is accomplished after the processing phase and generally is achieved completely. Accordingly, *Gobble* and *Devour* verbs do not allow the Conative alternation, as seen in (11) (Croft, 2009, p. 13).

Croft (2009) further observes that there are distinct English verbs for the inverse of the processing and ingestion phases: *spit out* and *throw up*, respectively. Processing verbs may be continued with *spit out* but not with *throw up*, as in (12).

(12) a. He chewed (on) the meat but then spit it out.  
b. \*He chewed on the meat but then threw it up. (Croft, 2009, p. 13)

On the other hand, ingestion verbs may be continued with *throw up* but not with *spit out*, as in (13) and (14).

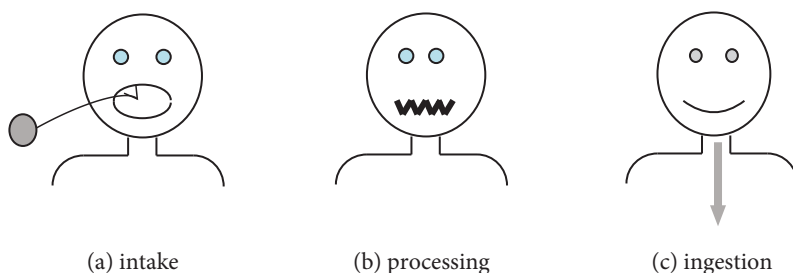
(13) a. \*He gobbled the meat (down) but then spit it out.  
b. He gobbled the meat (down) but then threw it up.

- (14) a. \*She devoured the meat but then spit it out.  
 b. She devoured the meat but then threw it up. (Croft, 2009, p. 13)

Croft thus demonstrates that by referring to the different phases of the eating frame, we can account for otherwise puzzling facts concerning eating verbs.

### 6.1.2 More on the three phases

By now, it should be clear what Croft means by the three phases: In the intake phase, one puts food into one's mouth; in the processing phase, the food is broken down and destroyed inside one's mouth; and in the ingestion phase, the food thus processed is sent to the stomach, as depicted in Figure 6.2.



**Figure 6.2** Three phases in eating

Still further facts can be accounted for in terms of the three phases. Thus the verbs referring to the ingestion phase may be accompanied by the particle *down*, as the processed food is sent down to the stomach in this phase.

- (15) a. I must confess I *gobbled* the meat *down* and I didn't notice the bone until it was too late.  
 b. The glass is put into their mouths as they whirl around in the shadows and lights of the torches and they chew and *swallow* it *down* – showing it in their mouths – putting out their tongues.  
 c. He *wolfed down* his breakfast. (all from BNC)

Also, more than one phase may be coordinated. (16) is an interesting example in which all the three phases are mentioned.

- (16) I put half my doughnut in my mouth in one gulp, munched it and swallowed it down. (BNC)

But the three phases must be mentioned in this order alone. If the order is changed, the resulting sentences will be incomprehensible.

- (17) a. \*I put half my doughnut in my mouth in one gulp, swallowed it and munched it.  
 b. \*I munched my doughnut, put it in my mouth in one gulp, and swallowed it.

Recall, however, that the three phases characterize only one of the three domains, i.e. the physical domain. And even when this domain is the one focused upon, the other domains (i.e. biological and social activity domains) are still in the background; it is rare for the eating activity to be understood solely in one domain. Thus when one puts something into their mouth in the intake phase, normally that something is nutritional, a piece of knowledge that is contributed by the biological domain.

This knowledge is suspended only in very special contexts, like the following.

- (18) John won the bet by eating some iron nails and wooden pegs.  
 (Lehrer, 1970, p. 230)

Lehrer (1970, p. 230) observes that here “*eat* means roughly ‘put in one’s mouth and swallow’ without regard to the biological and cultural factors.” This is another way of saying that in (18) eating is characterized in the physical domain alone.

### 6.1.3 Complex causal chains for *eat*

The three phases in the physical domain likely help us to account for why *eat* allows a variety of result states as noted at the outset. But toward that end, it is first necessary to incorporate the idea of the three phases into our force-recipient account. This turns out to be a challenge, in that the three phases cannot be simply represented by linking three causal chains consecutively.

Crucially, in the course of going through the three phases, the food changes rather significantly. For instance, when one eats an apple, the apple before being put into one’s mouth is not exactly the same as the apple that is being chewed in one’s mouth or as the apple that is sent down to the stomach. In other words, an entity that has undergone a change needs to be differentially represented from the entity before the change. To meet this demand, let us introduce a new notation. Figure 6.3 represents as  $X'$  an entity that has undergone a change, be it a change of state or a change of location.

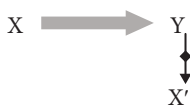
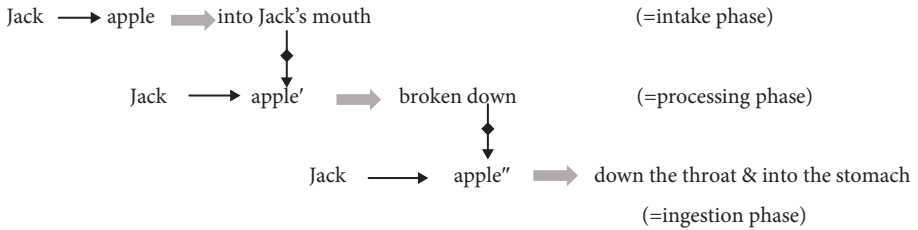


Figure 6.3  $X'$  as having undergone a change  $Y$

By using this notation, *Jack ate an apple* can be represented as in Figure 6.4. First, in the intake phase Jack acts on the apple, and the apple goes into Jack's mouth. Next, in the processing phase, the apple as having undergone a change of location (apple') is broken down. Third, in the ingestion phase the apple as having further undergone a change of state (apple'') is caused to go down the throat and into the stomach.

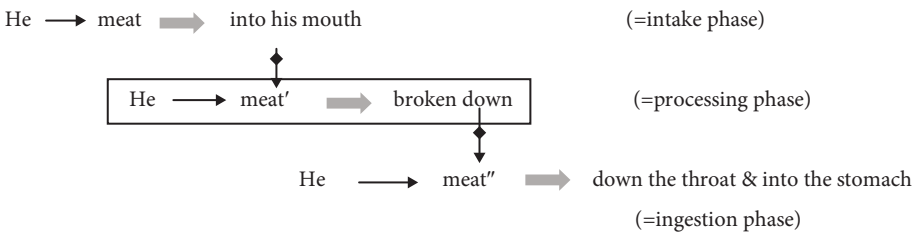


**Figure 6.4** Force-transmissions and changes across the three phases of *Jack ate an apple*

Eating is thus to be characterized by all these force-transmissions and changes across the three phases.

Incidentally, Chew verbs, Gobble verbs, and Devour verbs now can be differentiated as follows. With Chew verbs as illustrated in (19a), the processing phase is profiled, as shown in Figure 6.5. So the arrow starting with *he* and ending with *meat'* stands for a 'CHEW-AS-BREAK DOWN' force being exerted onto the meat as expressed in (19b).

- (19) a. He chewed the meat.  
b. He did a 'CHEW-AS-BREAK DOWN' action on the meat.



**Figure 6.5** *He chewed the meat*

With Gobble verbs as illustrated in (20a), by contrast, the ingestion phase is profiled, as shown in Figure 6.6. This time, the arrow starting with *he* and ending with *meat''* stands for a 'GOBBLE-AS-PUSH' force being exerted onto the meat as expressed in (20b).

- (20) a. He gobbled the meat (down).  
b. He did a 'GOBBLE-AS-PUSH' action on the meat.



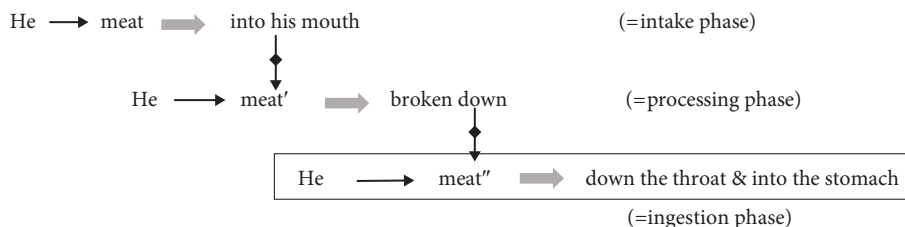


Figure 6.6 *He gobbled the meat (down)*

Devour verbs are handled the same way as Gobble verbs.

#### 6.1.4 *Eat – clean and eat oneself full*

It is now time to turn to *eat – full* and *eat – clean*. The former is attested only once in COCA as shown in (21), while the latter once in the BNC and twice in COCA, as shown in (22) and (23).

(21) I can just sit there and *eat myself full* until I can't take another bite. (COCA)

(22) The trap in Sam's boathouse kept intruding and so did Angela Brickell; the cold threat of khaki water that could rush into aching lungs to bring oblivion and the earthy girl who'd been claimed back by the earth, *eaten clean* by earth creatures, become earth-digested dust. (BNC)

- (23) a. The culprit is the Nile perch. Since its introduction in the 1960s, this predator has been *eating* the lake *clean* – wiping out the major constituents of the lake's native fauna that range in length from a few inches to a foot.
- b. "I lug the smelly carcasses onto the levee, smear them with honey, then cover them with shovelfuls of dirt from fire-ant hills. Fire ants *eat* those bones *clean* as a whistle in no time," Minette announced, pounding the table like a Sicilian. (both from COCA)

Now let us analyze (24a) and (24b), which are slightly modified from (21) and (23a) for ease of presentation.

- (24) a. Jack ate himself full.  
b. The predator ate the lake clean.

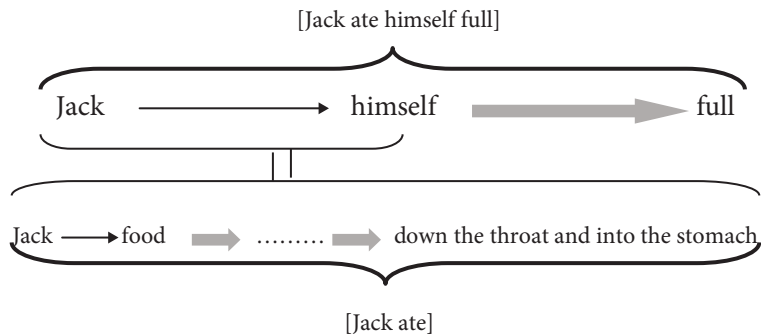
When we mechanically apply the ordinary paraphrase for resultatives to these sentences, the resulting sentences in (25) do not make sense.

- (25) a. \*Jack ate himself, and as a result he became full.  
b. \*The predator ate the lake, and as a result the lake became clean.

What is wrong with (25a) and (25b) is clearly the ACT ON components (*\*I eat myself*, *\*The predator ate the lake*). The correct ACT ON components should be identified by taking into consideration Figure 6.4.

Let us consider (24a). If we put something into a container and repeat that action, the container will eventually become full. Clearly, (24a) is based on this understanding, with the human body being construed as a container. But unlike the case of a purely physical container becoming full, human beings do not become full simply by putting food into the mouth. Thus even though Jack put an enormous amount of food into his mouth, Jack cannot be said to have become full if he did not chew the food and then gobble it down. In other words, the food being put into the mouth must further undergo the processing phase and the ingestion phase.

Thus the ACT ON component will consist of Jack's putting food into his body, which is the intake phase, to be followed by the processing phase and the ingestion phase. By compressing this sequence of force-transmissions into a single force-transmission starting with *Jack* and ending with *his stomach*, Jack can be said to act on himself. This serves as the ACT ON component for *Jack ate himself full*, as shown in Figure 6.7.



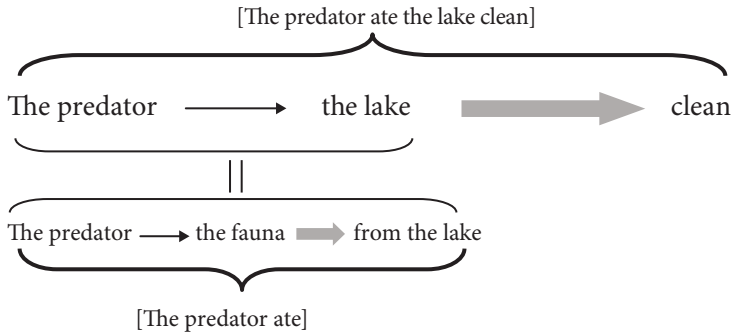
**Figure 6.7** Causal chain for *Jack ate himself full*

Thus *Jack ate himself full* may be paraphrased as in (26). In order to express a virtual action consisting of the three phases, ‘EAT-AS-PUT + PROCESS + INGEST’ is (tentatively) employed.

- (26) Jack did an ‘EAT-AS-PUT + PROCESS + INGEST’ action on himself, and as a result he became full.

Let us next turn to (24b). At first glance, it seems difficult to see how force could be applied to the area, which is a non-food component, according to the logic of the *eat* phases described in Figure 6.4. Notice, however, that the intake phase consists of putting food into one's mouth. And the act of putting food into one's mouth can

be alternately construed as removing the food from where it has been (the lake, in this case). Accordingly, by compressing a chain of force-transmissions starting with *the predator* and ending with *the lake* into a single force-transmission, we get the ACT ON component responsible for bringing about the state of being clean, as shown in Figure 6.8.



**Figure 6.8** Causal chain for *The predator ate the lake clean*

Thus while the eating in (24a) counts as putting and processing and ingesting all combined into one, the eating in (24b) counts as removing. By notating the virtual action as EAT-AS-REMOVE FROM, (27a) can now be paraphrased with (27b).

- (27) a. The predator ate the lake clean.  
 b. The predator did an ‘EAT-AS-REMOVE FROM’ action on the lake, and as a result the lake became clean.

Note, incidentally, that this means that the result state of having something removed from should be possible for eating verbs as long as the intake phase is available. Consider *drink – dry* in (28a), which can be analyzed as (28b), in essentially the same way as *eat the lake clean*.

- (28) a. He probably *drank* the clubhouse *dry*. (BNC)  
 b. He did a ‘DRINK-AS-REMOVE FROM’ action on the clubhouse, and as a result the clubhouse became dry.

This is possible because the intake phase is available for *drink*. After all, *drink*, like *eat*, is a general verb that appears to cover the entire process (Croft 2009: 12).

By contrast, this is not the case for other eating verbs. Boas (2003) observes that while (29a) and (29b) are acceptable, (30a) and (30b) are not, despite the fact that all the verbs are semantically very similar.

- (29) a. Stefan ate his plate clean.  
 b. Christian drank his glass dry. (Boas, 2003, p. 113)

- (30) a. \*Stefan chewed his plate clean.  
 b. ?Christian swallowed his glass empty. (Boas, 2003, p. 114)

This is because unlike *eat* and *drink*, *chew* and *swallow* profile the processing phase and the ingestion phase, respectively, and therefore cannot refer to the intake phase. Accordingly, neither chewing nor swallowing can be naturally construed as virtual removing. Hence the unacceptability in (30a) and (30b).

To recapitulate, despite the fact that the state of being full and that of being clean are apparently opposites, *eat oneself full* and *eat the lake clean* can be accommodated by saying that the result states are brought about by the verbal force, if only one realizes that the verb *eat* actually denotes different virtual actions.

## 6.2 *Eat oneself* AP/PP<sup>57</sup>

### 6.2.1 *Eat themselves out of a food supply*

Let us now go on to analyze fake reflexive resultatives as in (31).

- (31) I ate myself sick. (Simpson, 1983, p. 145)

We begin this consideration of fake reflexives with *eat*. By searching the three corpora, the following APs and PPs are found to occur after *eat oneself*, as summarized in Tables 6.1, 6.2, and 6.3.<sup>58</sup>

**Table 6.1** BNC counts of *eat oneself* AP/PP

|                                   | <i>eat oneself</i> _____ |
|-----------------------------------|--------------------------|
| silly, fitter, to sleep, to death | 1                        |
| TOTAL                             | 4                        |

57. Portions of the material in 6.2 and 6.3 were presented at the 6th Biennial International Conference on the Linguistics of Contemporary English, held at the University of Wisconsin-Madison (Iwata 2015a).

58. Sentences like (i) are not included in these counts, as *eat – out of house and home* will be discussed separately in 7.1.

(i) Do the caribou eat themselves out of house and home, or is it something else? (COCA)

Table 6.2 WB counts of *eat oneself* AP/PP

|                                                                | eat oneself _____ |
|----------------------------------------------------------------|-------------------|
| to death                                                       | 6                 |
| silly                                                          | 2                 |
| beautiful, jolly, slender, stupid, into obesity, into oblivion | 1                 |
| TOTAL                                                          | 14                |

Table 6.3 COCA counts of *eat oneself* AP/PP

|                                                                                                                                                                                                                | eat oneself _____ |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| to death                                                                                                                                                                                                       | 10                |
| sick                                                                                                                                                                                                           | 5                 |
| stupid                                                                                                                                                                                                         | 4                 |
| silly                                                                                                                                                                                                          | 2                 |
| full, out of career, out of job, out of business, out of your dress, out of the box, to the land, out of a food supply, out of a source of groceries, out of a habitat, into a state of oblivion, into a grave | 1                 |
| TOTAL                                                                                                                                                                                                          | 33                |

Of these result phrases, the following can be accounted for in terms of the physical domain. *Eat oneself full* can be analyzed as involving an ‘EAT-AS-PUT+PROCESS+INGEST’ action, as seen in 6.1.4.

(32) I can just sit there and *eat myself full* until I can’t take another bite. (COCA)

In contrast, both (33a) and (33b) can be analyzed as involving an ‘EAT-AS-REMOVE FROM’ action, as a result of which the entities appearing after *out of* are lost on the subject entities.

- (33) a. By the mid-1980s, the Singing River Mall colony was dwindling. Fewer chicks fledged. Fish crows had honed their chick-capture strategies and were *eating themselves out of a food supply*.
- b. The animals might appear to be *eating themselves out of a replenishable source of groceries*, but they have been associated with ponderosa pine stands for millennia. (both from COCA)

In short, these instances can be accommodated by reference to virtual actions ‘EAT-AS-PUT + PROCESS + INGEST’ and ‘EAT-AS-REMOVE FROM.’

### 6.2.2 *Eat oneself to death*

But things are different with the resultatives in (34).

- (34) a. It has long been known that Presley effectively *ate himself to death*. (WB)  
 b. But I *ate myself silly* on them (=prawns skips) last night and made myself feel sick so I'll never eat them again now. (BNC)  
 c. You *eat yourself sick* the night before, and so you had – you know, I've had like three pizzas and some collard greens and some pound cake, and so for you it was 18 beers. (COCA)

The result states mentioned (i.e. of being dead, silly, and sick) do not seem to result from purely physical actions like putting or removing. Rather, we should recall a different aspect of eating, i.e. that to eat some food means to have that food affect oneself. This aspect can be expressed by means of the causal chain in (35).

- (35) Jack ate.  
 Jack      →      food      →      Jack

The activity of eating something is now regarded as affecting Jack himself, in that the effect of the food counts as a force exerted onto himself.

In the preceding chapters, we have seen that the verbal force is responsible for bringing about the change of state. It follows, therefore, that with *eat oneself* AP/PP, which result state ensues is correlated with the food consumed. Thus the semantics of *X eats oneself Y* can be basically characterized as follows.

- (36) X eats something, and as a result of that something X becomes Y.

As will be shown below, almost all instances of fake reflexives accompanying *eat* and *drink* can be accounted for along these lines.

Our world knowledge about the correlation between the food and the resulting state is captured, first and foremost, by the healthy eating domain.

Healthy eating domain:

If one eats properly (i.e. good quality with a moderate amount), then one becomes healthy and one can boast a good look. But if one departs from this proper eating too much, one is likely to become fat and/or lose one's health. In the worst case, one will die.

Thus when one goes on a healthy diet, one may become fitter or slender.

- (37) a. *Eat Yourself Fitter*. (BNC)  
 b. Just follow our fabulous four-week Slimsuit Diet and *eat yourself slender* in time for you hols. (WB)

But if one eats too much, one may become fat and end up being sick or even dead. In (38a) the subject entity becomes obese, in (38b) the subject entity becomes physically sick as a result of overeating, and in (38c) the subject entity becomes dead as a result of overeating.

- (38) a. The reason that they become obese is because the animal never knows that it's full and it just *eats itself into obesity*. (WB)
- b. You *eat yourself sick* the night before, and so you had – you know, I've had like three pizzas and some collard greens and some pound cake, and so for you it was 18 beers. (COCA)
- c. the tubby tabby has been put on a strict diet to stop her *eating herself to death*. (WB)

Or one may become stupid as a result of eating low quality foods. In (39) students become lower in intelligence as a result of consuming junk food.

- (39) Sidebar Students who fuel their studies with fast food have something serious to worry about: They may literally be *eating themselves stupid*. (COCA)

Now there are at least two domains having to do with departures from the proper eating habit. One is the bulimia domain.

Bulimia domain:

A person suffering from bulimia uncontrollably eats too much and then vomits for fear of becoming fat.

Once a bulimic person puts some food into their mouth, they cannot stop themselves from eating further. So they may well be described as becoming stupid as in (40), for their state perfectly fits a dictionary definition of *stupid*: “They show a lack of good judgment or intelligence and they are not at all sensible” (COBUILD).

- (40) She would suffer from bulimia for a few weeks and then conquer her illness and be fine for perhaps six or seven months, only to find that as depression returned, her need to *eat herself stupid* took such a strong hold that she would be unable to stop herself from gorging once more. (COCA)

The other is the obesity domain, which concerns not only one's health *per se* but also how one is viewed in society. Specifically, fat people tend to be ill-treated in pursuing their career path.

Obesity domain:

Overweight and obese people cannot boast a good look and cannot perform well in sports. Because of this and/or because of their stereotypical image as lacking self-control, they are not treated well in their career path.

The first part of this description applies to (41a) and (41b).

- (41) a. “Don't be flippant, Finley. Your sister's wedding is just weeks away, and how will it look if you *eat yourself out of your maid-of-honor dress*?”
- b. Maybe that was why she took to her bed. Maybe that was why Poppa *ate himself so corpulent* he could hardly ride a horse. (both from COCA)

The second part is illustrated by (42) and (43).

(42) DIDIER DROGBA almost *ate himself out of football*. (WB)

- (43) a. The owner of a degree in speech and drama, he is smart and witty-smart enough, argues team management, to know that he might *eat himself out of a career* they have indicated should include a few Pro Bowl appearances.
- b. Then 23 and living alone, she took solace in cooking – and eating. At 150 lbs., “I *ate myself out of the business!*” she says. (both from COCA)

Here the result phrases describe the social consequences of becoming obese.

Thus fake reflexives with *eat* can be straightforwardly accommodated by means of my force-based account that makes crucial reference to Frame Semantics.<sup>59</sup>

### 6.3 *Drink oneself AP/PP*

#### 6.3.1 *Drink oneself beautiful*

Let us next turn to fake reflexives with *drink*. The results of searching for instances of *drink oneself AP/PP* in the BNC, the WB, and COCA are summarized in Tables 6.4, 6.5, and 6.6.<sup>60</sup>

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59. A reviewer comments that my theory cannot account for why the resultatives possible for *eat* cannot be formed based on *dine* (\**Joe dined the plate empty* or \**Joe dined himself to death*), and that the same problem also arises with similar verbs such as *consume* or *lunch*.

This comment is quite beside the point. Note that 6.1 is about resultatives understood primarily against the physical domain (e.g. *eat the plate empty*), and 6.2 is about resultatives understood primarily against the biological domain (e.g. *eat oneself to death*). But *dine* and *lunch* are verbs understood primarily against the social activity domain; *consume* is understood against the physical domain, but it is among the Devour verbs, which profile the ingestion phase (as already seen in 6.1) and therefore cannot refer to the intake phase. It follows from my frame-cum-force-based account, therefore, that these verbs are not compatible with the resultatives in question.

60. Sentences like (i) are not included in these counts, as *drink – under the table* will be discussed separately in 7.2.

(i) ... and just because drinks are cheap it doesn't mean everyone will *drink themselves under the table*. (WB)



Table 6.4 BNC counts of *drink oneself* AP/PP

|                                                                                           | drink oneself _____ |
|-------------------------------------------------------------------------------------------|---------------------|
| to death                                                                                  | 12                  |
| into a stupor                                                                             | 7                   |
| silly                                                                                     | 5                   |
| stupid, into oblivion                                                                     | 3                   |
| to sleep, into the grave                                                                  | 2                   |
| insensible, senseless, blind, into stupidity, into extinction, into the new year, to hell | 1                   |
| TOTAL                                                                                     | 51                  |

Table 6.5 WB counts of *drink oneself* AP/PP

|                                                                                                                                                                                                     | drink oneself _____ |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| to death                                                                                                                                                                                            | 38                  |
| into oblivion                                                                                                                                                                                       | 4                   |
| silly, stupid, into the grave                                                                                                                                                                       | 2                   |
| bloated, legless, purple, senseless, sick, cupid, into a coma, into failure, into a stupor, to sleep, into unconsciousness, into not caring, to the point of self-destruction, sideways, to a place | 1                   |
| TOTAL                                                                                                                                                                                               | 63                  |

As one can easily see, a much wider range of result phrases are found to occur after *drink oneself* than after *eat oneself*. This is due to a fundamental difference between eating and drinking. It is true that one eats food and drinks liquid in order to nourish one's body and thereby to sustain one's life, as indicated in the biological domain above. There is thus not much difference between eating and drinking, as far as essential food items are concerned.

But one may consume non-essential food items as well as essential ones, and this is where eating and drinking sharply contrast. One drinks alcoholic beverages for fun, so as to drown one's sorrow, etc., rather than out of nutritional needs. While one may eat certain food items (e.g. candy or chocolates) for fun rather than out of nutritional needs, alcohol-drinking occupies a far more prominent place in drinking overall.<sup>61</sup>

For this reason, it is appropriate to distinguish drinking alcoholic beverages from drinking non-alcoholic beverages. Let us examine the latter case first. The relevant domain can be stated as follows.

61. This is reflected in the different interpretations that *eat* and *drink* receive under indefinite object deletion. *He ate* means that he dined, but *he drank* means he drank alcoholic beverages.

Table 6.6 COCA counts of *drink oneself* AP/PP

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <i>drink oneself</i> _____ |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| to death                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 107                        |
| into a stupor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 36                         |
| to sleep                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 19                         |
| into oblivion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10                         |
| sick, silly                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 7                          |
| stupid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5                          |
| into a grave, unconscious                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 4                          |
| senseless                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3                          |
| blind, dead, into a coma, into unconsciousness, numb, out of a job, sober, sodden                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2                          |
| across the map, across the table, away, beautiful, blotto, crazy, dangerous, fat, happy, into bankruptcy, into Bolivia, into a conversation, into a debt, into failure, into a fool, into a glaze, into a hole, into happy idiocy, into insensibility, into madness, into the next life, into numbness, into a dangerous situation, into a state, into a beached state, into a state of innocence, into a state of paralysis, into a state of stupidity, into steadiness, into stupid liberation, legless, off the police force, onto a couch, out, out of the double vision, out of a marriage, past buzzed and squiffy to pindled, sad, shitfaced, thick, tipsy, to blackout, to heart health, to oblivion, to the point..., to the point of imbecility, to the point of stupor, to a standstill, to suicide, to unconsciousness, toward oblivion, useless | 1                          |
| TOTAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 270                        |

Healthy drinking domain (non-alcohol version):

If one drinks properly (i.e. good quality with a moderate amount), then one becomes healthy and one can boast a good look. But if one departs from this proper drinking too much, one is likely to become fat and/or lose one's health. In the worst case, one will die.

Thus one may become beautiful by drinking beverages that enhance one's beauty as in (44), and one may become healthy by drinking healthy beverages as in (45).

- (44) A: A major portion of *The Truth About Beauty* is devoted to guidelines for meeting and cultivating beauty. Can you give us an overview of the elements shared in this section?
- B: They include *Drink Yourself Beautiful*: Virtually every beauty factor-skin, hair, bones, weight, breast health and overall vitality is affected by the beverages we drink every day. (adapted from COCA)

- (45) Keep the carbs low or they'll have a great possibility of overflowing into fat.  
*Drink Yourself to Heart Health.* (COCA)

But if one drinks too much soda, one may well end up being fat as in (46).

- (46) Drinking 1 can of soda a day can make you 10 pounds fatter a year. Don't  
*drink yourself FAT.* (COCA)

As far as the drinking of non-alcoholic beverages is concerned, therefore, it differs from eating only in that what is consumed is liquid, rather than solid.

### 6.3.2 *Drink oneself silly*

Let us now go on to alcoholic drinking. First we have an inebriation domain, which consists of four stages.

Inebriation domain:

When one drinks alcohol, one first becomes cheerful ('enjoyment' stage); then one begins to lose control over what one says or does ('loss of composure' stage) and/or one cannot see or hear properly ('loss of bodily function' stage); finally one falls asleep ('loss of consciousness' stage).

These four stages are not necessarily discrete from each other, and may overlap in actual scenes of drinking alcohol. Nevertheless, it is remarkable that a number of the result phrases found to occur after *drink oneself* can be neatly arranged in accordance with the four stages. Thus in the 'enjoyment' stage, one is still not very drunk and can therefore function normally.

- (47) Men who *drank themselves tipsy* solved more problems demanding verbal resourcefulness in less time than sober guys did, a new study finds. (COCA)

But in the 'loss of composure' stage, the effect of alcohol manifests itself in one's external behaviors: One may say incoherent things in a loud voice and therefore may be regarded as being silly or stupid as in (48a) and (48b); one may giggle foolishly as in (48c); or one may threaten to do violent actions to others as in (48d).

- (48) a. The Alberta liquor laws laid down that no minors might drink, but it was not difficult to obtain beer or liquor, and he had often *drunk himself silly.* (BNC)
- b. ... and would either work their way up or they *drink themselves stupid* or they get mixed up with someone or ... (BNC)
- c. She was bored to tears, not at all interested in dancing or *drinking herself into asimplering, giggling fool* like most of the other young ladies in attendance (COCA)
- d. He was a hell-raiser. He'd fight and drink a lot of white whiskey. He would *drink himself dangerous.* (COCA)

At the same time, however, a very drunk person may start becoming inactive as one's sensory motors begin to function improperly. This is the 'loss of bodily function' stage. Thus as a result of drinking alcohol, one may become senseless as in (49a), insensible as in (49b), blind as in (49c), or numb as in (49d).

- (49) a. That's the reason I have brought you to this quiet garden, not to some tavern where I would *drink* myself *senseless*. (BNC)  
 b. He'd locked himself in their room and *drunk* himself *insensible*. (BNC)  
 c. It was of no health benefit for dealers to have delivered fresh orange juice and cordon bleu sandwiches midday if they *drank* themselves *blind* on champagne, quality wines and designer beers in the evenings. (BNC)  
 d. And my father's way of handling that was to *drink* himself *numb*. (COCA)

In (50) *legless* hyperbolically describes the state of being unable to move one's legs, rather than the (physical) loss of one's legs.

- (50) I'd then go out at night and *drink* myself *completely legless*. (WB)

Interestingly enough, the state of lost control over one's body functions may be expressed by means of a path PP. Thus in (51a) and (51b) the subject entities are so drunk that they cannot stand/sit up straight any longer and fall onto the couch or over the table.

- (51) a. I folded for the night, *drank* myself *onto Steve's couch*, becoming so much dead weight Steve didn't even bother trying to move me until morning.  
 b. It was Gadroll who found her. Just before midnight, when I had *drunk* myself *halfway across the table*, Gadroll slapped the paper and said, "Look at this." (both from COCA)

After going through these drunken stages, one ends up being asleep ('loss of consciousness' stage). Thus *to sleep* in (52a), *unconscious* in (52b), *into oblivion* in (52c), *into a coma* in (52d), and *to blackout* in (52e) all describe this stage.

- (52) a. Instead he swore at God and man, and *drank* himself *to sleep* every night. (BNC)  
 b. you can go dive into a half a case of beer and *drink* yourself *unconscious*. (COCA)  
 c. ... while the majority of passengers, blissfully unaware of the dramas of the last forty-eight hours – or the last four months – *drank* themselves *into a condition of happy oblivion*. (BNC)  
 d. ... when he *drank* himself *into a coma* or broke both legs while mixing martinis on skis. (COCA)  
 e. "Some nights I would *drink* myself *to blackout*." (COCA)

In short, drinking as understood against the inebriation domain embodies drinking as fun and its attendant states.<sup>62</sup>

### 6.3.3 *Drink oneself to death*

But drinking alcohol also has aspects that pertain to one's health and well-being. We have a healthy drinking domain for alcohol as well.

Healthy drinking domain (alcohol version):

With a moderate amount of alcohol, one may become calm and relaxed. But if one drinks too much, it will have an ill-effect on one's health.

On the positive side, with the help of some alcohol, one may be able to steady one's shaking hands as in (53a) and one may calm oneself and start a conversation as in (53b).

- (53) a. ... his hands shake too much to sign his name. He goes off to *drink himself into steadiness*.  
 b. He had to *drink himself into a conversation*. (both from COCA)

But on the negative side, one may end up with unhealthy features describable as being swollen as in (54).

- (54) a. Or they were married and living somewhere in the Jersey suburbs, getting fat and sluggish, running crooked autorepair shops, rigging the games in church Las Vegas Night fundraisers, or working all week for their fathers-in-law and *drinking themselves sodden* on the weekends. (COCA)  
 b. *Drink themselves bloated* as big as a collie floating. (WB)

While all of the states noted above have to do with the non-chronic effects of alcohol, drinking alcohol may bring with it far more serious, chronic consequences. Thus we need an alcoholism domain.

Alcoholism domain:

People who cannot stop drinking large quantities of alcohol spend much money on alcohol; they do poorly on their jobs so they often get fired; they gather together at an anonymous meeting to overcome alcoholism, etc.

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62. A reviewer claims that my analysis does not tell us why other closely related verbs such as *imbibe*, *guzzle*, and *down* do not behave the way *drink* does. Again, this is quite beside the point: All these verbs are understood primarily against the physical domain (as already seen in 6.1) and do not refer to the inebriation domain (a subdomain of the biological domain).

It goes without saying that alcoholism is detrimental to one's health. If one drinks too much alcohol over a long period of time, one will eventually die. The result phrases *to death* as in (55a) and *into a grave* in (55b) both express the endpoint of this scenario.

- (55) a. We talk casually of someone drowning in work or *drinking themselves to death* long before a terminal illness shows itself or their suicidal drive is detected.  
 b. Patrick didn't need to be a doctor to know that his mother was *drinking herself into an early grave*. (both from BNC)

But alcoholism has social consequences as well. Thus one may lose one's job as in (56a) and (56b) or end one's marriage as in (56c).

- (56) a. He *drank himself out of a job*.  
 b. Well, I do. I was a cop, a detective. I *drank myself off the police force*.  
 c. Our problems were different. I had *drunk myself out of this marriage* ten years ago, but it didn't mean we weren't in love. (all from COCA)

Or one may fail in one's job as in (57a), go into bankruptcy as in (57b), or go into debt as in (57c).

- (57) a. Once a director of glitzy commercial successes, he *drank himself into failure* after Bridie left him.  
 b. Archy had acquired a few additional slaves from a farmer in nearby Shannon who had *drunk himself into bankruptcy*.  
 c. But he was an alcoholic of cosmic dimensions and *drank himself into such chronic debt* that he started selling off the rights to his compositions. (all from COCA)

All these negative consequences count as resulting from drinking alcohol, when drinking is understood against the alcoholism domain.

#### 6.4 Result states as relativized to the domains

Thus resultatives with *eat* and *drink* may be accompanied by a variety of result phrases precisely because the two verbs are to be understood against the background of so many different domains. What needs to be emphasized at this point is that reference needs to be made to all these domains, in order to account for the whole range of result states accompanying *eat* and *drink*. This has very interesting consequences. First, the same adjective may describe slightly different states depending on the domain. This point can be appreciated by having a look at the

two adjectives *sick* and *stupid*. In (58a) *stupid* means “low in intelligence,” and in (58b) *sick* means “physically sick,” as both these sentences are understood against the healthy eating/drinking domain.

- (58) a. Sidebar Students who fuel their studies with fast food have something serious to worry about: They may literally be *eating themselves stupid*.  
 b. Many of these men and women *drank themselves sick* or froze during the long winter. (both from COCA)

By contrast, in (59a) *stupid* means “lacking good judgment,” and in (59b) *sick* means “willfully disoriented,” describing the woman’s drunken state as she tries to escape her feelings of self-reproach by impairing her cognizance. Both of these sentences are understood against the inebriation domain.

- (59) a. They *drank themselves stupid*, laughing loud enough to rattle the rafters.  
 b. And this is me when I *drank myself sick* so that I could forget what a horrible woman and wife and mother I was. (both from COCA)

Thus *sick* and *stupid* may receive slightly different interpretations depending on the domain, because different facets of those adjectives are profiled in different domains.

Another consequence is that the background domain may even alter what is generally thought to be an essential feature of resultatives. This is illustrated with *drink oneself silly*. Being silly means the state in which one says incoherent things in a loud voice as in (60).

- (60) a. Cranston would *drink himself silly*, celebrating his triumph, and make Athelstan recount time and time again his great victory.  
 b. The Alberta liquor laws laid down that no minors might drink, but it was not difficult to obtain beer or liquor, and he had often *drunk himself silly*. (both from BNC)

Also, someone who is drinking himself silly is enjoying the drink; he is drinking as much as he wants. Thus in the following sentences *drink oneself silly* may be replaced with *drink as much as one wants*.

- (61) a. Pay’s not good, but you *can* always *drink yourself silly* before you get back each night.  
 b. Well he can put bought as much as we’re gonna buy you *can drink yourself silly* for thirty one.  
 c. So we *can drink ourselves silly* and get a bill for about ten pounds. (all from BNC)

Consequently, *drink oneself silly* literally means (62a) but actually conveys (62b).

- (62) a. X does a ‘DRINK-AS-POUR ALCOHOL IN’ action on himself, and as a result X becomes silly.  
 b. X drinks as much alcohol as X wants, saying incoherent things in a loud voice.

But note that given these characteristics of *drink oneself silly*, the drinking activity and the result state of being silly are not so clearly distinct from each other. This is where *drink oneself silly* sharply contrasts with resultatives like *hammer – flat* or *wipe – clean*.

- (63) a. He hammered the metal flat {in 5 minutes/\*for 5 minutes}.  
 b. He wiped the table clean {in 5 minutes/\*for 5 minutes}.

One is likely to stop hammering the metal when the metal becomes flat; and one is likely to stop wiping the table once the table has become clean. In short, the activities of hammering the metal and wiping the table are goal-oriented, so that with these resultatives the result phrase marks an endpoint of the verbal activity. Hence they are telic.

But one normally continues to drink even after one becomes ‘silly’; the drinking activity and the result state of being silly can go on together. If anything, the activity and the result state are coalesced into a single whole and are practically indistinguishable. Accordingly, the result phrase does not express an endpoint beyond which the verbal activity no longer goes on. This is why *drink oneself silly* may receive an atelic reading, as seen in (64a) and (64b).

- (64) a. We then *drank ourselves silly for the rest of the evening* and had a few rounds of Auld Kendal snuff.  
 (http://drownedinsound.com/in\_depth/2944206)  
 b. I remember one specific evening when we *drank ourselves silly until 2 am ...*  
 (http://sadnewspaper.blogspot.com/2006/04/end-has-no-end.html)

Thus while telicity is often claimed to be an “uncontroversial aspect of resultatives” (cf. Wechsler 2005a, p. 258), *drink oneself silly* can be atelic, which is quite understandable given the inebriation domain.

Consequently, we may posit the following construction in Figure 6.9.



|      |                                                                                             |
|------|---------------------------------------------------------------------------------------------|
| Syn: | [NP <sub>x</sub> <i>drink oneself silly</i> ]                                               |
|      |                                                                                             |
| Sem: | “X does a ‘DRINK-AS-POUR ALCOHOL IN’ action on himself, and<br>as a result X becomes silly” |
|      | = “X drinks as much as X wants, saying incoherent things in a loud voice”                   |

Figure 6.9 ‘Drink oneself silly’ construction

## 6.5 Summary and conclusion

Resultatives based on *eat* and *drink* allow for a much wider range of result phrases than resultatives based on other verbs, which is due to the fact that the meanings of these verbs are so rich and intricately organized. The range of result phrases that are actually attested across the three corpora can be accommodated by recognizing the following, in addition to the three domains proposed in Croft (2009): Healthy eating domain, bulimia domain, obesity domain, healthy drinking domain, inebriation domain, and alcoholism domain. Of these, the healthy eating domain and the healthy drinking domain may be combined into a single domain, which essentially has two aspects: nourishment and fun. Deviating from the nourishment aspect are the bulimia domain and the obesity domain, and related to the fun aspect is the alcoholism domain. The inebriation domain may be regarded as being related to the fun aspect of the healthy eating/drinking domain and/or the social activity domain, as one can follow the various stages of the inebriation either by drinking alone or drinking with other people.

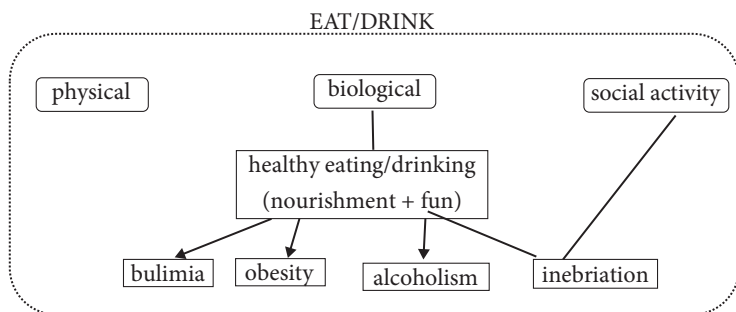


Figure 6.10 Relations between the domains

Thus, the range of result phrases attested for *eat* and *drink* can be accounted for only by understanding these verbs against one of these domains, and certainly not by a mere list of semantic roles, such as <eater eaten> and < drinker drunk-them>.

## Resultatives with verbs of eating and drinking II

### 7.0 Introduction

The following expressions are also among the resultatives involving *eat* and *drink*.

- (1) a. I *ate* him *out of house and home*.  
 b. She *drank* him *under the table*. (Simpson, 1983, p. 146)

These expressions are often said to be idiomatic, but since they do seem to be instances of resultatives, in this chapter we will analyze these expressions along the same lines as before.

There is one puzzle about these expressions. Generally, resultatives involving *eat* and *drink* require the post-verbal NPs to be coreferential with the subject NPs.

- (2) a. I ate myself *sick/to death*.  
 b. \*I ate him *sick/to death*.  
 (3) a. He drank himself *into the grave/to death*.  
 b. \*He drank her *into the grave/to death*. (Simpson, 1983, p. 145)

With the two expressions in (1), however, the post-verbal NPs are non-coreferential with the subject NPs.

Clearly, the contrast between (1), on the one hand, and (2) and (3), on the other, is still another manifestation of our second question: “Which resultatives are possible and which are not?” It is shown that the contrast can be accounted for in our force-recipient account, coupled with a number of domains.

### 7.1 *Eat – out of house and home*

#### 7.1.1 *The caribou eat themselves out of house and home*

Let us begin with *eat – out of house and home*.

- (4) I *ate* him *out of house and home*.

Corpus attestations are not numerous: There are seven instances in the BNC, three in the WB, and 33 in COCA. But by looking at these attested data, it turns out that there are actually two types. The first type is the one well-known in the literature and is exemplified in (5), where both the subject and the direct object entities (in active sentences) are human beings.

- (5) a. In those times, a poet could descend on you with all his retinue and *eat you out of house and home*.  
 b. Then in a matter of days, or even one day, are they not up and about again *eating us out of house and home*? (both from BNC)

In the following two instances, animals appear as subjects.

- (6) a. Horses take up a lot less room and they don't *eat you out of house and home*.  
 b. I can't afford no dog. *Eat you out of house and home*. You saw how big he was, right? (both from COCA)

But these two instances are also included in the first type, as the domestic animals mentioned are clearly regarded as members of an "extended family" whose over-consumption is a financial burden on the family, like the kids in (7).

- (7) Where I'm from, two kids born at one time is called a burden, 'cause they *eat you out of house and home*! (COCA)

The semantics of this type can be characterized as "X eats too much, and as a result Y must abandon his home."<sup>63</sup>

In the second type, on the other hand, the subject entity (in active sentences) is animals.

- (8) a. The study tackles a popular hypothesis for why the Slates' caribou population booms and busts. "Our question is: Do the caribou *eat themselves out of house and home*, or is it something else?" he explains.  
 b. "Maybe the whales *ate themselves out of house and home* two years ago," says Megill. His current hypothesis is that the once-thriving mysids need some time to recover before their chief predators can return.  
 c. It took me two years to figure out that it was his rabbit gun, and that because I haven't used it, we are being *eaten out of house and home* by rabbits. (all from COCA)

63. Taken literally, this semantic gloss is absurd, of course: Even though Y's livelihood is greatly diminished by X's over-consumption, that does not result in Y literally needing to abandon his home. Rather, it involves hyperbole, as will be discussed in the next section.

This second type is found in the COCA corpus alone. Quite often, the direct object entity is also animals as in (8a) and (8b), but it may be human beings as in (8c). The semantics may be characterized as “X eats too much, and as a result Y leaves the habitat.”

Out of the 33 instances found in COCA, 25 are of the first type, and eight are of the second type. One notable finding is that while the attested instances are predominantly in the active voice across the two types (24 out of 25 and seven out of eight, respectively), post-verbal NPs are different between the two types: All those 24 instances in the first type are accompanied by non-reflexive objects, but all those seven instances in the second type are accompanied by reflexive objects as in (8a) and (8b). These differences are summarized in Table 7.1.

Table 7.1 Two types of *eat* \_\_ *out of house and home* in COCA

|         | active                         | passive | TOTAL |
|---------|--------------------------------|---------|-------|
| Type I  | 24 (all non-reflexive objects) | 1       | 25    |
| Type II | 7 (all reflexive objects)      | 1       | 8     |
| TOTAL   | 31                             | 2       | 33    |

Although only the first type has been discussed in the literature so far, identifying the encoded form-meaning correlation seems to be more straightforward in the second type than in the first type, because the first type is clearly hyperbolic but the second type is not. So let us start with the second type.

According to the force-recipient account, the causal chain for the second type should proceed as in (9).

- (9) Causal chain for *The caribou eat themselves out of house and home*  
 caribou  $\longrightarrow$  caribou  $\longrightarrow$  out of house and home

It is necessary to justify this causal chain by making clear what kind of force is exerted onto the caribou, and how the change is thereby brought about.

Let us examine the ACT ON component. Recall from the last chapter that eating some food may be construed as removing the food from where it has been, and that accordingly (10a) may be paraphrased as (10b).

- (10) a. The predator ate the lake clean.  
 b. The predator did an ‘EAT-AS-REMOVE FROM’ action on the lake, and as a result the lake became clean.

While (10a) simply describes the result state of the area from which food is removed, to the animals feeding on the food available in that area, this means that they are running out of a food supply, as described in (11).

- (11) a. By the mid-1980s, the Singing River Mall colony was dwindling. Fewer chicks fledged. Fish crows had honed their chick-capture strategies and were *eating themselves out of a food supply*.  
 b. The animals might appear to be *eating themselves out of a replenishable source of groceries*, but they have been associated with ponderosa pine stands for millennia. (both from COCA)

Now going one step further in this direction, animals cannot stay in the area any longer.

- (12) The native deer in the region are *eating themselves out of a habitat*, devouring acorns and oak seedlings so fast that the oak forest is in danger of disappearing. (COCA)

Notice that this is essentially the same as sentences like (8a): What the caribou eat is the grass, and by eating the grass the caribou is removing the grass from the field which has been their habitat. This in turn means that the caribou are driven out of their habitat as a result of their own eating of the grass. Accordingly, what the second type means can be captured by drawing on a piece of knowledge concerning ecology.

Ecology domain:

When there is no more food to sustain their lives in a habitat, animals or birds migrate to another place.

Thus the semantics of the second type may be rendered as in (13).

- (13) X does an ‘EAT-AS-REMOVE FROM’ action on Y, and as a result Y moves out of the habitat.

The post-verbal NP entity is affected in being deprived of the food, and therefore follows the course of events normally taken by the entity thus affected as specified in the ecology domain.

Note that this explains why with *eat – out of house and home* the post-verbal NP may be disjoint in reference from the subject NP: The post-verbal NP entity is a recipient of an ‘EAT-AS-REMOVE FROM’ force, and the party thus affected may be different from the subject entity.

### 7.1.2 *He ate me out of house and home*

Let us now turn to the first type. As before, it should receive the causal chain as in (14), and the semantics of this expression can therefore be rendered as in (15).

(14) Causal chain for *He ate me out of house and home*.

He  $\longrightarrow$  I  $\longrightarrow$  out of house and home

(15) He did an ‘EAT-AS-REMOVE FROM’ action on me, and as a result I had to abandon my home.

Thus the first type seems to be essentially the same as the second type. There are two important differences, though.

First, while it is plausible to claim that the caribou migrated to another place because no food was left in that place, it is far less plausible to claim that a person leaves his/her house because no food was left in the house. That is, for the caribou to sustain their lives, migrating to another place is virtually the only option, but this is not the case with humans. After all, a person can buy food when the food stored in the house runs out. This suggests that what affects the person in (14) is not strictly the removal of the food in the house but the financial loss thereby caused.

Second, the first type is hyperbolic: “X eats to such an extent that Y will leave home.” The point is to emphasize the excessive eating, and hence the excessive financial loss; Y does not actually leave. Thus in (16a) a little brother’s eating too much is cited as one of the reasons why the woman had to spend so much money, not as a reason why she actually left home; and in (16b) visitors indeed ate a tremendous amount of food, but the affected man was probably not forced to actually abandon his home.

- (16) a. She had enormous school expenses, a big rent payment due, a live-in little brother who was *eating her out of house and home*, and a car that drank a quart of motor oil a week.  
 b. Visitors came in gangs and they mostly *ate him out of house and home*. I have killed a fine beef and it would all be eaten in a day or two.  
 (both from COCA)

Also, (17) means that Dr. Neil simply ate a lot of biscuits. No matter how many biscuits may be eaten, they cannot possibly be all the food inside the house.

- (17) ... she complained bitterly that Dr Neil would eat them *out of house and home* if he continued to run through biscuits at his present rate. (BNC)

Thus we may be justified in positing a construction as in Figure 7.1, where both literal (“X eats, and as a result Y must abandon home”) and derived (“X’s eating so much puts a financial burden on Y”) readings are specified as the semantics.



in which Tom loses quite a lot of money, and as a result he may actually have to abandon his home. In short, with both of the expressions the changes will result from the verbal events and are therefore to be regarded as extensions from only the literal reading of *eat – out of house and home*.

## 7.2 *Drink – under the table*

### 7.2.1 Two domains involved

Let us next turn to *drink – under the table*.

(20) She *drank* him *under the table*. (Simpson, 1983, p. 146)

There are three instances in the BNC, 14 in the WB, and 32 in COCA.

Now according to the force-recipient account, this expression will receive the causal chain in (21).

(21) Causal chain for *Mary drank John under the table*  
 Mary  $\longrightarrow$  John  $\longrightarrow$  under the table

It is again necessary to justify this causal chain by making clear what kind of force is exerted onto John and how the change is thereby brought about. So let us examine the two components (i.e. ACT ON and CHANGE) in turn.

In order to address the question of what kind of force is exerted, it is first necessary to recognize that *drink – under the table* is to be understood against the following domain.

Spontaneous pseudo-‘drinking-competition’ domain:

When people drink together, they half-jokingly engage in a spontaneous pseudo-competition. The person who drinks more than the other(s) is the winner.

Since this involves drinking with other people, maybe this is a subdomain of the social activity domain in Croft (2009).

Social activity domain:

There are certain culturally defined combinations of food. Eating is typically performed at particular times (i.e., meals). Eating is also often performed with other people. Finally, eating is generally associated with certain places (restaurants, dining areas). (Croft, 2009, p. 15)

Now crucially, in the spontaneous pseudo-‘drinking competition,’ if one party drinks a certain amount of alcohol, the other(s) are required to drink the same amount, as long as the competition goes on. Accordingly, in *Mary drank John under*



*the table*, by drinking a certain amount of alcohol, Mary is practically forcing John to drink the same amount as well, as shown in Figure 7.2.

This complex causal chain, with *Mary* a head and *John* a tail, can be compressed into one that starts from *Mary* and ends with *John*.<sup>64</sup> This is the ACT ON component of the causal chain in (21).

As for the CHANGE component, note that if one party is so drunk that he/she can no longer continue drinking, then that person may end up passing out and falling under the table. That person is the loser of the competition.

This might appear to be a fancy way of expressing a result of drinking alcohol, but in fact it fits in with a domain which we have already seen. Recall that in the inebriation domain there are four stages.

Inebriation domain:

When one drinks alcohol, one first becomes cheerful ('enjoyment' stage); then one begins to lose control over what one says or does ('loss of composure' stage) and/or one cannot see or hear properly ('loss of bodily function' stage); finally one falls asleep ('loss of consciousness' stage).

Of the four stages, the 'loss of bodily function' stage is illustrated by the state of being senseless, insensible, blind, or numb.

- (22) a. That's the reason I have brought you to this quiet garden, not to some tavern where I would *drink* myself *senseless*. (BNC)  
 b. He'd locked himself in their room and *drunk* himself *insensible*. (BNC)  
 c. It was of no health benefit for dealers to have delivered fresh orange juice and cordon bleu sandwiches midday if they *drank* themselves *blind* on champagne, quality wines and designer beers in the evenings. (BNC)  
 d. And my father's way of handling that was to *drink* himself *numb*. (COCA)

But the inactive state may also be expressed by PPs like *onto the couch*.

- (23) I folded for the night, *drank myself onto Steve's couch*, becoming so much dead weight Steve didn't even bother trying to move me until morning. (COCA)

Here the subject entity is so drunk that he cannot stand straight any longer and falls onto the couch.



64. One might wonder why such a long sequence of force-transmission can be compressed into a single causal chain at all. Conceivably, this is because Mary is held as *ultimately responsible* for John's falling under the table, exactly like *Man reaches the moon* or *Napoleon invades Russia* (Pinker, 1989, p. 86), as discussed in 2.3.1.

Notice that *under the table* is exactly like *onto the couch* in (23) in describing a very drunken state as defined by the ‘loss of bodily function’ stage. Seen from this viewpoint, then, there is nothing special about *under the table* being a result phrase accompanying *drink*.

As a matter of fact, *drink oneself under the table* is actually attested.

- (24) He has made it clear that anybody misusing the promotion will be banned for life and just because drinks are cheap it doesn’t mean everyone will *drink themselves under the table*. (WB)

This expression receives the causal chain in (25).

- (25) Causal chain for *John drank himself under the table*  
 John  John  under the table

By comparing (25) with the causal chain in (21), the resemblance is striking. As far as the causal chains are concerned, (21) could even be regarded as a non-reflexive counterpart of (25).

Thus *drink – under the table* is far from a frozen idiom. It turns out to be analyzable when one understands the ACT ON component as against the spontaneous pseudo-‘drinking-competition’ domain, and the CHANGE component as against the inebriation domain.<sup>65</sup>

Accordingly, it is now clear why a post-verbal NP may be non-coreferential with the subject NP in *drink – under the table*: The post-verbal NP is indeed a force-recipient as characterized in the spontaneous pseudo-‘drinking-competition’ domain, as noted above. In fact, *under the table* is not alone in appearing as a result phrase of *drink* after a post-verbal NP which is non-coreferential with the subject NP. Consider (26).

- (26) a. Lewis of Württemberg, surnamed the pious, *drank two challengers into stupor* and, being himself still sober, had them sent home in a cart with a pig. (BNC)  
 b. His dad sang opera and *drank him under the table* and *into a stupor*, then tucked him up in bed. (WB)

In (26a) *into a stupor*, a result phrase to be understood against the inebriation domain, appears in the place of *under the table*; and in (26b) *into a stupor* is coordinated with *under the table*. In both cases, the post-verbal NP is non-coreferential

65. A reviewer asks why the verbs *gulp*, *imbibe*, *consume*, *guzzle*, and *sip* cannot occur in the ‘V – under the table’ resultative. The answer is obvious. All these verbs are understood primarily against the physical domain (as already seen in 6.1) and therefore do not refer to the spontaneous pseudo-‘drinking-competition’ domain (a subdomain of the social activity domain) or to the inebriation domain (a subdomain of the biological domain).

with the subject precisely because the drinking activity is understood against the spontaneous pseudo-‘drinking-competition’ domain.

The following example can be accounted for along similar lines.

- (27) He wanted to take O’Hara to the Beaux Arts Club to *drink him into sleep*.  
O’Hara refused. (BNC)

Here again, the post-verbal NP *him* (=O’Hara) is non-coreferential with the subject NP, with the drinking activity being understood something like a spontaneous pseudo- ‘drinking-competition’.

By contrast, in the following unacceptable sentences cited by Simpson (1983), the eating and drinking activities are clearly not understood against the spontaneous pseudo- ‘drinking-competition’ domain.

- (28) a. I ate myself *sick/to death*.  
b. \*I ate him *sick/to death*.  
(29) a. He drank himself *into the grave/to death*.  
b. \*He drank her *into the grave/to death*. (Simpson, 1983, p. 145)

Thus the seeming constraint against the disjoint reference between the subject and the post-verbal NP actually comes from the fact that the disjoint reference reading is not compatible with the domain in question, and nothing more.<sup>66</sup>

### 7.2.2 The “beating” sense as primary

The discussion to this point has been concerned with the literal reading of *drink – under the table*. But like a number of resultatives discussed so far, the literal reading of *drink – under the table* is only half of the story. Crucially, in *Mary drank John under the table*, John did not necessarily actually pass out and fall under the table. Rather, his falling under the table should be taken to metonymically and hyperbolically express his losing the competition. Thus not only the literal meaning as seen in the last subsection but also the derived (=hyperbolic) reading should go into the semantics of the ‘drink – under the table’ construction, as shown in Figure 7.3.

66. In other words, the seeming co-reference requirement ultimately comes from individual domains, and is not a property of resultatives in general.

|           |                                                                                                     |
|-----------|-----------------------------------------------------------------------------------------------------|
| Syn:      | [NP <sub>X</sub> <i>drink</i> NP <sub>Y</sub> <i>under the table</i> ]                              |
|           |                                                                                                     |
| Sem: LIT: | “X does a ‘DRINK-AS-POUR ALCOHOL IN’ action on himself,<br>and as a result Y falls under the table” |
| DER:      | “X beats Y in drinking alcoholic beverages”                                                         |

Figure 7.3 ‘Drink – under the table’ construction

What is more, since *drink – under the table* is primarily understood against the spontaneous pseudo-‘drinking-competition’ domain, the focus is on ‘beating.’ That is, although “X beats Y in drinking alcoholic beverages” is a derived reading, nevertheless it is the salient meaning of *drink someone under the table* (cf. Giora 1997, 2003).

There are a number of facts arguing in favor of treating the “beating” sense as primary. First, in the attested examples of *drink – under the table*, the activity is often framed in terms of an ability as in (30).

- (30) a. Most alcoholics **can** *drink* everyone *under the table* and never even act drunk.  
 b. Here I was a little less than honest – most times I would leap at the chance to carouse with a tavern crowd, and took pride in **being able** to sing the bawdiest ballads and *drink* everyone *under the table*.

(both from COCA)

The number of instances of *drink – under the table* appearing embedded under *can*, *could*, *capacity to*, or *be able to* across the three corpora is as summarized in Table 7.2.

Table 7.2 *Drink – under the table* with and without ability-related expressions

|       | <i>can/could/capacity to/able to</i> ___ | others | TOTAL |
|-------|------------------------------------------|--------|-------|
| BNC   | 2 (=67%)                                 | 1      | 3     |
| WB    | 5 (=36%)                                 | 9      | 14    |
| COCA  | 14 (=44%)                                | 18     | 32    |
| TOTAL | 21 (=43%)                                | 28     | 49    |

In total, over 40 per cent of the attested instances involve one of these ability-related expressions. Clearly, in all these instances the sense of beating is the element of focus.

Second, there are a small number of extensions of *drink – under the table*, almost all of which are related to *drink – under the table* via the derived reading,

rather than the literal reading. Thus, *talk*, *booze*, *quote*, *sing*, and *argue* are also found to appear accompanied by *under the table* in the corpora, as summarized in Tables 7.3, 7.4, and 7.5.

Table 7.3 BNC counts of 'V – under the table'

|       | _____ NP under the table |
|-------|--------------------------|
| drink | 3                        |
| TOTAL | 3                        |

Table 7.4 WB counts of 'V – under the table'

|       | _____ NP under the table |
|-------|--------------------------|
| drink | 14                       |
| talk  | 1                        |
| TOTAL | 15                       |

Table 7.5 COCA counts of 'V – under the table'

|                    | _____ NP under the table |
|--------------------|--------------------------|
| drink              | 32                       |
| argue, talk        | 2                        |
| booze, quote, sing | 1                        |
| TOTAL              | 39                       |

- (31) There are people who *can talk* me *under the table*, but if they had to explain what they were talking about they would be under it. I might get beat with a big word or two but when it comes to getting things to work it's different. (WB)
- (32) a. Well, they used to say ol' Ty had a drinking problem but you can *booze* me right *under the table* right now ...  
 b. He was also a bishop and presumably *could quote* me *under the table* regarding my bandying candidates.  
 c. Why does it take you 10 years to get a deal with a record company that values that, when there are so many other folk who puttin' out records, who you *could sing*, quite frankly, *under the table*?  
 d. Time-outs do not particularly phase him, and our little barrister would *argue* Chief Justice Roberts *under the table*. (all from COCA)

Significantly, all the verbs except for *booze* (i.e. *argue*, *talk*, *quote*, *sing*) are not semantically related to *drink*. This suggests that they are extensions from the derived

meaning “to beat” rather than from the literal meaning “X drinks alcohol, and as a result Y falls under the table.” We thus seem to be justified in positing a more general construction, a ‘V – under the table’ construction, as in Figure 7.4.

|      |                                                             |
|------|-------------------------------------------------------------|
| Syn: | [NP <sub>X</sub> V NP <sub>Y</sub> <i>under the table</i> ] |
|      |                                                             |
| Sem: | “X beats Y in V-ing”                                        |

Figure 7.4 ‘V – under the table’ construction

Third, blended forms of V- *under the table* and *out*-verbs are found on the web.

- (33) a. How’s Jane Seymour’s punching power? Or can Serena *outdrink* Starbuck *under the table*?  
(<http://kier.3dfreemove.com/forums/showthread.php?t=115725&page=70>)
- b. he can *outsing* her *under the table* anyway.  
([http://www.6767.com/archives/2006/08/toronto\\_1.html](http://www.6767.com/archives/2006/08/toronto_1.html))
- c. Therdnase A triple color change so amazing, Nate *out-experts* Erdnase *under the table*.  
(<http://www.themagiccorner.com/catalog/tricks/videosItoQ.htm>)

This is not surprising, considering that *out*-verbs also express the meaning “to beat.” Thus Bresnan (1980), probably the earliest work on this phenomenon, states as follows.

- (34) a. Mary outshouted John.  
b. The lamp outshines the candle.  
c. Few people outgrin the Cheshire cat. (Bresnan, 1980, p. 119)

When prefixed to grammatically intransitive verbs, *out*- serves to transitivize them. The meaning of ‘A [<sub>V</sub> out-V]s B’ is approximately paraphrased as “A surpasses B in V-ing” or “A Vs to a greater extent than B”. (Bresnan, 1980, p. 118)

It is not uncommon for two expressions which express very similar meanings to blend together. The existence of blended forms as in (33), therefore, further suggests that the “beat” sense is the salient meaning of V – *under the table* in the mental lexicon of native speakers of English.

### 7.3 Summary

In the course of analyzing the sentences of *eat – out of house and home* and *drink – under the table* attested in the corpora, it has become clear that the ecology

domain and the spontaneous pseudo-‘drinking-competition’ domain need to be recognized. Accordingly, we need to slightly modify our picture of the domains needed to account for the resultatives based on *eat* and *drink*. First, the spontaneous pseudo-‘drinking-competition’ domain is clearly a subdomain of the social activity domain, so it may be incorporated into the network of domains as shown in Figure 7.5.

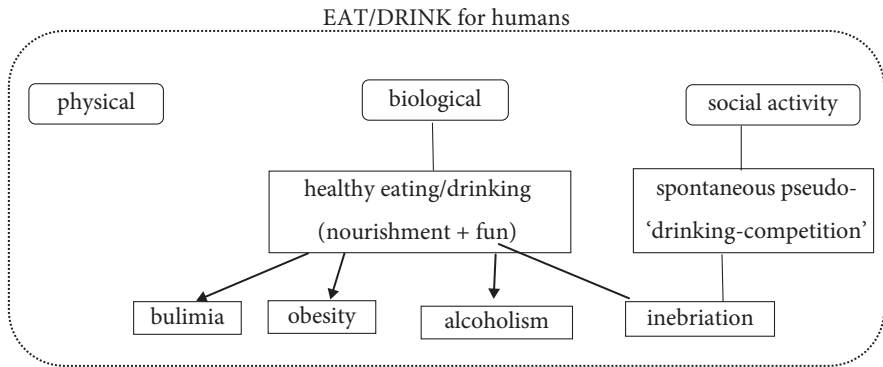


Figure 7.5 Relations among the domains (revised version)

As for the ecology domain, it concerns animals, rather than humans. So maybe we need to distinguish the EAT/DRINK frame for animals from that for humans. Conceivably, the EAT/DRINK frame for animals contains the physical domain and the biological domain, but not the social activity domain (unless animals are later found by zoologists to engage in social activities far more actively than are believed at present). The ecology domain is to be related to the biological domain in this EAT/DRINK frame for animals.

## 7.4 Conclusion

This chapter analyzed *eat – out of house and home* and *drink – under the table*. Both expressions might appear to be pure idioms, but it has turned out that both expressions are motivated. What is special about these expressions is that they are understood against domains different from other resultatives based on *eat* and *drink*. Specifically, *eat – out of house and home* is understood against the ecology domain, and *drink – under the table* against the pseudo-‘drinking-competition’ domain. Apart from this point, both expressions are like other resultatives in that the post-verbal NP is a force-recipient, and that they display polysemous network structures.

## *He laughed himself silly*

### 8.0 Introduction

The expression *laugh oneself silly*, as exemplified in (1), has been well-known in the literature on resultatives.

- (1) He laughed himself silly.

Jackendoff (1997), however, claims that this is not a true resultative but an idiomatic intensifier. This immediately invites the following two questions. First and foremost, is *laugh oneself silly* really not a true resultative?

Next, notice that there are a couple of expressions very similar to *laugh oneself silly*. Thus we have *laugh oneself sick*, as shown in (2).

- (2) Charlie laughed himself {silly/sick}. (Jackendoff, 1990, p. 227)

Also, we have *laugh oneself stupid*, as seen in (3).

- (3) A week ago, she'd have *laughed herself stupid* at the idea. (WB)

If *laugh oneself silly* is not a resultative but an idiomatic intensifier, as Jackendoff (1997) claims, then we are naturally led to expect that the same should be true of *laugh oneself stupid* and *laugh oneself sick* as well. But this means that all three of these expressions would be intensifiers with little difference in meaning. This leads to the second question: Are these three expressions all the same?

In what follows, we will address these two questions. Let us begin by reviewing Jackendoff's (1997) claim about *laugh oneself silly*.

### 8.1 'V oneself silly'

#### 8.1.1 Jackendoff (1997)

Jackendoff (1997) claims that the expressions in (4), one of which is *laugh oneself silly*, are not true resultatives, because they behave differently from ordinary resultatives.



- (4) Dean laughed himself {crazy/silly/to death}. (Jackendoff, 1997, p. 552)

Expressions like [(4)] are often taken to be standard resultatives resulting from productive lexical/syntactic processes. But such an account fails to explain the strange restrictions on the final phrase. (Jackendoff, 1997, p. 552)

For one thing, according to Jackendoff (1997), the result state does not obtain with these expressions. According to Jackendoff, “it is nearly always idiomatic: Dean doesn’t end up silly or dead in [(4)], and perhaps not crazy either.” (Jackendoff, 1997, p. 552)

Additionally, Jackendoff (1997) points out that these expressions can be either telic or atelic.

- (5) Dean laughed himself {crazy/silly} {for/in} an hour. (Jackendoff, 1997, p. 552)

Based on these observations, Jackendoff (1997) argues that like the expressions in (6), those in (4) are idiomatic intensifiers that happen to use the same syntax as resultatives.

... cases such as [(4)], like those in [(6)], are not really resultatives, even though they have been frequently cited as crucial evidence in a theory of resultatives. Rather they are instances of yet another family of idiomatic intensifiers that use the same syntax as the resultative. (Jackendoff, 1997, p. 552)

- (6) a. Fred talked {his head/his ass/his butt} off, but to no avail.  
 b. The chef was cooking up a storm back in the kitchen.  
 c. Every night I sit here and sing my heart out, but does anyone listen to me? No! (Jackendoff, 1997, p. 551)

We have already seen in Chapter 4 that expressions like (6a) and (6c) can be characterized in terms of force dynamics and are therefore resultatives. Similarly, whether *laugh oneself silly* is a true resultative or not boils down to whether it can be accommodated in our force-recipient account or not. So let us see whether *laugh oneself silly* can be thus analyzed or not.

### 8.1.2 What does it mean to become “silly” as a result of laughing?

What exactly does *laugh oneself silly* mean? In order to answer this question, recall that we have already discussed in Chapter 6 a very similar expression: *drink oneself silly*. It was shown there that a number of expressions of the form [*drink oneself AP/PP*] are to be understood against the inebriation domain, repeated below.

Inebriation domain:

When one drinks alcohol, one first becomes cheerful ('enjoyment' stage); then one begins to lose control over what one says or does ('loss of composure' stage) and/or one cannot see or hear properly ('loss of bodily function' stage); finally one falls asleep ('loss of consciousness' stage).

*Drink oneself silly*, corresponding to the 'loss of composure' stage, thus has the following characteristics. First, someone who is drinking himself silly is enjoying the drink; he is drinking as much as he wants. Thus in the following sentences *drink as much as one wants* can be substituted for *drink oneself silly*.

- (7) a. Pay's not good, but you *can* always *drink yourself silly* before you get back each night.  
 b. Well he can put bought as much as we're gonna buy you *can drink yourself silly* for thirty one.  
 c. So we *can drink ourselves silly* and get a bill for about ten pounds.

(all from BNC)

Second, the activity and the result state are coalesced into a single whole and are practically indistinguishable. Accordingly, an atelic reading is possible, as indicated by the time adverbials *for the rest of the evening* and *until 2am* in (8a) and (8b), respectively.

- (8) a. We then *drank ourselves silly* for the rest of the evening and had a few rounds of Auld Kendal snuff.  
 (http://drownedinsound.com/in\_depth/2944206)  
 b. I remember one specific evening when we *drank ourselves silly* until 2am ...  
 (http://sadnewspaper.blogspot.com/2006/04/end-has-no-end.html)

Based on these characteristics, the meaning of *drink oneself silly* was characterized as in (9).

- (9) X drinks as much as X wants, saying incoherent things in a loud voice.

Accordingly, the 'drink oneself silly' construction was posited as in Figure 8.1.

|      |                                                                                          |
|------|------------------------------------------------------------------------------------------|
| Syn: | [NP <sub>x</sub> <i>drink oneself silly</i> ]                                            |
|      |                                                                                          |
| Sem: | "X does a 'DRINK-AS-POUR ALCOHOL IN' action on himself, and as a result X becomes silly" |
|      | = "X drinks as much as X wants, saying incoherent things in a loud voice"                |

Figure 8.1 'Drink oneself silly' construction

Now let us get back to *laugh oneself silly*. Remarkably, *laugh oneself silly* seems to describe the kind of activity that a person who is drinking himself silly does. This is evidenced by (10), where the people enjoying an alcoholic beverage are laughing themselves silly.

- (10) Anyway, afterwards we go either to my house or to hers and sit about all afternoon chatting and drinking wine – and *laughing ourselves silly*. (WB)

This suggests that a person who is laughing himself silly is likely laughing as much as he wants, exactly like *drink oneself silly*. Thus it seems safe to characterize the meaning of *laugh oneself silly* as “to laugh as much as one wants, in a silly, light-hearted way.”

Significantly, this interpretation directly follows from the literal meaning. The COBUILD dictionary provides the following definition: “If you do something such as laugh or drink yourself silly, you do it so much that you are unable to think or behave sensibly.” This is tantamount to saying that being silly means being “unable to think or behave sensibly.”

Note that typically, a person who is laughing as much as he wants, in a silly, light-hearted way is shaking his head and his whole body vigorously with loud laughing sounds. A person behaving in this way can be said to have become “unable to think or behave sensibly”. In this sense, becoming silly is indeed a result of laughing, *contra* Jackendoff (1997).

In fact, it can even be said that the very act of laughing sets the stage for becoming silly. Thus Chafe (2007), who is exploring the mechanism of laughter, observes: “... laughter hinders the person who is laughing from performing serious physical or mental activity.” (Chafe 2007: 23) This can be taken to indicate that the laughing activity serves as a force exerted upon himself, as a result of which the state of being silly ensues. Accordingly, *He laughed himself silly* receives the causal chain representation in (11), which is intended to mean the same thing as the paraphrase in (12).

- (11) Causal chain for *He laughed himself silly*  
 he  $\longrightarrow$  he  $\longrightarrow$  silly

- (12) He laughed a lot, and as a result he became “unable to think or behave sensibly.”

Accordingly, we can now posit a construction for *laugh oneself silly* as in Figure 8.2.

|      |                                                                                                                     |
|------|---------------------------------------------------------------------------------------------------------------------|
| Syn: | [NP <sub>x</sub> <i>laugh oneself silly</i> ]                                                                       |
|      |                                                                                                                     |
| Sem: | “X laughs a lot, and as a result X becomes silly”<br>= “X laughs as much as X wants, in a silly, light-hearted way” |

Figure 8.2 ‘Laugh oneself silly’ construction

### 8.1.3 Short-lived result state

Now there is still another reason why *laugh oneself silly* appears to be different from typical resultatives. Significantly, with ordinary resultatives the result state persists for some time even after the verbal activity is over. Thus in (13a) after the hammering is finished, the metal continues to be flat near-permanently. Similarly, in (13b) after the wiping is finished, the table continues to be clean for some time.

- (13) a. He hammered the metal *flat*.  
b. He wiped the table *clean*.

This is even true of resultatives with fake reflexive objects in general. Thus in (14a) after he stops shouting, he continues to be hoarse for some time; and in (14b) after he stops talking, he continues to be exhausted for some time.

- (14) a. He shouted himself *hoarse*.  
b. He talked himself *blue in the face*.

In short, with ordinary resultatives the result state persists after the verbal activity is over, so that the result state can be easily regarded as distinct from the verbal activity. Accordingly, it is easy to regard the result state as being brought about by the verbal activity.

With *laugh oneself silly*, by contrast, the state of being silly holds only while the laughing activity is occurring. Once the person stops laughing, he will soon return to his normal condition, i.e. not being silly. Since the result state holds only concurrently with the laughing activity, it is hard to recognize the state as being a result of the verbal activity. Conceivably, this is another reason why Jackendoff (1997, p. 552) claims that the subject entity “doesn’t end up silly.”

This is why ‘V oneself silly’ looks like an adverbial intensifier.

### 8.1.4 Other instances of ‘V oneself silly’

Let us now turn to other instances of ‘V oneself silly’. In the three corpora (BNC, WB, and COCA) the following range of intransitive verbs is found to occur in ‘V oneself silly’ as in Tables 8.1, 8.2, and 8.3, respectively.

Table 8.1 BNC counts of ‘V oneself silly’

|                           | _____ oneself silly |
|---------------------------|---------------------|
| drink                     | 5                   |
| laugh                     | 2                   |
| eat, shout, gorge, giggle | 1                   |
| TOTAL                     | 11                  |

Table 8.2 WB counts of ‘V oneself silly’

|                         | _____ oneself silly |
|-------------------------|---------------------|
| laugh                   | 9                   |
| smoke                   | 3                   |
| drink, eat              | 2                   |
| slur, spend, soul, work | 1                   |
| TOTAL                   | 20                  |

Table 8.3 COCA counts of ‘V oneself silly’

|                                                                        | _____ oneself silly |
|------------------------------------------------------------------------|---------------------|
| laugh                                                                  | 27                  |
| drink                                                                  | 7                   |
| gorge                                                                  | 3                   |
| eat, giggle, spend, talk                                               | 2                   |
| blow, play, puff, ride, ring, rock, run, sport, sweat, whistle, wonder | 1                   |
| TOTAL                                                                  | 56                  |

*Laugh* and *drink* are the two most frequent verbs across the two corpora. It seems safe to conclude, therefore, that *laugh oneself silly* and *drink oneself silly* are prototypes.

As seen above, *laugh oneself silly* is characterizable as “to laugh as much as one wants, in a silly, light-hearted way,” and *drink oneself silly* as “to drink as much as one wants, saying incoherent things in a loud voice.” The two expressions can thus be said to share the meaning “to utter in a loud voice as much as one wants, in a silly, light-hearted way.” Interestingly enough, the ‘V oneself silly’ expressions involving verbs like *shout* or *giggle* as illustrated in (15) also fit this description.

- (15) a. ... they were all too busy *shouting themselves silly* to pay any attention to her.  
 b. He could see them all sitting there, earphones on their heads, *giggling themselves silly* at his expense. (both from BNC)

Thus we have class A (*laugh, drink, giggle, shout, talk, whistle*) with the semantics “to utter in a loud voice as much as one wants, in a silly, light-hearted way.”

Next, there are also sentences like (16).

- (16) a. But I *ate myself silly* on them (=prawn skip) last night and made myself feel sick so I’ll never eat them again now. (BNC)  
 b. Find one that matches your desires and *ride yourself silly*. (COCA)  
 c. With the TurboGrafx-16, you’ll *play yourself silly* on Keith Courage In Alpha Zones as you struggle to prevail over the forces of B.A.D. (Beastly Alien Dudes). (COCA)

Here the subject entities are engaged in an activity as much as they want, similar to class A. But unlike class A, they need not utter loud voices. Rather, they are simply indulged in some activity like eating food, riding a bicycle, or playing a game. The notion of indulgence is perhaps well-illustrated in (17), where the subject entity enjoys smoking to his heart’s content.

- (17) A couple of hours of group therapy with eight furiously puffing strangers fumigating my cream jersey with nicotine (all, apparently, part of the process) was enough to make me stop the car on the way home, buy a packet of cigarettes and then *smoke myself silly* all the way up the A3. (WB)

We thus have class B (*blow, eat, gorge, play, ride, spend, rock, run, sport*) whose semantics can be phrased as “to do as much as one wants, in a silly, light-hearted way.”

The following sentences in (18) are still different from those belonging to class B. Thus in (18a) the subject entity does not “sweat as much as he wants,” as one cannot voluntarily control one’s sweat coming through one’s skin, in the same way that one can eat or smoke voluntarily. Rather, (18a) means that the subject entity sweats to a great deal (probably without wanting or enjoying it). The same is true of (18b) and (18c).

- (18) a. This is to make up for last week when I *sweat myself silly* because they turned the air conditioning off.  
 b. The three little pigs stood by the window gleefully watching the wolf *puffing himself silly*.  
 c. If the Rangers studied trends, they might have *wondered themselves silly* about how they would perform after dealing Rodriguez, the player who is often called the best in baseball. (all from COCA)

These instances can be grouped into class C (*puff, sweat, wonder*), with the semantics of “to do to a great extent, in a light-hearted way.”

Lastly, the following instance is found in the COCA corpus.

- (19) Anyway, your phone here in the office has been *ringing itself silly*. (COCA)

Clearly, a ringing phone is likened to a person laughing himself silly. Thus we have class D whose only member is *ring*, with the semantics “to emit a loud sound as if ‘as much as one wants.’” This class is related to class A via personification.

Consequently, ‘V oneself silly’ forms a network as summarized in Figure 8.3.

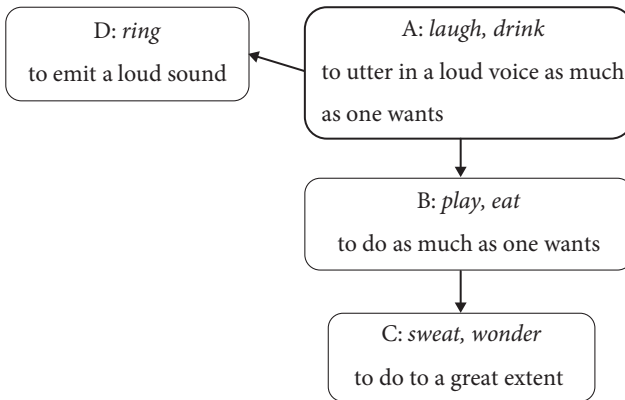


Figure 8.3 Network of ‘V oneself silly’

## 8.2 ‘V oneself stupid’

Let us next turn to ‘V oneself stupid.’ As noted at the outset, Jackendoff’s (1997) statement leads us to expect that ‘V oneself stupid’ is fundamentally the same as ‘V oneself silly.’ A corpus search reveals otherwise, however. The range of intransitive verbs that are found to occur in ‘V oneself stupid’ in the BNC, the WB, and COCA is summarized in Tables 8.4, 8.5, and 8.6, respectively.

Table 8.4 BNC counts of ‘V oneself stupid’

|       | _____ oneself stupid |
|-------|----------------------|
| drink | 3                    |
| laugh | 1                    |
| TOTAL | 4                    |

Table 8.5 WB counts of ‘V oneself stupid’

|                   | _____ oneself stupid |
|-------------------|----------------------|
| drink             | 2                    |
| dance, eat, laugh | 1                    |
| TOTAL             | 5                    |

Table 8.6 COCA counts of ‘V oneself stupid’

|       | _____ oneself stupid |
|-------|----------------------|
| drink | 5                    |
| eat   | 4                    |
| dance | 1                    |
| TOTAL | 10                   |

As can easily be seen, ‘V oneself stupid’ is attested by far fewer verbs with far less variety than ‘V oneself silly.’ With the total number of attestations thus small, it is rather hard to identify a prototype (if any). Nevertheless, *drink oneself stupid* is attested in all the three corpora. So let us start with *drink oneself stupid*.

Just like *drink oneself silly*, *drink oneself stupid* is understood against the inebriation domain. Thus in the following example, the subject entity is laughing loudly, exactly like *drink oneself silly*.

- (20) Nighttime at the cabin: they *drank themselves stupid*, laughing loud enough to rattle the rafters; they took pictures with Mr. Chiles’s instant camera Ricky found. (COCA)

While *drink oneself stupid* is very similar to *drink oneself silly*, there seems to be a subtle difference between them. As already noted, *drink oneself silly* seems to carry with it the implication of indulgence (i.e. enjoying the drink). Thus *drink oneself silly* is often found to be embedded under *can* as in (21), and it often describes a scene in which one is talking with one’s friends over alcoholic drinks, typically at a bar as in (22).

- (21) a. Pay’s not good, but you **can** always *drink yourself silly* before you get back each night. (BNC)  
 b. Well he can put bought as much as we’re gonna buy you **can** *drink yourself silly* for thirty one. (BNC)  
 c. So we **can** *drink ourselves silly* and get a bill for about ten pounds. (BNC)  
 d. You know ... how they **can’t** *drink themselves silly* at any hour of the day or night anymore. (COCA)
- (22) a. Cranston would *drink himself silly*, celebrating his triumph, and make Athelstan recount time and time again his great victory. (BNC)  
 b. He was like the guy who worked all day in the paper mill and lived for the weekends, *drinking himself silly* down at the bar with his buddies. (COCA)

But neither of these characteristics is found with *drink oneself stupid*, at least as far as the data from the three corpora are concerned. Instead, in the following



instances of *drink oneself stupid*, the subject entities are drinking alone and are perhaps lonely; no sense of enjoying the drink is discernible.

- (23) a. McQuaid was a drunken blackguard who was with me in the war. I felt sorry for him. If I didn't give him a square meal on Monaghan Day he'd *drink himself stupid* in Mohill.
- b. "You will go home?" Sir John stared into the gathering darkness. He would have loved to but what was the use? All he'd do was sit and *drink himself stupid*. (both from BNC)

Consider also (24), which is about careless drivers without manners.

- (24) They can easily be identified when driving vehicles. They never indicate when changing direction, they either think it's an optional extra or they just send telepathic messages to each other excluding us humans. (...) The last and most obvious one is *drinking themselves stupid* letting themselves loose on our roads. (WB)

This excerpt keeps describing such drivers, and the final sentence involving *drink themselves stupid* is about drunken driving. All these facts suggest that with *drink oneself stupid* the focus seems to be on the "dysfunctional" aspect of being drunk.

How are we to characterize the semantics of *drink oneself stupid*, then? The Longman Dictionary of Contemporary English defines one sense of *stupid* as "showing a lack of good sense or good judgment," and this definition seems quite helpful in capturing the meaning of *drink oneself stupid*. Thus (25a) can be paraphrased with (25b).

- (25) a. He drinks himself stupid.
- b. He drinks alcohol as much as he wants, losing good judgment.

Remarkably, *eat oneself stupid* can be characterized similarly. Again, as noted above, a person who eats himself silly is enjoying eating. In both of the following sentences, *ate myself silly* can be replaced with *ate as much as I wanted*.

- (26) a. But I *ate myself silly* on them (=prawn skip) last night and made myself feel sick so I'll never eat them again now. (BNC)
- b. I have just had a monthlong vacation in that green heart of Italy, Umbria, where I *ate myself silly*, all in the name of research. (COCA)

By contrast, the following instance of *eat oneself stupid* is about an eating disorder.

- (27) She would suffer from bulimia for a few weeks and then conquer her illness and be fine for perhaps six or seven months, only to find that as depression returned, her need to *eat herself stupid* took such a strong hold that she would be unable to stop herself from gorging once more. (COCA)

A person suffering from bulimia eats as much food as possible *uncontrollably*. Thus *eat oneself stupid*, as exemplified in (27), can be taken to instantiate the semantics “to eat as much as one wants, losing good judgment.”

In the following examples the subject entities may not be so obviously dysfunctional.

- (28) a. ... a record to seep deep into your sub-conscious as you *dance yourself stupid* in post-exam ecstasy, lose your virginity or just lounge about on the beach.  
 b. A week ago, she'd have *laughed herself stupid* at the idea.  
 (both from WB)

Nevertheless, both of these examples are well within the characterization of “losing good judgment.”

While the majority of the instances of ‘V oneself stupid’ attested in the three corpora can be thus characterized in terms of “to do as much as one wants, losing good judgment,” there are a couple of instances that do not fit this characterization. Consider (29).

- (29) a. Students who fuel their studies with fast food have something serious to worry about: They may literally be *eating themselves stupid*.  
 b. But students who fuel their studies with fast food have something more serious than the “freshman 15” to worry about: They may literally be *eating themselves stupid*. Researchers have known since the late 1980s that bad eating habits contribute to the kind of cognitive decline found in diseases like Alzheimer’s.  
 (both from COCA)

Clearly, both sentences involve a different (though related) sense of *stupid*: “having a low level of intelligence, so that you have difficulty learning or understanding things” (LDOCE). Thus both sentences are about the students whose intelligence level becomes lower because of the junk food they eat (6.2.2). Accordingly, (30a), intended to be of this type of *eat oneself stupid*, can be paraphrased as (30b).

- (30) a. They eat themselves stupid.  
 b. They do an ‘EAT-AS-PUT JUNK FOOD IN’ action on themselves, and as a result their level of intelligence becomes lower.

Here, “being stupid” counts as the endpoint, like ordinary resultatives.

### 8.3 ‘V oneself sick’

Lastly, let us turn to ‘V oneself sick.’ The range of intransitive verbs found to occur in the V slot of this expression in the BNC, the WB, and COCA is summarized in Tables 8.7, 8.8, and 8.9, respectively.

**Table 8.7** BNC counts of ‘V oneself sick’

|           | _____ oneself sick |
|-----------|--------------------|
| laugh     | 4                  |
| cry, weep | 1                  |
| TOTAL     | 6                  |

**Table 8.8** WB counts of ‘V oneself sick’

|              | _____ oneself sick |
|--------------|--------------------|
| laugh        | 2                  |
| binge, drink | 1                  |
| TOTAL        | 4                  |

**Table 8.9** COCA counts of ‘V oneself sick’

|       | _____ oneself sick |
|-------|--------------------|
| laugh | 13                 |
| drink | 8                  |
| eat   | 6                  |
| cry   | 3                  |
| gorge | 1                  |
| TOTAL | 31                 |

Like ‘V oneself stupid’, there is far less variety than ‘V oneself silly.’ But unlike ‘V oneself stupid’, *drink* is found in COCA alone. So the inebriation domain does not seem to be relevant to making sense out of this expression.

Rather, with verbs of consumption (*eat*, *binge*, and *drink*) the relevant domain is that of healthy eating, repeated below:

Healthy eating domain:

If one eats properly (i.e. good quality with a moderate amount), then one becomes healthy and one can boast a good look. But if one departs from this proper eating too much, one is likely to become fat and/or lose one’s health. In the worst case, one will die.

The following are all instances of departure from such proper eating. Thus in both (31a) and (31b) *eat oneself sick* means that the subject entities actually become sick as a result of overeating. And so does *binge oneself sick* in (32).

- (31) a. You *eat yourself sick* the night before, and so you had – you know, I’ve had like three pizzas and some collard greens and some pound cake, and so for you it was 18 beers.  
 b. Today on YOUR HEALTH, *eating yourself sick*. Caught up in an epidemic of obesity, heart disease, and diabetes. (both from COCA)
- (32) Rachel, a compulsive overeater, describes this: At the times I am planning a binge, I am thinking of it nonstop, even while working, talking or driving. I am “driven.” Because of the preoccupation I am working at half efficiency at work. I have lost time from work from *bingeing myself sick* and from sugar-induced depressions more times than I can even estimate. Any use of the mood-changer plunges the addict right back into the cycle. (WB)

In (33) *eat oneself sick* means that the subject entities actually become sick as a result of eating something that is detrimental to one’s health.<sup>67</sup>

- (33) a. *Eating yourself sick*: Transmission of disease as a function of foraging ecology.  
 b. Ponies will *eat themselves sick* any chance they get. (both from COCA)

And in (34) the subject entities actually become sick as a result of drinking too much alcohol.

- (34) a. He ate too much; *drank himself sick* every weekend.  
 b. Other patients were pulled out of the hospital and deposited on the streets of New York City, which swallowed them effortlessly. Many of these men and women *drank themselves sick* or froze during the long winter. (both from COCA)

The result state of being sick is not limited to that of being physically sick. One may end up being “emotionally” sick as a result of drinking alcohol.

- (35) And this is me when I *drank myself sick* so that I could forget what a horrible woman and wife and mother I was. (COCA)

This is a very interesting example, in that it aptly illustrates the difference between *drink oneself sick* and *drink oneself silly/stupid*. Specifically, the notion of light-heartedness, as discernible in *drink oneself silly*, is not detectable in (35). Also,

67. One consequence of the fact that with *eat oneself sick* the subject entity literally, not hyperbolically, becomes sick as a result of eating will be discussed in 16.3.2.

while with *drink oneself silly/stupid* the effect of alcohol manifests itself externally as a behavior, with *drink oneself sick* the effect is more internal to oneself.

All these facts indicate that *eat oneself sick* is a straightforward instance of resultative and therefore can be analyzed in terms of a causal chain in (36).

- (36) Causal chain for *You ate yourself sick*  
 you  $\longrightarrow$  your body  $\longrightarrow$  sick

The same holds true for verbs of crying (*cry* and *weep*). In (37) the subject entities become emotionally sick as a result of crying.

- (37) a. She had *cried herself sick* the night before her wedding. (COCA)  
 b. I'm well educated and I've got two children and I can manage pretty well, there's a number of much more essential things that I know how to do, but I can't do those ones, and when they come up I feel like *weeping myself sick*. (BNC)

In (38), on the other hand, the subject entity becomes physically sick as a result of crying, i.e. her physical health will be damaged.

- (38) Later in the night, as she lay crying at his side, he bade her for God's sake to stop snivelling, so that he might get to sleep. As she could not stop, he had arisen, telling her that she might *cry herself sick*, but that he was going to Mrs Inigo, a woman who wasn't quite such a cold poultice. (BNC)

This is because crying is believed to affect both one's emotional state and one's body. Crying is a manifestation of one's internal anxiety/worry which one can no longer contain. So crying can be taken to indicate that the state of being emotionally troubled and unsteady goes on, which will eventually affect one's physical condition as well.<sup>68</sup>

Again, therefore, *cry oneself sick* can be analyzed in terms of a causal chain as in (39).

- (39) Causal chain for *She cried herself sick*  
 she  $\longrightarrow$  her mind/body  $\longrightarrow$  sick

Thus, with all the instances of 'V oneself sick' seen so far, the post-verbal NP entity indeed becomes sick as a result of the verbal activity; it has nothing to do with the external manifestation of one's drunken state, so the expressed meaning is far from the notion of self-indulgence, unlike 'V oneself silly.'

68. Notice, however, that there is also a positive side to crying: Crying has the cathartic effect of easing/lessening the sadness or worry by releasing the sad feelings, as will be noted in 14.2.3.4.

Given this difference between ‘V oneself sick’ and ‘V oneself silly,’ however, it comes as a bit of a surprise that this difference vanishes when the verb is *laugh*. Observe that it is rather difficult to find the *laugh oneself sick* in (40) being significantly different from *laugh oneself silly*. After all, the subject entity is laughing copiously without actually becoming sick, either physically or mentally.

- (40) Crazy, of course – if he had caught any of the others doing such a crazy thing he would have *laughed himself sick!* (BNC)

In fact, there are indications that *laugh oneself sick* is almost identical to *laugh oneself silly*. In the following corpus data, the two expressions are used to describe the same situation, i.e. the person would have laughed quite a lot in a counter-factual world.

- (41) a. If someone had told me I would be giving up everything for one man a year ago I would have *laughed myself silly*. (WB)  
 b. If I had been told only a year ago that I would find myself in this position, Rose, I would have *laughed myself sick*. (COCA)

Also, in the following example *silly* and *sick* are coordinated by *or*.

- (42) ... while others *laughed themselves silly or sick* on rum and coke at the Maid Marian New Year’s Superdisco. (BNC)

Thus we are faced with an apparent puzzle: Why is it that the otherwise distinct expressions (i.e. ‘V oneself silly’ and ‘V oneself sick’) should appear identical when the verbal slot is occupied by *laugh*?

The answer may be sought in a special characteristic of *laugh*. When people laugh to a great degree, they shake various parts of their body rather vigorously. As already seen in Chapter 4, this motivates the formation of resultatives based on the separation of body-parts as a result of the vigorous shaking, as in (43).

- (43) a. Joe would *laugh his head off*.  
 b. “I expect she would *laugh her socks off* if she found you here in royal regalia!” (both from COCA)

Now note that it is quite conceivable that by laughing too intensely, one’s abdomen is contorted as well. Accordingly, *laugh oneself sick* can be analyzed in terms of the (hyperbolic) reasoning that as a result of the contortion of the abdomen, one becomes physically sick, on a par with the expressions in (43).<sup>69</sup>

69. This aspect of laughing may be exploited to motivate even the expression *laugh to death*. Claridge (2011, p. 201) observes that “*Laugh to death* ... works on the basis of the discomfort and belly ache that appears when one cannot stop laughing.”

## 8.4 Summary

At the outset, the following two questions were raised in reaction to Jackendoff's (1997) claim that *laugh oneself silly* is not a resultative but an idiomatic intensifier: (1) Is *laugh oneself silly* really not a true resultative? and (2) are 'V oneself silly,' 'V oneself stupid,' and 'V oneself sick' the same?

As to the first question, *laugh oneself silly* is indeed a resultative. As to the second, the three expressions are distinct from each other. This is demonstrated, first and foremost, by the fact that the range of verbs found to occur in the V slot of the three expressions in the three corpora are different, as summarized in Table 8.10.

**Table 8.10** BNC, WB and COCA counts of *silly*, *stupid*, and *sick*

|                  | BNC | WB | COCA |
|------------------|-----|----|------|
| V oneself silly  | 11  | 10 | 46   |
| V oneself stupid | 4   | 3  | 8    |
| V oneself sick   | 6   | 1  | 28   |

The range of verbs found to occur in 'V oneself silly' are accounted for as follows: *Laugh oneself silly* "to laugh as much as one wants, in a silly, light-hearted way" is the prototype, which generalizes as "to do as much as one wants, in a silly, light-hearted way" (e.g. *eat oneself silly*, *smoke oneself silly*) and then further as "to do to a great extent, in a silly, light-hearted way" (e.g. *sweat oneself silly*). When used in these generalized meanings, 'V oneself silly' might appear to be an intensifier expression.

But this is not the case with 'V oneself stupid' and 'V oneself sick'; 'V oneself stupid' is a standard resultative in that the result state arises as a result of the verbal action. And so is 'V oneself sick'.

Of the three expressions, 'V oneself silly' looks to be most plausibly characterized in terms of the intensifier meaning 'to do intensely,' in that extensions from the prototype are amenable to this characterization. But this is not so with 'V oneself stupid' and 'V oneself sick.' This is probably because the state of being silly (= unable to think or behave sensibly) is taken somewhat positively, while the state of being stupid (= losing good judgment) and that of being sick are taken rather negatively. The notion of "to do as much as one wants" may easily develop out of the semantics of 'V oneself silly,' but not from either 'V oneself stupid' or 'V oneself sick,' because of a tinge of negativity inherent in *stupid* and *sick*.<sup>70</sup>

70. Tony Higgins has suggested, however, that all three expressions may be captured by the notion "to do to an uninhibited degree" instead.

## 8.5 Conclusion

In this chapter, *laugh oneself silly* was analyzed. Contrary to Jackendoff (1997), this expression is indeed a resultative, and can be accommodated in our force-recipient account. Remarkably, *laugh oneself silly* is to be characterized against the inebriation domain, similarly to *drink oneself silly*.

Also, the three expressions ‘V oneself silly,’ ‘V oneself stupid,’ and ‘V oneself sick,’ turned out to be different from each other. Accordingly, three different constructions need to be posited to accommodate them.





PART IV

## **'Change verb' resultatives and how to accommodate them**



## ‘Change verb’ resultatives

### 9.0 Introduction to Part IV

In Part II and Part III, we have seen that despite Jackendoff’s (1997) claim that the sentences in (1) are intensifier expressions and are therefore not true resultatives, they are indeed resultatives and can be accommodated in the proposed force-recipient account.

- (1) a. He laughed his head off.  
b. He laughed himself silly.

Now in Part IV, we turn to resultatives like (2), which are also known to differ from ordinary resultatives, though in ways different from those in (1) (Pustejovsky 1991a, Washio 1997).

- (2) a. He froze the ice cream solid.  
b. He cut the meat thin.

It is shown that in order to accommodate resultatives like (2a) and (2b), we have to reconsider what the causal chain representation signifies and, correspondingly, modify the constructional meaning of Transitive resultatives.

### 9.1 Weak resultatives and spurious resultatives<sup>71</sup>

#### 9.1.1 Pustejovsky (1991a)

In the literature, a number of scholars have noted that when change-of-state verbs are followed by result phrases as in *The lake froze solid*, the result phrase further specifies a change already entailed by the verb, rather than describing a second result state in addition to the entailed change (Pustejovsky (1991a, p. 76), Kaufmann (1995, p. 416), Levin & Rappaport Hovav (1995, p. 58), Tortora 1998, Rapoport (1999, p. 673), Horrocks and Stavrou (2003, p. 317), Randall (2010, p. 99), among others). This is most clearly stated by Pustejovsky (1991a), who observes that (3b) does not exhibit an aspectual shift characteristic of resultatives:

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71. This chapter is a significantly revised and enriched version of Iwata (2006a).

- (3) a. The river *froze* in 20 minutes.  
 b. The river *froze solid* in 20 minutes. (Pustejovsky, 1991a, p. 76)

The events in both [(3a)] and [(3b)] are coextensive. That is, it is not the case that the event denoted in (a) is a subpart of that denoted in (b); rather they are the same event, with different information being expressed about it.

(Pustejovsky, 1991a, p. 76)

Pustejovsky (1991a) even suggests that sentences like (3b) are “not actually cases of the resultative construction at all, but involve the addition of emphatic (or manner) adjunct phrases.” (Pustejovsky, 1991a, p. 76)

What Pustejovsky means by these remarks can be understood in the following way. With ordinary resultatives like *He hammered the metal flat*, his hammering the metal (the verbal event) and his causing the metal to become flat (the causative event) are distinct, with the former standing in a means relation to the latter. This may be described as in Figure 9.1.

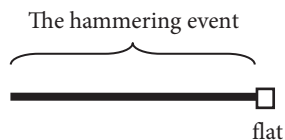


Figure 9.1 *He hammered the metal flat*

The hammering event, which takes some time, is expressed in a bold line. The state of being flat, which comes to obtain after the hammering event, is expressed as a small box.

This is not the case with *The river froze solid*, however. The verb *freeze* entails a state, that is, the state of being frozen. So *The river froze* encompasses both the process and the end state. Now this same event can be alternatively construed as the river’s becoming solid. In other words, the river’s freezing and the river’s becoming solid are two facets of one and the same event, as described in Figure 9.2.

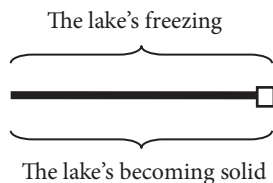


Figure 9.2 *The lake froze solid*

Once we realize this point, we understand why sentences like *The river froze solid* resist a paraphrase which is valid for ordinary resultatives. Specifically, while the resultatives in (4a) and (4b) can be paraphrased as “X becomes Y by V-ing,” as

shown in (5a) and (5b), respectively, the same paraphrase does not work for the intransitive counterpart for (6a). Levin & Rappaport Hovav (1999) observe that (6a) cannot be paraphrased by (6b).

- (4) a. The kettle boiled dry.  
 b. The clothes steamed dry. (Levin & Rappaport Hovav, 1999)
- (5) a. The kettle became dry by boiling.  
 b. The clothes became dry by steaming.
- (6) a. The river froze solid.  
 b. \*The river became solid by freezing. (Levin & Rappaport Hovav, 1999)

Given the co-extensiveness of the verbal event and the change of state as described in Figure 9.2, then, it is no wonder that a means paraphrase does not sound good as in (6b).

### 9.1.2 Washio (1997)

Now when we turn to Washio (1997), we realize that resultatives based on change-of-state verbs actually have two subtypes. Washio (1997) distinguishes three types of resultatives (strong, weak, and spurious resultatives): Strong resultatives are those in which the meaning of the verb and the meaning of the adjective are completely independent of each other, as in (7). Thus the verbs *drag* and *race* do not contain in their lexical semantics the notion “smooth” or “sweaty.”

- (7) a. The horses dragged the logs *smooth*.  
 b. The jockeys raced the horses *sweaty*.

With weak resultatives, by contrast, the verbs entail a change of state. Thus the verb *dye* contains in its lexical semantics the notion of “color,” which is further specified by *pink*. Similarly, the verb *freeze* entails the state of being solid.

- (8) a. Mary dyed the dress *pink*.  
 b. I froze the ice cream {*hard/solid*}.

Spurious resultatives are similar to weak resultatives, but the adjective can be replaced with the corresponding *-ly* adverb with virtually no difference in meaning, as in (9) and (10).<sup>72</sup>

72. Washio's (1997) “spurious resultatives” have been often cited yet practically taken for granted among Japanese scholars working on resultatives, leaving the issue of defining what spurious resultatives actually are yet to be addressed. Attempting such a definition will be deferred until the next chapter, however, as to do so here would detract from the main point of this chapter.

(9) He cut the meat {*thin/thick*}.

(10) He cut the meat {*thinly/thickly*}.

Washio's "strong resultatives" are ordinary resultatives as widely known in the literature (Jackendoff 1990, Goldberg 1995, Levin & Rappaport Hovav 1995, Boas 2003, among many others), while weak resultatives and spurious resultatives are both based on change-of-state verbs. Unlike strong resultatives, weak resultatives and spurious resultatives cannot be paraphrased by means of "X causes Y to become Z by V-ing."<sup>73</sup> Thus Washio (1997) observes that (11a) cannot be paraphrased with (11b).<sup>74</sup>

(11) a. He cut the meat {*thin/?thinly*}.

b. \*He caused the meat to become thin by cutting it. (Washio, 1997, p. 17)

Also, weak resultatives resist this paraphrase.<sup>75</sup>

(12) a. He froze the ice cream solid.

b. \*He caused the ice cream to become solid by freezing it.

In what follows, therefore, resultatives which are based on change-of-state verbs are referred to as 'change verb' resultatives. Weak resultatives and spurious resultatives are subtypes of 'change verb' resultatives.

### 9.1.3 Further characteristics of 'change verb' resultatives

There are a couple of further characteristics which differentiate 'change verb' resultatives from ordinary resultatives. First, Horrocks & Stavrou (2003) observe that the result phrase can be *wh*-questioned with 'change verb' resultatives but not with ordinary resultatives.

(13) a. How did s/he wipe the table? – \*Clean.

b. How did s/he beat the metal? – \*Flat.

73. While it has been amply demonstrated in Chapter 2 that the 'X acts on Y' paraphrase is better than the 'X causes Y to become Z by V-ing Y' paraphrase, different types of resultatives can be distinguished in terms of whether they conform to the 'X causes Y to become Z by V-ing Y' paraphrase or not. So in what follows, I will use the 'X causes Y to become Z by V-ing Y' paraphrase as a litmus test in distinguishing types of resultatives.

74. Strictly, Washio (1997) observes only of spurious resultatives that the 'X causes Y to become Z'-paraphrase fails.

75. The reason why the paraphrase fails differs between (11) and (12), though, as will be shown shortly.

- (14) a. What colour did s/he paint the house? – Red.  
 b. How did s/he cut the onion? – Thin. (Horrocks & Stavrou, 2003, p. 317)

This is rather to be expected, in that one can ask about the specific character of a lexically encoded result state, but not that of a non-encoded one.

Second, in commenting upon the debate between Carrier & Randall (1989) and Jackendoff (1990) as to the availability of adjectival passives like (15), Levin & Rappaport Hovav (1995) observe that sometimes adjectival passives can be formed where the order of the result phrase and the passive participle is reversed, as in (16).

- (15) a. a wiped-clean table  
 b. pounded-flat metal

- (16) In those few undertoned words of Grandcourt's she felt as absolute a resistance as if her thin fingers had been pushing at a *fast-shut* iron door.

[G. Eliot, *Daniel Deronda*, p. 311, cited in  
 Levin & Rappaport Hovav, 1995, p. 44]

Levin & Rappaport Hovav (1995) maintain that this structure can be derived by making the passive participle into the head of a compound, but wonder why this option is not more generally available, noting that "most such structures sound unacceptable (*\*flat-watered tulips*)" (Levin & Rappaport Hovav, 1995, pp. 44–45).

What is overlooked by Levin & Rappaport Hovav is that adjectival passives of this type are formed from 'change verb' resultatives. In the following attested data, resultatives are unambiguously of the 'change verb' type.

- (17) a. At the top was a faded *blue-painted* door with the single word, Studio, emblazoned upon it in plain black lettering.  
 b. The Knights wear mantles of wolf skins over their *red-coloured* armour.  
 c. Swiftly, Ace clambered over the *red-stained* sandbags, and checked the door.

- (18) Cocktail prawns (450 g) and *thin-cut* ham (454 g) are both £1 cheaper at £2.99 and six Mr Kipling Country Slices, worth 83p, are free with 80 Brooke Bond PG Tips Tea Bags (£1.54). (BNC)

Again, this is quite natural in that this type of compounding is possible only when the first element of the compound is lexically encoded.

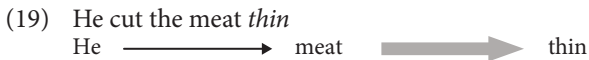


## 9.2 How ‘change verb’ resultatives are to be analyzed

### 9.2.1 What is the host of predication?

But given that ‘change verb’ resultatives are thus different from ordinary resultatives, how are they to be accounted for, then? Notice that while the differences of ‘change verb’ resultatives from ordinary resultatives have been amply demonstrated up to this point, the discussion so far crucially rests on the ‘X causes Y to become Z’-paraphrase. So let us analyze ‘change verb’ resultatives from the viewpoint of the ‘X acts on Y’-paraphrase, instead.

Let us begin with spurious resultatives, which seem to be more recalcitrant than weak resultatives. According to the force-recipient account, the spurious resultative *He cut the meat thin* is expected to receive the causal chain representation in (19).



Three things can be said of this causal chain. First, the ACT ON component is valid, as the meat indeed is acted upon. This suggests that the post-verbal NP is a force-recipient, in accordance with the force-recipient account.

Second, however, the result phrase is not strictly predicated of the direct object entity. Rather, what is thin are the slices of the meat that result from the cutting event, as illustrated in Figure 9.3.

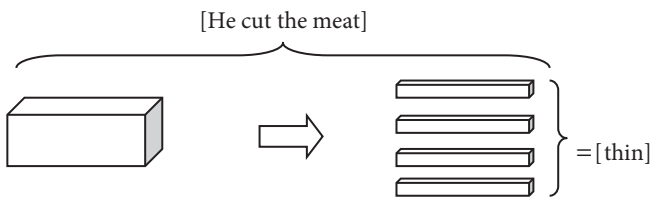


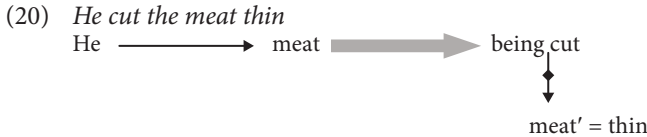
Figure 9.3 *He cut the meat thin*

Third, nothing is asserted to change from a state of being not thin to then being thin. Rather, the property of being thin emerges exactly when the meat gets cut (= when the verbal event is completed). In order to capture this aspect by means of the causal chain representation, we need a notation to express an entity that has undergone a change. Recall that in Chapter 6, we already introduced such a mechanism. Figure 9.4 represents as X' an entity that has undergone a change, be it a change of state or a change of location.



Figure 9.4  $X'$  as having undergone a change  $Y$

By using this notation, the causal chain for *He cut the meat thin* can be represented as in (20).



This causal chain differs from that in (19): The result phrase *thin* is not strictly at the tail of the causal chain, because it is not the case that the original source of meat to be cut then becomes thin upon cutting. Rather, the result phrase *thin* is predicated of the meat as having undergone the change of state (i.e. being cut).

### 9.2.2 Unifying 'change verb' resultatives with ordinary resultatives

Thus spurious resultatives receive a different causal chain representation than ordinary resultatives. At the same time, notice that the difference is minimal. As just stated, with spurious resultatives, the result phrase *thin* is predicated of the entity after being cut, not the entity before being cut. So (21a) can be paraphrased as in (21b).

- (21) a. He cut the meat thin.  
 b. He cut the meat, and the resulting entity was thin.

Apparently, with ordinary resultatives like *He hammered the metal flat*, the result phrase *flat* is predicated of the entity before being hammered. Notice, however, that the entity after being hammered is called by the same name as that for the entity before being hammered. So it is perfectly possible to suppose that the result phrase is predicated of the metal as having been hammered.

- (22) a. He hammered the metal flat.  
 b. He did a hammering action upon the metal, and as a result the entity being thus acted upon was flat.

That is, in both cases the result phrase is predicated of the entity as having undergone the verbal action. The only difference is that with spurious resultatives the entity after having undergone a verbal action is not called by the same name as that of the entity before the verbal action.

Once we realize this point, we can unify spurious resultatives and ordinary resultatives as follows. Since in both cases the result phrase is predicated of the entity after undergoing the verbal action, the meaning of spurious resultatives (21a) and that of ordinary resultatives (22a) can be expressed as in (23a) and (23b), respectively.

- (23) a. He did a cutting action upon the meat, and the resulting entity was thin.  
 b. He did a hammering action upon the metal, and as a result the entity being thus acted upon was flat.

Accordingly, we can now change the constructional meaning of Transitive resultatives from the one in (24a) (version 1) to that in (24b) (version 2).

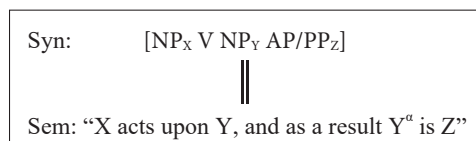
- (24) a. X acts upon Y, and as a result Y becomes Z. (version 1)  
 b. X acts upon Y, and as a result Y<sup>a</sup> is Z. (version 2)

In (24b), Y<sup>a</sup> designates an entity having undergone the verbal action. Also, “become” is avoided. With this revised constructional meaning, therefore, spurious resultatives can be handled together with ordinary resultatives.

It goes without saying that weak resultatives also can be accommodated under this constructional meaning. Thus (25a) can be paraphrased as in (25b), where the state of being solid holds after a relevant force is applied to the post-verbal NP *the ice cream*.

- (25) a. He froze the ice cream solid.  
 b. He did a freezing action upon the ice cream, and the resulting entity was solid.

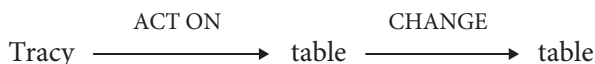
We can thus revise the Transitive resultative construction as shown in Figure 9.5.



**Figure 9.5** Transitive resultative construction (version 2)

Given that the constructional meaning is thus revised, we must modify our view of the causal chain representation accordingly. Specifically, Rappaport Hovav & Levin (2001) state that a causal chain consists of the ACT ON segment and the CHANGE segment as shown in (26), and we have been following this practice up to the last chapter.

- (26) Causal chain for *Tracy wipes the table clean* in Rappaport Hovav & Levin (2001)



But the term “CHANGE” is better avoided, for the word “become” is not appropriate, as noted above. Rather, given that the state as designated by the result phrase simply holds, what comes after the shaded, thick arrow should be taken to indicate the RESULT-phase, as shown in (27).

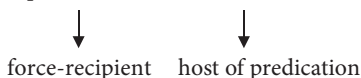
- (27) Causal chain for *Tracy wipes the table clean* in the present account



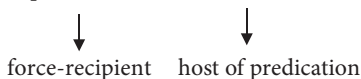
From now on, the causal chain representation is to be understood in this way.

Incidentally, note that this revised force-recipient account is, in a sense, exactly the opposite of a small clause analysis. Our force-recipient account has been modified from (28a) to (28b), where the post-verbal NP entity is a force-recipient alone, and not strictly a host of predication.

- (28) a. X acts upon Y, and as a result Y becomes Z. (version 1)



- b. X acts upon Y, and as a result Y<sup>a</sup> is Z. (version 2)



Accordingly, (29a) is to be parsed as in (29b): The post-verbal NP designates an entity directly acted upon, and the result phrase simply expresses a state in the result phase, following the force-transmission. By contrast, the small clause analysis is tantamount to claiming that the post-verbal NP entity is only a host of predication, not a force-recipient. So (29a) is claimed to consist of the verb and the small clause as shown in (29c).

- (29) a. He cut the meat thin.  
 b. He [cut the meat] [thin]. (force-recipient account)  
 c. He [cut] [the meat thin]. (small clause account)

Obviously, the bracketing in (29c) is incorrect, as *the meat* and *thin* are not in a predication relation. What is worse, a small clause analysis predicts that the situation described by (29a) should be expressed by (30a), instead. After all, *slices* and *thin* could form a small clause, as shown in (30b), exactly parallel to non-subcategorized object cases like (31a) and (31b).

- (30) a. # He cut slices thin.  
 b. He cut [slices thin].
- (31) a. They drank [him under the table].  
 b. The audience laughed [the actors off the stage].

But (30b) cannot mean what it is supposed to mean under a small clause analysis, and it is not attested in any of the three corpora. Rather, the intended meaning is actually expressed as in (32).

- (32) a. Bragg began to *cut thin slices* of rough, black twist with his juice-stained knife.  
 b. He *cut two thick slices* of bread and spread yellow, salty butter over each one. (both from BNC)

This seems to be due to a constraint on English resultatives, namely that the post-verbal NP is invariably an affectum, i.e. an entity that exists prior to the verbal action (e.g. *dig the ground*), not an effectum, i.e. an entity that comes to exist only after the verbal action (e.g. *dig a hole*). Note that this is an automatic consequence of the force-recipient account, in that an effectum, i.e. an entity that does not exist prior to the verbal action, cannot possibly be a recipient of a verbal force.

### 9.3 Resultative caused-motion counterparts

#### 9.3.1 *Break the egg into the pan*

Thus, our force-recipient account has been revised so as to accommodate spurious resultatives. Now exactly the same can be said of resultative caused-motion sentences, for spurious resultatives have their counterparts in the resultative caused-motion construction. Consider (33).

- (33) a. ...the old wifey *broke* the eggs *into the pan* and threw them onto the plate ...  
 b. Rodney *cracked* two eggs *into the frying pan*.  
 c. Wash and dry the leaves and *tear* them *into a salad bowl*. (all from BNC)

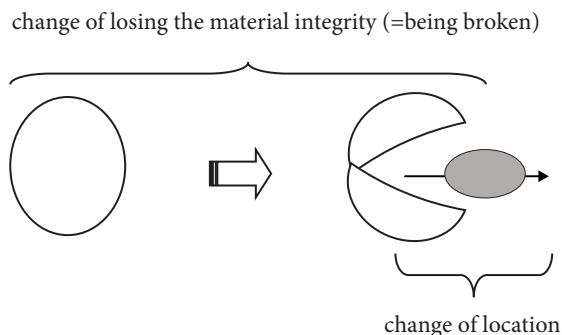
Just as the result phrase is not strictly predicated of the post-verbal NP in the case of spurious resultatives (e.g. *cut the meat thin*), so the path PP is not strictly predicated of the post-verbal NP in these sentences.

In the literature, it has been known that in sentences like (33a) the egg before getting broken and the egg that went into the pan are not strictly the same. Thus Levin & Rappaport Hovav (1995), citing (34), observe as follows:

... the noun heading the postverbal NP in these examples is of a very special type. The noun *walnut* can refer to the nut as a whole (i.e., both the nutshell and the nutmeat) or to the nutmeat alone; the nouns *egg* and *peas* also have two senses showing a similar relation. (Levin & Rappaport Hovav, 1995, p. 60)

- (34) a. We broke the walnuts *into the bowl*.  
 b. The cook cracked the eggs *into the glass*.  
 c. Daphne shelled the peas *onto the plate*.  
 (Levin & Rappaport Hovav, 1995, p. 60)

Note that the verb *break* (as well as *crack* and *tear*) is a change-of-state verb, and that the direct object entity, therefore, undergoes a change of state. Accordingly, the eggshell's breaking effects the release of the 'egg content' from inside the eggshell, as described in Figure 9.6.



**Figure 9.6** Two changes described by *break the egg*

Just as *thin* is predicated of the meat as having undergone cutting in *He cut the meat thin*, so *into the pan* is predicated of the egg as having undergone breaking in *She broke the egg into the pan*. The difference concerns whether the result phrase pertains to a result state or a 'result movement'.

- (35) a. She broke the egg into the pan.  
 b. She did a breaking action upon the egg, and the resulting entity moved into the pan.

Accordingly, on the assumption that the path PP simply expresses the path alone without specifying the host of predication, exactly like the result phrase as seen in 9.2, we can now change the semantics of the resultative caused-motion construction from the one in (36a) to that in (36b).

- (36) a. X acts upon Y, and as a result Y moves Z (version 1)  
 b. X acts upon Y, and as a result Y<sup>α</sup> moves Z. (version 2)

Consequently, the resultative caused-motion construction is now revised as shown in Figure 9.7.

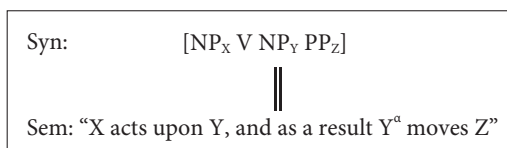


Figure 9.7 Resultative caused-motion construction (version 2)

It goes without saying that this revised version can also accommodate "ordinary" resultative caused-motion sentences like (37a), which is now paraphrased as in (37b).

- (37) a. He wiped the crumbs off the table.  
 b. He did a 'WIPE-AS-PUSH' action upon the crumbs, and as a result the entity being thus acted upon (=the crumbs) moved off the table.

### 9.3.2 *Empty the tank into the sink*

Still another case of resultative caused-motion sentences based on change-of-state verbs comes from sentences like (38).

- (38) I emptied the tank into the sink.      (Levin & Rappaport Hovav, 1995, p. 61).

Here again, the post-verbal NP entity is not what actually undergoes motion; it is not the tank that moved into the sink. Rather, water emerges from the action of emptying the tank. Just like the case of *break the egg into the pan*, therefore, *empty the tank into the sink* can be paraphrased as in (39).

- (39) I did an emptying action upon the tank, and the resulting entity (=water) moved into the sink.

Interestingly enough, this type of resultative seems to be possible even for the verb *clear*. The following are attested in the BNC.

- (40) a. She *cleared* her desk *onto the floor*, made coffee and switched on the typewriter.  
 b. We'll *clear* one shelf *onto the table* here, and then we'll see.  
(both from BNC)

It is not the desk or the shelf that moved onto the floor or the table. Rather, clearing the desk or the shelf entails the movement of what has been on the desk or the shelf, and it is this moved entity that *onto the floor* and *onto the table* are respectively predicated of. The following example can be similarly accounted for.

- (41) He peeled an onion and chopped it up along with a green pepper. He then *cleared the cutting board into a frying pan* and sautéed the mixture with butter, powdered garlic, and other seasonings.

[M. Connelly, *Trunk Music*, p. 290]

Thus these instances are entirely parallel to (38), the sole difference being that the entity in question moves out of a container in (38) but moves off a surface in (40) and (41).

Interestingly enough, (38) is not the only type of resultative caused-motion sentences that can be formed on the basis of *empty*. Specifically, the entity that does move may also appear immediately after the verb *empty*.

- (42) a. If the bag has developed no leaks, *empty the water out of the aquarium into another container.* (BNC)  
 b. *Empty the mayonnaise into a small bowl* and mix in cracked pepper to taste. (WB)

How are these resultatives to be handled?

What seems to be relevant in this connection is the fact that a container entity may stand alone as the direct object of *empty* as in (43), but a substance entity cannot as in (44).

- (43) a. I emptied the tank into the sink.  
 b. I emptied the tank.  
 (44) a. I emptied water into the sink.  
 b. \*I emptied water.

A reasonable possibility that presents itself, then, is to analyze sentences like (42) as instances of resultative caused-motion sentences with non-subcategorized objects. Thus *I emptied water into the sink* receives the causal chain in (45), which may be paraphrased as in (46).

- (45) Causal chain for *I emptied water into the sink*

I  $\longrightarrow$  water  $\longrightarrow$  into the sink

- (46) I did an 'EMPTY-AS-RELEASE' action upon the water, and as a result the entity being thus acted upon moved into the sink.

In short, when a container entity appears after *empty* as in (47a), this is an instance of resultative caused-motion sentences based on change-of-state verbs. If, on the other hand, a substance entity appears in the post-verbal position as in (47b), this is an instance of resultative caused-motion sentences with a non-subcategorized object.



- (47) a. I emptied the tank into the sink.  
 b. I emptied water into the tank.

In this way the two types of resultative caused-motion sentences based on the verb *empty* can be straightforwardly accounted for by means of the mechanisms already introduced.

## 9.4 Still another issue raised by ‘change verb’ resultatives

### 9.4.1 Result phrase-addition analysis

Thus while ‘change verb’ resultatives appear to pose a challenging problem to a unified account of resultatives, they can be accommodated in our force-recipient account. Note, however, that there is still another issue raised by ‘change verb’ resultatives. Recall Pustejovsky’s (1991a) remark that these apparent resultatives are “not actually cases of the resultative construction at all, but involve *the addition of emphatic (or manner) adjunct phrases.*” (Pustejovsky, 1991a, p. 76, my emphasis)

This suggests that *cut the meat thin* (spurious resultative) and *freeze the ice cream solid* (weak resultative) result from adding *thin* and *solid* to *cut the meat* and *freeze the ice cream*, respectively, as shown in (48a) and (48b).

- (48) a. [cut the meat] + [thin] = > [cut the meat thin]  
 b. [freeze the ice cream] + [solid] = > [freeze the ice cream solid]

In constructional terms, this means that these resultative sentences are obtained by adding a result phrase (i.e. *thin* and *solid*) to the transitive construction, that is, they are not instances of the resultative construction as an argument structure construction. So while we have shown that spurious resultatives and weak resultatives can be accommodated by means of the revised argument structure construction, there is also a possibility of a result phrase-addition analysis.

Logically, there is no reason to exclude a result phrase-addition analysis. Parsimony is not a legitimate reason to do so, for it would be an instance of “exclusion” fallacy in the sense of Langacker (1987): Just because a given phenomenon can be analyzed in more than one way does not necessarily mean that only one of them is correct.

Besides, there are instances that independently call for the result phrase-addition analysis, anyway. Consider (49).

- (49) a. He *wiped* the blade *clean on his skin coat* and walked out.  
 b. Afterwards he washed the tin out in the stream, splashed water over his face and hands and *wiped* them *dry on a handkerchief*. (both from BNC)

These instances of *wipe – clean* and *wipe – dry* significantly differ from those in (50), in that the result phrase is followed by an *on*-PP.

- (50) a. *Wiping* the board *clean*, she began to write on it in bold letters something ...  
 b. After he had fed him he *wiped* his boots *dry* with an old rag ....  
 (both from BNC)

Since the observed syntactic frame is [NP V NP AP *on*-PP], not [NP V NP AP] (or [Subj V Obj ADJ]), the sentences in (49) cannot be accommodated by means of the same construction that handles the resultatives in (50). That is, we would have to posit another construction, as long as we try to accommodate the resultatives in (49) by means of an argument structure construction.

To make things worse, this is not a matter of adding one more construction to the inventory. Essentially the same is observable with resultatives based on intransitive verbs. Consider (51) and (52).

- (51) a. Not only has he again *fallen flat on the ground*, but his head and his hands have broken off and lie at the entrance of the building.  
 b. Riding under the low branches of a tree, she *dropped backwards flat on the horse's back*, with her feet on its shoulders. (both from BNC)
- (52) From the tip of the headland and for some way out to sea the waves were *breaking white against half-submerged fangs and stacks of rock* that had in time past broken away from the main cliffs. (BNC)

In (51) intransitive verbs are accompanied by result phrases, which are further followed by *on*-PPs; in (52) the result phrase is followed by an *against*-PP.

Furthermore, the same is true even with prepositional result phrases. Thus in (53) the result phrases *to death*, *to pieces*, and *to smithereens* are followed by *against*-PPs.

- (53) a. The lad on its back, dolled up as King William, had been *crushed to death against the wall*.  
 b. The first time he had driven the van to Stowbridge he had *smashed* its top *to pieces against the arch of the bridge*, not realising it was just a few inches too high to go under.  
 c. A wooden scooter he'd made tipped me over the handlebars on its maiden voyage and he picked it up and *smashed* it *to smithereens against a lamp-post*, as if it were a cobra that had just delivered a fatal bite. (all from BNC)

In order to accommodate all these resultatives, we would have to posit a construction with the syntactic frame [NP V AP *on/against*-PP] for (51) and (52), and

another construction with the syntactic frame [NP V NP AP/PP *on/against*-PP] for (49) and (53). In other words, if one rejects the result phrase-addition analysis for reasons of parsimony, then one would have to proliferate argument structure constructions, instead.

But clearly, by proliferating constructions in this way, we are missing a very important point, namely that when the result phrases are subtracted from these sentences, the resulting sentences are still well-formed.

- (54) a. He wiped the blade *clean* on his skin coat.  
 b. He wiped the blade on his skin coat.
- (55) a. The waves were breaking *white* against half-submerged fangs.  
 b. The waves were breaking against half-submerged fangs.
- (56) a. He smashed it *to smithereens* against a lamp-post.  
 b. He smashed it against a lamp-post.

This makes us realize that all these *on*-PPs and *against*-PPs are selected by the verbs, not by putative argument structure constructions.<sup>76</sup>

Accordingly, it seems far more natural to consider (49a) as resulting from adding a result phrase to the subcategorization frame, as shown in (57).

- (57) [He wiped the blade on his skin coat] + [clean] = [He wiped the blade clean on his skin coat].

All the other instances in (51)–(53) can be analyzed similarly.

#### 9.4.2 Result phrase construction

But given that a result phrase construction is necessary, what will it look like? Since constructions are a form-meaning pairing, we must consider both the semantics and the syntax of this result phrase construction. First, because the result phrases found in ‘change verb’ resultatives (e.g. *thin* and *solid*) are characterized by many scholars as further specifying the entailed change in the verb meaning, one may well wonder how the notion of further-specification can be incorporated into the semantics.

To find an answer to this question, notice that the notion of further specification is not limited to resultatives like *The lake froze solid*. In fact, it is of far more general applicability. Thus Cruse (1986) observes that in each sentence of

76. As a matter of fact, the lexical semantics of the *wipe* as in *wipe the blade on his skin coat* is slightly different from that of the *wipe* as in *wipe the table*. But I will not go into a detailed discussion, as to do so would detract attention from the main point.

(58), the meaning of the adverb (*quickly, slowly, softly* and *loudly*) is encapsulated in the verb meaning.

- (58) a. Arthur rushed *quickly* to the door.  
 b. Arthur ambled *slowly* across the lawn.  
 c. Arthur murmured *softly* in Bertha's ear.  
 d. Arthur was shouting *loudly*. (Cruse, 1986, p. 108)

Thus these adverbs further specify the manner of motion/speaking.

Cruse (1986) further notes that something similar occurs in the following expressions.

- (59) a *bad* headache, a *terrible* catastrophe (Cruse, 1986, p. 108)

This means that *bad* and *terrible* further specify the respective properties encoded in the head nouns. Thus besides APs further specifying a result state, we have adverbs further specifying the manner of motion/speaking and adjectives further specifying a property.

Significantly, these further-specifying manner adverbs and adjectives seem to be no different from ordinary manner adverbs and ordinary adjectives.<sup>77</sup> Thus, the adverbs in (58) and the adjectives in (59) seem to be handled by the same mechanisms that handle ordinary adverbs and ordinary adjectives, and the notion of further-specification does not need to be specified.

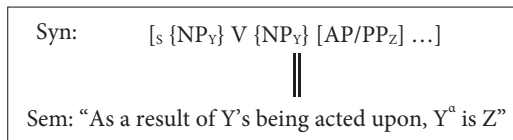
The same should be true of the result phrase construction which we are now introducing. That is, we do not have to worry about how to incorporate the notion of further-specification in the semantics of this construction.

Next, note that even though 'change verb' resultatives may be approached in terms of a result phrase-addition analysis, besides an argument structure construction analysis, the fact remains that 'change verb' resultatives conform to the force-recipient account, that is, the result state obtains as a result of the verbal force. So the result phrase construction in question should include reference to the verbal force being exerted.

Third, in order to cover the range of result phrases seen in 9.4.1, the syntax of the result phrase construction should specify that the result phrase may accompany either an intransitive verb or a transitive verb.

Taking all these things into consideration, then, an adjectival/prepositional result phrase construction is posited as in Figure 9.8.

77. Apparently, this is because redundancy is quite often tolerated in human language.

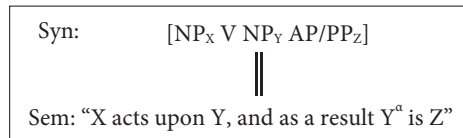


**Figure 9.8** A result phrase construction

In the syntax, curly brackets are employed to indicate that the two occurrences of NP<sub>Y</sub> are mutually exclusive, thereby capturing both the case in which the subject is a force-recipient as in (60a) and the case in which the post-verbal NP is a force-recipient as in (60b).

- (60) a. The lake froze *solid*.  
 b. He froze the ice cream *solid*.

In the semantics, the result state is held to follow from the verbal force, exactly like the case of the Transitive resultative construction as shown in Figure 9.9.



**Figure 9.9** Transitive resultative construction (version 2)

Thus this result phrase construction can handle all those cases seen above and still be an implementation of a force-recipient account.

### 9.4.3 Summary

Let us quickly summarize what has been revealed so far. We now have available two ways of analyzing English resultatives: An argument structure construction analysis and a result phrase-addition analysis. The two strategies are called for by different sets of data. On the one hand, resultatives with non-subcategorized objects cannot be handled by means of a result phrase-addition analysis as shown in (61b). After all, the post-verbal NP is not a subcategorized object, as seen in (62).

- (61) a. He laughed himself silly.  
 b. \* [laugh himself] + [silly] = > [laugh himself silly]

- (62) \*He laughed himself.

On the other hand, resultatives like (63a) can be handled only by means of a result phrase-addition analysis, as shown in (63b).

- (63) a. He wiped the blade clean on a kerchief.  
 b. [wipe the blade on a kerchief] + [clean] = [wipe the blade clean on a kerchief].

At this point, note that resultatives with subcategorized objects like (64a), which have been approached by means of an argument structure construction analysis so far, can nevertheless be handled by means of a result phrase-addition analysis as well, as shown in (64b).

- (64) a. He wiped the table clean.  
 b. [wipe the table] + [clean] = > [wipe the table clean]

This is so because nothing in the syntax and semantics of the result phrase construction in Figure 9.8 prohibits the result phrase-addition analysis in (64b).

There are thus both resultatives that can be handled by means of an argument structure construction analysis alone (e.g. *He laughed himself silly*) and resultatives that can be accommodated by means of a result phrase-addition analysis alone (e.g. *He wiped the blade clean on a kerchief*). Other resultatives can be handled either way (e.g. *He wiped the table clean*, *He cut the meat thin*).

Given that both analyses are necessary to cover the whole range of resultatives, then, the same should be the case with resultative caused-motion sentences as well. Recall that resultative caused-motion sentences with subcategorized objects as in (65a), those with non-subcategorized objects as in (65b), and those based on change-of-state verbs as in (65c) are all to be handled by means of the resultative caused-motion construction as in Figure 9.10.

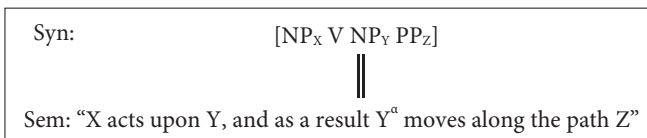


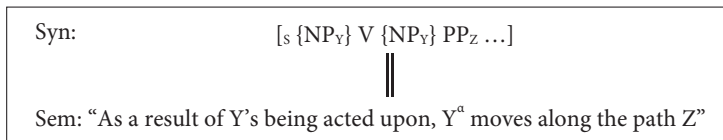
Figure 9.10 Resultative caused-motion construction (version 2)

- (65) a. He hit the ball into center field.  
 b. He wiped the crumbs off the table.  
 c. She broke the egg into the pan.

But (65a) and (65c) can be approached in terms of a result phrase-addition analysis as shown in (66).

- (66) a. [hit the ball] + [into center field] = > [hit the ball into center field]  
 b. [break the egg] + [into the pan] = > [break the egg into the pan]

To implement the idea of a result phrase-addition analysis, therefore, we need to posit a path result phrase construction, as shown in Figure 9.11.



**Figure 9.11** A path result phrase construction

This means that resultative caused-motion sentences with subcategorized objects, whether they are based on change-of-state verbs or not, can be approached either way, exactly parallel to the resultatives in (67).

- (67) a. He wiped the table clean.  
 b. He cut the meat thin.

## 9.5 Conclusion

This chapter started by noting the apparently peculiar behavior of ‘change verb’ resultatives, which comprise weak resultatives and spurious resultatives in the sense of Washio (1997). With resultatives like *He hammered the metal flat*, the base verb (*hammer*) does not entail a change, and the result phrase is apparently predicated of the post-verbal NP. With spurious resultatives like *He cut the meat thin*, by contrast, the base verb (*cut*) entails a change, and the result phrase is not predicated of the post-verbal NP.

In order to accommodate spurious resultatives, therefore, the proposed force-recipient account needs to be revised as follows: The constructional meaning has been changed from “X acts on Y, and as a result Y becomes Z” to “X acts on Y, and as a result Y<sup>α</sup> is Z”; the causal chain is to be interpreted as consisting of the ACT ON-phase and the RESULT-phase.

Also, ‘change verb’ resultatives suggest that a result phrase-addition analysis is feasible. Consequently, we now have two analyses available for accommodating the syntax of resultatives.

## What are spurious resultatives?

### 10.0 Introduction

In the last chapter, our proposed force-recipient account has undergone a revision so as to accommodate spurious resultatives like (1).

- (1) He cut the meat {thick/thin}.

Resultatives like (1) differ from ordinary resultatives in that the post-verbal NP entity does not remain the same after undergoing the verbal activity. Accordingly, it is this emergence of a created entity that is the defining characteristic of spurious resultatives, according to our analysis in the last chapter.

Actually, however, the original exposition of Washio (1997) is not limited to sentences like (1). Sentences like (2a) and (2b) are also cited as instances of spurious resultatives.

- (2) a. He spread the butter {thick/thin}.  
b. He tied his shoelaces {tight/loose}.

Also, Washio (1997) cites a number of characteristics of spurious resultatives, not all of which have been discussed in the last chapter.

In this chapter, therefore, we will address the question of what spurious resultatives are, and why they behave the way they do, by closely examining the resultatives in (1) and those in (2). It will be shown that those like (1) and (2a), but not those like (2b), deserve to be treated as a special type of resultative.

### 10.1 Putative characteristics of spurious resultatives

Let us begin by reviewing Washio's (1997) definition, in the same way as Washio (1997) originally presents spurious resultatives. Washio (1997) refers to resultatives like (3) as spurious resultatives.

- (3) a. He tied his shoelaces tight.  
b. He tied his shoelaces loose. (Washio, 1997, p. 16)



According to Washio (1997), spurious resultatives have the following three characteristics. First, the adjectival result phrase can be replaced with the corresponding *-ly* adverb.

- (4) a. He tied his shoelaces tightly.  
 b. He tied his shoelaces loosely. (Washio, 1997, p. 17)

Second, while ordinary resultatives allow only one of the adjectives that form an antonym pair as shown in (5), spurious resultatives allow both of the adjectives (e.g. *tight* vs. *loose*).

- (5) a. He wiped it {dry/\*wet}.  
 b. He wiped it {clean/\*dirty}.

Third, spurious resultatives cannot be paraphrased by “X causes Y to become Z by V-ing Y.” Thus Washio (1997) claims that (6a) cannot be paraphrased as (6b).

- (6) a. He tied his shoelaces loose.  
 b. \*He caused his shoelaces to become loose by tying them.  
 (Washio, 1997, p. 17)

The same is true of further examples of spurious resultatives.

- (7) a. He spread the butter {thick/thickly}.  
 b. \*He caused the butter to become thick by spreading it.  
 (8) a. He spread the butter {thin/thinly}.  
 b. \*He caused the butter to become thin by spreading it.  
 (9) a. He cut the meat {thick/thickly}.  
 b. \*He caused the meat to become thick by cutting it.  
 (10) a. He cut the meat {thin/?thinly}.  
 b. \*He caused the meat to become thin by cutting it. (Washio, 1997, p. 17)

Of these three characteristics, the third one, i.e. the failure of ‘X causes Y to become Z by V-ing Y’-paraphrase, has already been shown (in 9.1) to be due to the emergence of a created entity. Thus in (11a) the result phrase *thin* is not predicated of the meat but the slices of meat, as indicated in (11b).

- (11) a. He cut the meat thin.  
 b. He cut the meat, and the resulting entity (=slices of meat) was thin.

As for the availability of both of the members of the antonym pair as result phrases, it is questionable whether this really constitutes an actual characteristic of spurious resultatives. First, it is rather hard to come by antonym pairs whose members can both plausibly appear as result phrases. Washio (1997) cites the following

four pairs, but these are practically the only possible antonym pairs noted so far in the literature.

- (12) a. He wiped it {dry/\*wet}.  
 b. He wiped it {clean/\*dirty}.
- (13) a. He tied his shoelaces {tight/loose}.  
 b. He cut the meat {thin/thick}.

A mere four examples is a very small amount to presume whether a putative generalization really holds true or not.

Second, of these four pairs, the ill-formedness of \**wipe* – *wet* and \**wipe* – *dirty* is actually due to the incompatibility between the verb meaning and the result phrase, as will be shown in Chapter 16. As for the pair *tie* – *tight*/*tie* – *loose*, its authenticity is doubtful, as we will see below. This effectively leaves us with just *cut* – *thin*/*cut* – *thick*. But a characteristic that is observed with a single antonym pair alone does not seem to qualify as an essential characteristic of a special type of resultative.

The only remaining puzzle is why the adjectival result phrase should alternate with *-ly* adverbs at all. Apparently, Washio (1997) does not seem to think that this is problematic:

It makes no significant difference if the adjective is taken as specifying the result state or specifying the manner of action so that, typically, the adjective can be replaced with the corresponding adverb with virtually no difference in meaning.  
 (Washio, 1997, p. 17)

But generally, adjectives syntactically modify nouns and semantically specify the state of a thing; they do not specify the manner of action. Conversely, adverbs syntactically modify VPs and semantically specify the manner of action; they do not normally modify NPs. So the observed alternation between adjectives and *-ly* adverbs actually poses a puzzle.

In what follows, let us address this puzzle by focusing on the issue of why the *-ly* adverbs apparently refer to the state of a thing.

## 10.2 *Thinly*

### 10.2.1 Adverbs that refer to a theme entity

Let us begin with the adjective – adverb pairs in (14).

- (14) a. He spread the butter {thin/thinly}.  
 b. He cut the meat {thin/thinly}.

As just noted, it is puzzling that the adverb *thinly* appears to be predicated of a theme entity in these sentences.

Despite the recent surge of interest in adverbs, *thinly* (and *thickly*) used in this way has been rarely, if ever, analyzed in detail in the literature (Ernst 1984, 2002, Maienborn & Schäfer 2011, and the references cited therein).<sup>78</sup>

Actually, however, *thinly* and *thickly* are not the only adverbs that behave in this way. Consider (15).

- (15) a. Coarsely grate cheddar cheese and spread *liberally* over the potato mix. (WB)  
 b. Butter or hard margarine is always spread *lavishly* on bread. (BNC)

Note that the adverbs *liberally* and *lavishly* mean that the amount of the cheese and the butter or margarine being spread is large.

It might be argued that *liberally* and *lavishly* merely modify the verbal activity, to the effect that the act of spreading is done with a large amount of the theme entity, and that, therefore, these adverbs refer to the amount of the theme entity only indirectly.

But a more remarkable instance comes from *evenly*, as illustrated in (16).

- (16) Pour batter into tin and spread *evenly*. (BNC)

Here the layer of batter is said to be even, so *evenly* is apparently predicated of a theme entity directly.

At the same time, *evenly* still functions as an adverb even when it refers to the spatial arrangement or configuration of the batter. Consider (17), where intransitive *spread* is modified by *evenly*.

- (17) Pour the chocolate out on to a sheet of waxed paper and tilt the paper in every direction to allow the chocolate to *spread out evenly*. (BNC)

Here *evenly* defines a certain spatial configuration of the substance *in relation to the spreading activity*: The chocolate spreads out in such a way that the same amount of chocolate ends up occupying every part of the surface. But this is tantamount to saying that *evenly* specifies how the chocolate moves. In this sense, *evenly* can be

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78. A notable exception is Geuder (2000), who argues that “resultative adverbs” predicate of implicit created objects (p. 80). Thus (ia) and (ib) are to be analyzed as something like “the resulting outfit is elegant” and “the resulting slice of bread is thin,” respectively.

- (i) a. She dressed elegantly.  
 b. He sliced the bread thinly. (Geuder, 2000, p. 76)

But this analysis is simply stipulating that such adverbs can be predicated of a thing, rather than offering a solution to the present puzzle.

said to express a manner of motion of the substance (in the sense of Talmy 2000b), by specifying the resulting configuration of the moved substance.<sup>79</sup> Thus *evenly* does modify the verbal event, as described in Figure 10.1.


The chocolate spread out *evenly*.  


Figure 10.1 Intransitive *spread* modified by *evenly*

Let us next turn to (18), where transitive *spread* is modified by *evenly*.

(18) Spread sauce *evenly* over the plate. (BNC)

As far as the substance being moved is concerned, *evenly* can be said to express a manner of motion, like before. But at the same time, *evenly* can be characterized as specifying the manner of action on the part of the person engaged in the verbal action: In order to bring about the spatial configuration in question, one has to move the substance in a specific manner.

In other words, “to spread batter evenly” can be paraphrased as “to move batter in such a way that the same amount of substance will end up being over every part of the surface.” Thus when *evenly* modifies transitive *spread*, it expresses both a manner of motion of the substance and a manner of action by the agent, as described in Figure 10.2, where transitive *spread* is decomposed into “to cause to spread.”


X causes [the sauce to spread *evenly*].  


Figure 10.2 Transitive *spread* modified by *evenly*

This is why *evenly*, being an adverb, modifies a VP, but at the same time refers to the configuration of a theme entity that results from the spreading activity.

### 10.2.2 *Spread – thinly, cut – thinly*

It is now time to turn to *thinly*, as exemplified in (19).

79. Ernst (2016, p. 270), challenging the resultative adverb analysis in Geuder (2000), notes in passing that in (i) it is not a result object but a result state of having a physical disposition that is modified by the adverb.

(i) evenly distributed

To the extent that by “a result state of having a physical disposition” is meant the resulting configuration of the moved substance, Ernst’s (2016) observation seems to be very close to my view.

- (19) Be sure to *spread* butter or margarine *thinly* and try to avoid frying food. (WB)

The similarity with *evenly* is very clear. In fact, the two adverbs may be coordinated.

- (20) When pan is medium hot, whisk batter and ladle in enough to cover the base. Immediately tilt pan to spread batter *thinly and evenly*; tip excess back into bowl. (WB)

As should be obvious by now, exactly the same account can be given for *thinly*. *Thinly* means that a thin layer/coat forms as a result of the verbal action. This is clearly seen when *thinly* modifies intransitive *spread*.

- (21) Melt a little extra butter in a 15 cm non-stick frying pan. Add a small ladleful of the batter, tilting the pan to help it to *spread thinly*. (WB)

Here *thinly* specifies how the batter moves. In other words, *thinly* expresses a manner of motion of the substance by specifying the resulting configuration of the moved substance.

Now when *thinly* modifies transitive *spread* as in (19), it indicates a certain manner of action as well: to move the substance in such a manner that a thin layer/coat will emerge. Just like *evenly*, therefore, *thinly* modifies a VP, but refers to the configuration of a theme entity that results from the verbal activity.

It goes without saying that *thinly* in this sense may appear with various verbs besides *spread*. Thus in (22a) and (22b) the sown seeds and the sprinkled seeds are respectively said to form a thin layer.

- (22) a. Sow them (=seeds) *thinly* in pots or trays, and when they are big enough to handle prick them out into seed boxes.  
 b. Sprinkle the seed very *thinly* along the drill, tapping the packet gently. (both from WB)

In (23a) and (23b) the layers resulting from covering and smearing are said to be thin.

- (23) a. Instead, we amble uphill, over rocks *covered thinly* with turf and heather ...  
 b. A more permanent way of taking a web is to use a piece of black cardboard with Copydex *thinly smeared* in a narrow band around the edges. (both from BNC)

And in (24a) and (24b) a layer of frozen ice and a layer of gold resulting from hammering are said to be thin.

- (24) a. He walked into the canal which was *thinly frozen over*, remaining partly immersed till he was discovered by other men on their way to the Works.  
 b. *thinly hammered* gold (both from BNC)

This seems to indicate that in order for *thinly* to modify a VP, it is sufficient that a thin entity emerges from the verbal activity in one way or another. Thus the semantics of *thinly* can be roughly stated as in (25).

- (25) V *thinly*: “to V in such a way that a thin entity will emerge”

Given this characterization of *thinly*, it is no wonder that either *thin* or *thinly* may appear with *cut* and *spread* as in (26).

- (26) a. He spread the butter {thin/thinly}.  
 b. He cut the meat {thin/thinly}.

In (26a) *spread – thin* is a resultative, meaning that he spread the butter, and the entity resulting from the spreading activity has the property of being thin, as indicated in (27a). On the other hand, *spread – thinly* is a verb-adverb sequence, which means that the verbal activity of spreading the butter is done in such a way that a thin entity will emerge, as shown in (27b).

- (27) a. He spread the butter, and the resulting entity was thin.  
 b. He spread the butter in such a way that a thin entity would emerge.

Obviously the two paraphrases amount to essentially the same thing.

The same goes for (26b). The resultative *cut – thin* is paraphrased as in (28a), and the verb-adverb sequence *cut – thinly* is paraphrased as in (28b). Again, the two paraphrases amount to practically the same thing.

- (28) a. He cut the meat, and the resulting entity was thin.  
 b. He cut the meat in such a way that a thin entity would emerge.

This is why the adjectival result phrase *thin* can be replaced with the adverb *thinly* without a substantial change in meaning.

### 10.2.3 The distinction between *thin* and *thinly*

Thus *thin* and *thinly* apparently alternate, not because the result phrase *thin* is adverbial in nature, but because the resultative and the verb – adverb sequence happen to mean nearly the same thing. The alternation between *thick* and *thickly* can be similarly accounted for.

It goes without saying that the alternation fails if the resultative is not of the right type. Thus while *sow*, *sprinkle*, and *cover* may be modified by *thinly* as in (29), these verbs cannot be followed by the adjectival result phrase *thin* as shown in (30).

- (29) a. Sow the seeds *thinly*.  
 b. Sprinkle the seeds *thinly*.  
 c. The rocks are covered *thinly* with turf and heather.
- (30) a. \*Sow the seeds *thin*.  
 b. \*Sprinkle the seeds *thin*.  
 c. \*The rocks are covered *thin* with turf and heather.

This is because in (30) the post-verbal NP entities do not undergo a change and turn into a thin entity.

Remarkably, even when either *thin* or *thinly* is allowed, the distribution is not exactly identical. Besides *spread* and *cut*, *slice* and *roll* are found to occur either with *thin* or *thinly* in the corpora.

- (31) a. *Slice* the cheese as *thinly* as possible and place in the centre of the plate. (BNC)  
 b. To make the croutons, *roll* out the pastry *thinly*. (WB)

The number of occurrences of each verb with *thinly* and *thin* in the BNC and the WB is summarized in Tables 10.1 and 10.2.

**Table 10.1** BNC counts of *thinly* vs. *thin*

|        | <i>thinly</i> | <i>thin</i> |
|--------|---------------|-------------|
| spread | 67            | 19          |
| slice  | 45            | 0           |
| roll   | 24            | 1           |
| cut    | 5             | 8           |

**Table 10.2** WB counts of *thinly* vs. *thin*

|        | <i>thinly</i> | <i>thin</i> |
|--------|---------------|-------------|
| slice  | 140           | 4           |
| spread | 42            | 24          |
| roll   | 8             | 2           |
| cut    | 2             | 4           |

As can be clearly seen, the frequency is different between *thinly* and *thin*. The AP *thin* is preferred only with *cut*; with all the other verbs (*slice*, *roll*, and *spread*) *thinly* is strongly preferred.

Almost the same results are found with *thickly* and *thick*, as shown in Tables 10.3 and 10.4.

**Table 10.3** BNC counts of *thickly* vs. *thick*

|        | thickly | thick |
|--------|---------|-------|
| spread | 13      | 3     |
| slice  | 12      | 1     |
| cut    | 1       | 0     |
| roll   | 1       | 0     |

**Table 10.4** WB counts of *thickly* vs. *thick*

|        | thickly | thick |
|--------|---------|-------|
| slice  | 19      | 2     |
| spread | 6       | 1     |
| cut    | 3       | 5     |
| roll   | 0       | 0     |

Conceivably, these results come from the fundamental distinction between adjectives and adverbs: *Thin* and *thick* are predicated of a thing and refer to the result state, whereas *thinly* and *thickly* modify an event and refer to a process leading up to the result state.<sup>80</sup> Now note that rolling and spreading are not instantaneous but durative (i.e. something is continuously moved in contact with a surface). Accordingly, it is easy to construe *thinly/thickly* as modifying the verbal processes of *spread* and *roll*. This is why adverbs are more frequent with these verbs.

By contrast, cutting is instantaneous, so it is more difficult to construe *thinly/thickly* as modifying *cut*. If anything, focus is on the result state. As a matter of fact, with *cut* – *thin* the state of being thin is often elaborated as in (32).

- (32) a. A chef in Saratoga Springs exasperated by a difficult customer complaining that his french fries were not sliced *thinly* enough *cut* the potatoes *paper thin*.  
 b. And er the bread and butter for their tea had to be *cut wafer thin*.

<sup>80</sup> For discussion of various senses of *thin* and *thick*, see Paradis, Lohndorf, van de Weijer, and Willners (2015, pp. 168–171).



- c. It mustn't just be pink; it mustn't be too fat, and it should be *cut* so *thin* that you can almost see the church tower through it. (all from BNC)

In (32a) and (32b), *paper thin* and *wafer thin* emphasize the thinness, and in (32c) the degree of thinness is specified with the *so – that* construction. This accounts for why the adjective is preferred with *cut*.

Apparently, this account does not seem to extend to *slice*, which prefers *thinly* to *thin*, despite the fact that there does not seem to be a big difference between cutting and slicing. Still, *slice* crucially differs from *cut* in one respect: The verb *slice* specifies the configuration of a resulting entity, in that it means “to make a slice of.” In order to make slices, one must attend to the shape of the resulting objects (i.e. slices). This means that slicing is a more deliberate activity which requires more concentration than (simple) cutting. Again, therefore, focus is on the verbal process, like rolling and spreading.

Incidentally, an attentive reader may have noticed that with *spread* the adverb *thinly* is not so strongly preferred over the adjective *thin*: *Spread – thin* is relatively large in number (19 as against 64 of *spread – thinly* (BNC); 24 as against 42 of *spread – thinly* (WB)). Nevertheless, the same tendency is observed as before. With *spread – thin*, the result state tends to be what is focused on. Thus the adjective *thin* is elaborated as in (33) and (34), just like in (32).

- (33) a. Because I *spread* it on *really, really thin* today. (BNC)  
 b. ... and making sure that resources are not *spread too thin* to provide proper care for the properties already in its ownership. (WB)  
 c. Place a spoonful of filling in middle; *spread very thin*, covering the whole surface. (WB)
- (34) When they were eventually left alone, with the food *spread* on old china so *thin* that it was almost transparent, he leaned forward with a show of curiosity and murmured, “Are they real?” (BNC)

Now to sum up the discussion in this section. As seen above, Washio (1997) claims that the adjective can be replaced with the corresponding *-ly* adverb because the adjectival result phrase can be taken to specify either the result state or the manner of motion. Our discussion has revealed that this is not strictly correct: The adjective *thin* specifies the result state alone, not the manner of action. In other words, *cut/spread – thin* is a resultative based on a change verb entailing the creation of an object, whereas *cut/spread – thinly* is not a resultative.

Rather, in *cut/spread – thinly* the verb *cut/spread* is simply modified by an adverb that entails the emergence of a thin entity. The *thin – thinly* alternation is a consequence of the fact that when a change-of-state verb entailing the creation of

an object is modified by certain adverbs, the sentence as a whole happens to mean very nearly the same thing as a resultative based on that same verb.

### 10.3 *Tight/tightly* and *loose/loosely*

#### 10.3.1 When the alternation is really possible

Let us next turn to the sentences in (35) and (36).

- (35) a. He tied his shoelaces tight.  
 b. He tied his shoelaces loose. (Washio, 1997, p. 16)

- (36) a. He tied his shoelaces tightly.  
 b. He tied his shoelaces loosely. (Washio, 1997, p. 17)

Washio (1997) cites these sentences as instances of spurious resultatives, but a corpus search reveals that the cases involving *tight/tightly* and *loose/loosely*, on the one hand, are rather different from those involving *thin/thinly* and *thick/thickly*, on the other.

First and foremost, the alternation between *tight* and *tightly* is found with many more verbs than that between *thin* and *thinly* or that between *thick* and *thickly*. Thus verbs like *clasp*, *hug*, and *squeeze* may be accompanied either by *tightly* or *tight*, as shown in (37)–(39).

- (37) a. She *clasped* the lad *tightly* ...  
 b. A TERRIFIED mother *clasps* her son *tight* yesterday as seven bombs explode in Spanish cities.

- (38) a. Carole *hugged* her *tightly*.  
 b. Father and son *hugged* each other *tight*.

- (39) a. Suddenly she reached for his hand and *squeezed* it *tightly*.  
 b. He understood why McAnally had *squeezed* his hand *tight* to confirm the trust. (all from WB)

What is more, these verbs do not exhaust the list. The verbs found to occur with both *tight* and *tightly* in the BNC and the WB are summarized in Tables 10.5 and 10.6.

Table 10.5 Verbs found to occur with both *tight* and *tightly* in BNC

|         | tightly | tight |
|---------|---------|-------|
| bandage | 5       | 1     |
| bind    | 46      | 5     |
| button  | 5       | 1     |
| clamp   | 3       | 8     |
| clasp   | 32      | 4     |
| clench  | 29      | 19    |
| cling   | 18      | 3     |
| clip    | 1       | 1     |
| close   | 63      | 13    |
| clutch  | 33      | 5     |
| cram    | 2       | 1     |
| cramp   | 1       | 1     |
| crush   | 2       | 3     |
| curl    | 17      | 6     |
| draw    | 44      | 24    |
| fasten  | 9       | 2     |
| fit     | 25      | 7     |
| fix     | 2       | 1     |
| fold    | 8       | 4     |
| gather  | 4       | 1     |
| grip    | 82      | 9     |
| hold    | 147     | 150   |
| hug     | 16      | 15    |
| jam     | 3       | 5     |
| lock    | 8       | 5     |
| pack    | 77      | 14    |
| press   | 23      | 7     |
| pull    | 33      | 73    |
| roll    | 15      | 3     |
| screw   | 15      | 13    |
| seal    | 3       | 4     |
| shut    | 43      | 17    |
| squeeze | 15      | 16    |
| strap   | 4       | 1     |
| stretch | 12      | 19    |
| string  | 3       | 2     |
| tie     | 18      | 12    |
| twist   | 5       | 4     |
| wedge   | 6       | 4     |
| wind    | 14      | 7     |
| wrap    | 62      | 8     |

**Table 10.6** Verbs found to occur with both *tight* and *tightly* in WB

|         | tightly | tight |
|---------|---------|-------|
| bind    | 20      | 3     |
| clamp   | 8       | 3     |
| clasp   | 14      | 8     |
| clench  | 14      | 5     |
| cling   | 7       | 3     |
| close   | 14      | 15    |
| clutch  | 18      | 3     |
| curl    | 4       | 3     |
| draw    | 8       | 3     |
| fasten  | 1       | 2     |
| hold    | 55      | 91    |
| hug     | 11      | 6     |
| pack    | 43      | 4     |
| press   | 9       | 10    |
| pull    | 11      | 42    |
| seal    | 9       | 3     |
| shut    | 6       | 13    |
| squeeze | 4       | 11    |
| stretch | 4       | 6     |
| tie     | 16      | 6     |
| wind    | 10      | 3     |

It does not seem likely that all these instances count as spurious resultatives, for they do not pass the other tests for spurious resultatives proposed by Washio (1997). Take the verb *pull*. (40) can be paraphrased as (41), just like ordinary resultatives.

(40) I *pulled* the seat belt *tight* again. (BNC)

(41) I caused the seat belt to become tight by pulling it.

Also, these verbs do not take the other member of the antonym pair, i.e. *loose*, as a result phrase. As Tables 10.7 and 10.8 show, few of the verbs found to take *tight* also take *loose* as a result phrase.<sup>81</sup>

<sup>81</sup> As noted in 10.1, it is doubtful whether these tests are really reliable. I am referring to these tests simply to demonstrate that resultatives with *tight* and *loose* do not behave the way Washio's (1997) exposition will have us believe.

Table 10.7 Verbs found to occur with both *tight* and *loose* in BNC

|      | tight | loose |
|------|-------|-------|
| pull | 73    | 9     |
| hold | 150   | 1     |

Table 10.8 Verbs found to occur with both *tight* and *loose* in WB

|      | tight | loose |
|------|-------|-------|
| pull | 42    | 5     |
| tie  | 6     | 1     |

Furthermore, it is questionable whether even these instances really count as spurious resultatives. Indeed, we have instances of *pull – loose* as in (43), along with those of *pull – tight* as in (42), but the actions described are significantly different: In (43) *pull – loose* means to undo the tying, rather than to pull something around something else or to pull a string-like entity at two opposite ends.

- (42) a. Then, putting it on and *pulling* the collar *tight* about her throat, she lit the candle that was standing ...  
 b. The skin around Richard's eyes was *pulled tight* with tension.
- (43) a. His tie was *pulled loose*, his shirt unbuttoned, and his hair was tousled.  
 b. Anne unknotted the rubber tubing from her arm, and *pulled* the tourniquet *loose*. (all from BNC)

This does not seem to constitute the pair which Washio (1997) originally means by “spurious resultatives” (This point will be discussed in greater detail below).

The remaining instances are only those in (44a) and (44b).

- (44) a. I had a glimpse of a fair-haired girl staring wide-eyed and terrified from a tennis court, her racket *held loose* by her side and tennis balls scattered at her feet ... (BNC)  
 b. Sunday, bright and early and we're on our way, having *tied* the boat *loose* and headed out into the Channel. (WB)

In (44a) *loose* seems to be a depictive, rather than a resultative, in that the state of being loose is not caused by the act of holding. In (44b) *tie – loose* does not make sense: Since “we're on our way” implies a departure, the boat should no longer be “tied.” This is quite likely a performance error.<sup>82</sup> Thus neither of these instances really counts.

82. Tony Higgins (personal communication) suggests that the simplest way of paraphrasing *tie – loose* in this context would be something like: They untied the rope from the dock and *tied*

Because *loose* rarely occurs as a result phrase of these verbs, the alternation between *loose* and *loosely* is also attested very rarely. In the BNC, *pull* and *hold* are the only verbs found to occur with both *loosely* and *loose*, as shown in Table 10.9.

**Table 10.9** Verbs found to occur with both *loose* and *loosely* in BNC

|      | loosely | loose |
|------|---------|-------|
| pull | 1       | 9     |
| hold | 18      | 1     |

But *pull* – *loose* and *hold* – *loose* do not count as resultatives in the intended sense, as seen above. So there is no instance of alternation between *loose* and *loosely* in the BNC.

In the WB, *roll* and *tie* are the only verbs found to occur with both *loose* and *loosely*, as in Table 10.10.

**Table 10.10** Verbs found to occur with both *loose* and *loosely* in WB

|      | loosely | loose |
|------|---------|-------|
| roll | 2       | 3     |
| tie  | 19      | 1     |

Again, these instances do not seem to count. Thus *roll loosely* in (45a) is rather different in meaning from *roll loose* in (45b).

- (45) a. *Loosely roll* the crepe and keep it warm while you make the remaining crepes.  
 b. The ball *rolled loose* behind both, straight into the path of Wright.

And the only instance of *tie* – *loose* in (46) does not count, as noted above.

- (46) Sunday, bright and early and we're on our way, having *tied* the boat *loose* and headed out into the Channel. (WB)

The only way to make sense out of all these facts is to suppose that resultatives with *tight* and *loose* do not qualify as spurious resultatives. It is just that *tight* and *tightly* are interchangeable when they occur with certain verbs.

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it to the boat, thus setting the boat *loose*.

### 10.3.2 What does it mean to be tight?

But how come *tight* and *tightly* are interchangeable, then? Evidently, a closer look at the semantics of the adjective *tight* is necessary. Towards that end, let us concentrate on the alternation between *pull – tightly* and *pull – tight*, as in (47).

- (47) a. I pulled the seat belt *tightly*.  
 b. I pulled the seat belt *tight*.

In the BNC and the WB, the following NPs are found to appear as direct objects of *pull – tight*, as summarized in Tables 10.11 and 10.12.

**Table 10.11** BNC counts of *pull \_\_\_\_ tight*

|                                                                                                                        | pull ____ tight |
|------------------------------------------------------------------------------------------------------------------------|-----------------|
| rope                                                                                                                   | 8               |
| cord, human being                                                                                                      | 6               |
| belt, strip                                                                                                            | 3               |
| collar, filament, hair, knot, muscle, negligee, sail, string, thread,                                                  | 2               |
| bandage, cloak, duvet, elastic, foreskin, hood, housecoat, lace, lasso, noose,                                         | 1               |
| nerve, scar, scarf, seatbelt, sheet, skin, something, strap, tendon, thong,<br>T-shirt, twine, waist, wool, wrap, yarn |                 |
| TOTAL                                                                                                                  | 70              |

**Table 10.12** WB counts of *pull \_\_\_\_ tight*

|                                                                                                                                                       | pull ____ tight |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| string                                                                                                                                                | 5               |
| knot                                                                                                                                                  | 4               |
| human being                                                                                                                                           | 3               |
| belt, lace, muscle, rope                                                                                                                              | 2               |
| arm, brake, buckle, coat, cord, cover, door, end, gown, hair, headphone,<br>lapel, leg, mesh, noose, scarf, skin, splice, stay, thigh, thread, tinsel | 1               |
| TOTAL                                                                                                                                                 | 42              |

By looking at these attested data, at least four senses of *tight* can be distinguished.

First, when skin or muscle is pulled tight as in (48), the skin or the muscle becomes taut as a result of being stretched by two forces working in the opposite directions, as shown in Figure 10.3.



Figure 10.3 *Pull – tight<sub>1</sub>*

(48) *The skin around Richard’s eyes was pulled tight with tension.* (BNC)

Let us refer to this sense of *tight* as *tight<sub>1</sub>* (=taut-tight).

Next, if two ends of a rope are tied together, a join is made (=a knot). If the rope thus arranged is pulled tight<sub>1</sub>, then the knot ends up being firm, as shown in Figure 10.4.



Figure 10.4 *Pull – tight<sub>2</sub>*

(49) His right hand was no help with this heavy work and he used his teeth to *pull* the knot *tight*. (WB)

Let us refer to this sense of *tight* as *tight<sub>2</sub>* (=firm-tight).

Third, when you put a string-like entity around something and pull the entity tight<sub>1</sub>, you end up exerting a constricting force on that something, as in Figure 10.5. This is what happens in (50).

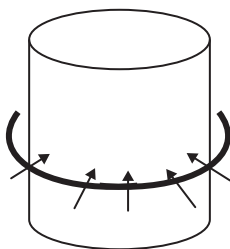


Figure 10.5 *Pull – tight<sub>3</sub>*

- (50) a. I pulled *the seat belt tight* again.  
 b. She pulled *the string tight*, strangling him.  
 c. *The rope was pulled tight*, and her wrists were secured in front of her.  
 (all from BNC)

Let us refer to this sense of *tight* as *tight<sub>3</sub>* (=constricting-tight).

Strictly, when something is pulled tight<sub>3</sub> as in (50), the string is also pulled tight<sub>1</sub> and possibly the join of the two ends of the string is pulled tight<sub>2</sub> as well. So *pull – tight<sub>3</sub>* may be more precisely described as in Figure 10.6.



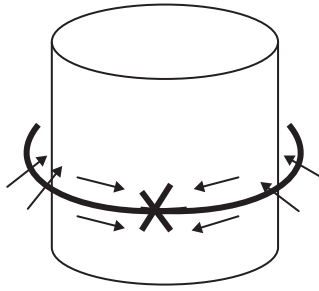


Figure 10.6 Pull –  $tight_{2+3}$

While only the string-like entity is overtly expressed in (50), the recipient of the constricting force may also appear after such prepositions as *round* or *about* as in (51).

- (51) a. He held out his arms and she flew into them, *wrapping* her arms *tight* round him and hugging him hard.  
 b. ... and in the misery of the night I turned round and round in bed, my nightdress *winding* itself *tighter and tighter* about me ...

(both from BNC)

Lastly, when someone is pulled tight as in (52), this means that that someone is held firm and securely.

- (52) He *pulled* her *tight* against him, squashing her against his chest. (BNC)

Let us refer to this sense of *tight* as  $tight_4$  (=“held firm”-tight).

How  $tight_4$  is related to  $tight_3$  should be obvious. With  $tight_3$  the string-like entity is overtly expressed as a direct object, but with  $tight_4$  the recipient of the constricting force is coded as the direct object. This is a case of profile shift in which the recipient of the constricting force is profiled as in Figure 10.7.

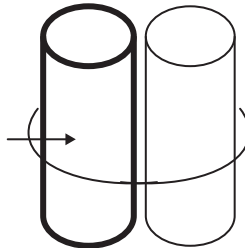


Figure 10.7 Pull –  $tight_4$

Thus there are at least four senses of *tight*, which are closely related to each other. Accordingly, while a rope and a human being are entirely different entities, they can both be pulled “tight.”

10.3.3 *Pull – tight vs. pull – tightly*

Let us next turn to *pull – tightly*. The entities that appear in the direct object position in the two corpora are summarized in Tables 10.13 and 10.14.

Table 10.13 BNC counts of *pull \_\_\_\_ tightly*

|                                                                                                                   | pull ____ tightly |
|-------------------------------------------------------------------------------------------------------------------|-------------------|
| yarn                                                                                                              | 3                 |
| coat, gown, hair, robe, sheet, towel                                                                              | 2                 |
| bag, door, gag, human being, housecoat, jumper, overcoat, rib, scarf, shawl, shirt, shoulder, skirt, sleeve, wrap | 1                 |
| TOTAL                                                                                                             | 30                |

Table 10.14 WB counts of *pull \_\_\_\_ tightly*

|                                                                              | pull ____ tightly |
|------------------------------------------------------------------------------|-------------------|
| belt, hair, hat, hood, molecule, pleat, ring, sash, string, tie, human being | 1                 |
| TOTAL                                                                        | 11                |

In most of the instances, *tightly* corresponds to either *tight*<sub>3</sub> or *tight*<sub>4</sub>. Thus in (53a) her robe is put around her, a configuration for *tight*<sub>3</sub>; and in (53b) she is drawn towards him.

- (53) a. He smiled and she *pulled* her robe *tightly* round her.  
 b. He now thrust his arm out and *pulled* her *tightly* towards him ...  
 (both from BNC)

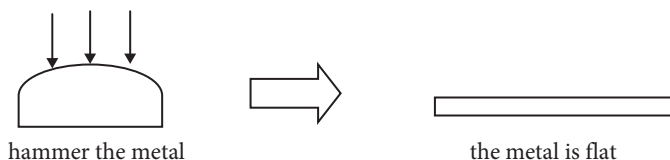
But *tightly* may correspond to *tight*<sub>1</sub> and *tight*<sub>2</sub> as well. In (54a) her skirt became straight or taut, and in (54b) a join becomes firm.

- (54) a. ... and she straightened her coat and *pulled* her skirt *tightly* down over her knees ... (BNC)  
 b. A cloud grows by attracting more molecules of gas and dust; the consequent increase in its gravity *pulls* the molecules together *more and more tightly*. (WB)

Thus it seems safe to conclude that the adverb *tightly* is basically interchangeable with the adjective *tight* in any of the four senses. But this brings us back to the original question: Why are *tight* and *tightly* interchangeable at all?

### 10.3.4 Force persistence

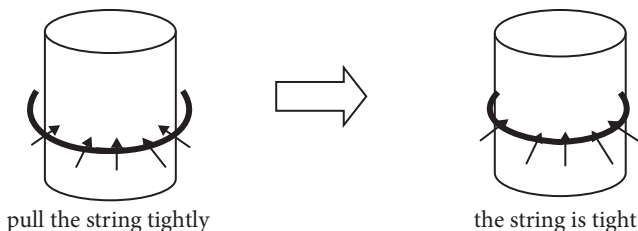
The key is to be sought in the rather special character of *tight*. The result phrase *tight* is significantly different from other (ordinary) result phrases in the following respect. With ordinary resultatives, once the result state is achieved as a result of applying force, that state continues to hold without any further force being applied. Thus in (55a), once the metal has become flat as a result of being hammered, the metal continues to be flat near-permanently without anyone attending to the shape of the metal, as shown in Figure 10.8. The same is true of (55b) and (55c).



**Figure 10.8** *hammer the metal flat*

- (55) a. He hammered the metal *flat*.  
 b. He wiped the table *clean*.  
 c. He painted the wall *red*.

By contrast, when something becomes “tight” (in whichever sense) as a result of some verbal action, the force must continue to be in operation. Otherwise the state of being tight soon vanishes. Thus when one pulls a seatbelt tight and then unleashes it, it will soon revert to its former state. In order for the seatbelt to continue to be tight, it needs to be buckled. In other words, being tight is a state in which the same constricting force continues to be at work as in the adverb *tightly*, as shown in Figure 10.9.



**Figure 10.9** *Pull the string tight*

But then, the process component and the result state are virtually indistinguishable. Because of this “force persistence” characteristic, the result phrase *tight* can be used whenever the adverb *tightly* is used.

At the same time, the two are not completely identical. Consider (56).

- (56) a. I pulled the seatbelt tight.  
b. I pulled the seatbelt tightly.

Tony Higgins (personal communication) observes as follows:

(56b) suggests a person grasping the seatbelt, tugging it to a greater degree of tightness but then perhaps still holding on to maintain that tightness. Whereas in (56a) a person grasps the seatbelt, tugging it to the tightest point possible, at which point the seatbelt mechanism then clicks and holds that point, after which the person then lets go and returns to the action of driving, knowing that the belt is now ‘tight’.

This observation can be interpreted as follows: In (56a) *pull – tight* is a resultative, with *tight* expressing the state of the seatbelt as a result of pulling the seatbelt, as indicated in (57a). On the other hand, in (56b) *pull – tightly* is a verb – adverb sequence, where *tightly* expresses how the force is applied. So (56b) may be paraphrased as in (57b).

- (57) a. I pulled the seat belt, and as a result the entity being thus acted upon was tight.  
b. I pulled the seat belt to such a degree that the seat belt would become tight.

This suggests that the semantics of *tightly* may be stated as in (58).

- (58) V *tightly*: “to V to such a degree that something will become tight”

As long as that “something” is identical to the post-verbal NP entity, *tightly* may be replaced with *tight* without a substantial change in meaning.

Just like the case of *spread – thin* and *spread – thinly*, therefore, *pull – tight* and *pull – tightly* mean essentially the same thing. Again, however, the categorical distinction between *tight* and *tightly* still remains: *Tight* is an adjective and *tightly* is an adverb, after all.

### 10.3.5 *Loose vs. loosely*

Lastly, let us turn to the relation between *loose* and *loosely*. The following are attested instances of *pull – loosely* and *pull – loose*.

- (59) a. His tie was *pulled loose*, his shirt unbuttoned, and his hair was tousled.  
b. ... a bright blue quilted jacket *pulled loosely* about his shoulders against the morning’s freshness ... (both from BNC)

Note that here *pull – loosely* and *pull – loose* are not interchangeable.

- (60) a. ?\* His tie was *pulled loosely*.  
 b. ?? a bright blue quilted jacket *pulled loose* about his shoulders

This suggests that there is a fundamental difference between *loose* and *loosely*.

This is in fact confirmed by looking at corpus data. As already seen, few verbs appear with both *tight* and *loose*, as shown in Tables 10.15 and 10.16.

**Table 10.15** Verbs found to occur with both *tight* and *loose* in BNC

|      | tight | loose |
|------|-------|-------|
| pull | 73    | 9     |
| hold | 150   | 1     |

**Table 10.16** Verbs found to occur with both *tight* and *loose* in WB

|      | tight | loose |
|------|-------|-------|
| pull | 42    | 5     |
| tie  | 6     | 1     |

Remarkably, however, many verbs appear with both *tightly* and *loosely*. Thus verbs like *tie* and *cover* may be accompanied either by *tightly* or *loosely*, as shown in (61) and (62).

- (61) a. To be cheeky, *tie* them *tightly* round the neck.  
 b. He had a red bandanna *tied loosely* around his neck. (both from WB)
- (62) a. *Cover* the bowl *tightly* with cling film.  
 b. *Cover* the bowl *loosely* with plastic wrapper. (both from WB)

In fact, the number of the verbs found to occur with both *tightly* and *loosely* is far greater, as shown in Tables 10.17 and 10.18.

This strongly indicates that the result phrases (*tight* and *loose*) and the *-ly* adverbs (*tightly* and *loosely*) function entirely differently.

Let us begin with *loosely*. As Washio (1997) notes, the adjectives *tight* and *loose* can be regarded as forming an antonym pair, on the understanding that they occupy two opposite ends of a scale of “tightness.” *Tightly* and *loosely* function along these lines: They differ only in the degree of “tightness.” Thus with *tie – loosely*, the string-like entity is not as firmly attached, and the constricting force is not as strong as with *tie – tightly*, as described in Figure 10.10.

Table 10.17 Verbs found to occur with both *tightly* and *loosely* in BNC

|            | tightly | loosely |              | tightly | loosely |
|------------|---------|---------|--------------|---------|---------|
| belt       | 1       | 4       | gather       | 4       | 4       |
| bend       | 1       | 1       | grasp        | 12      | 2       |
| bind       | 46      | 5       | grip         | 82      | 1       |
| bond       | 2       | 2       | hold         | 147     | 18      |
| braid      | 2       | 1       | integrate    | 11      | 2       |
| catch      | 2       | 1       | interconnect | 1       | 1       |
| clasp      | 32      | 5       | knit         | 16      | 3       |
| clench     | 29      | 1       | knot         | 7       | 2       |
| close      | 63      | 1       | lie          | 2       | 4       |
| coil       | 8       | 4       | link         | 8       | 5       |
| come       | 1       | 1       | pack         | 77      | 4       |
| compact    | 2       | 1       | pin          | 1       | 1       |
| control    | 64      | 2       | plait        | 1       | 1       |
| cooperate  | 1       | 1       | pull         | 33      | 1       |
| coordinate | 1       | 2       | push         | 1       | 1       |
| couple     | 10      | 13      | roll         | 15      | 2       |
| cover      | 14      | 7       | screw        | 15      | 1       |
| cradle     | 1       | 1       | secure       | 5       | 3       |
| curl       | 17      | 3       | stick        | 1       | 1       |
| drape      | 1       | 2       | stitch       | 1       | 1       |
| draw       | 44      | 1       | string       | 3       | 2       |
| embrace    | 3       | 1       | tailor       | 1       | 1       |
| enclose    | 3       | 1       | tie          | 18      | 14      |
| entwine    | 2       | 1       | weave        | 6       | 3       |
| fit        | 25      | 10      | wind         | 14      | 1       |
| fix        | 2       | 3       | wrap         | 62      | 7       |
| fold       | 8       | 3       |              |         |         |

Table 10.18 Verbs found to occur with both *tightly* and *loosely* in WB

|            | tightly | loosely |           | tightly | loosely |
|------------|---------|---------|-----------|---------|---------|
| bind       | 20      | 1       | knit      | 28      | 4       |
| clasp      | 14      | 1       | knot      | 2       | 2       |
| connect    | 2       | 10      | link      | 2       | 6       |
| coordinate | 1       | 2       | pack      | 43      | 2       |
| couple     | 1       | 1       | roll      | 9       | 2       |
| cover      | 19      | 18      | string    | 2       | 2       |
| drape      | 1       | 3       | structure | 5       | 3       |
| draw       | 8       | 2       | stuff     | 2       | 1       |
| fasten     | 1       | 1       | surround  | 1       | 1       |
| fill       | 1       | 1       | tie       | 16      | 19      |
| fit        | 11      | 3       | wear      | 1       | 2       |
| grasp      | 2       | 3       | weave     | 14      | 4       |
| grip       | 26      | 3       | wind      | 10      | 1       |
| group      | 3       | 1       | wrap      | 25      | 4       |
| hold       | 55      | 8       |           |         |         |

Figure 10.10 *Tie - loosely* vs. *tie - tightly*

As this figure illustrates, *tie - loosely* and *tie - tightly* may in fact be descriptions of two stages of a single act of tying: One may at first tie something loosely and then tie it tightly by adding more force. In short, *loosely* may be used to describe an intermediate stage of an act of joining one thing with another tightly.

- (63) ... a bright blue quilted jacket *pulled loosely* about his shoulders against the morning's freshness ... (BNC)

Given that *loosely* differs from *tightly* only in the degree of tightness, then, it comes as no surprise that the two adverbs may modify the same verbs, as illustrated in Tables 10.17 and 10.18.

When *tight* and *loose* serve as result phrases, however, their difference is no longer limited to the degree of tightness. With *pull – tight*, the scenario is basically the same as *pull – tightly*: If one puts a string around something and pulls the string “tightly,” then the string will end up being tight.

With *pull – loose*, by contrast, one pulls something *that has already been fixed firmly in place*, and then that something will end up being loose, as illustrated in Figure 10.11.

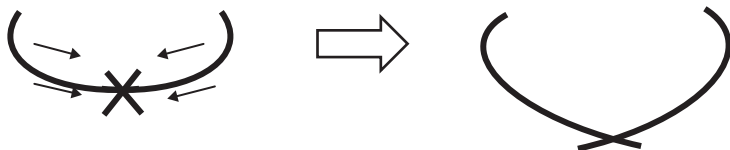


Figure 10.11 *Pull – loose*

(64) His tie was *pulled loose*, his shirt unbuttoned, and his hair was tousled.

(BNC)

So the state of being loose thus attained is not a state of having been pulled with less force than bringing about the state of being tight. Rather, the state of being loose results from weakening the constricting force already at work by partly “undoing” the putting-together act.

In fact, when *loose* appears as a result phrase, it always denotes a state as having been thus achieved. Thus all the attested examples involving *loose* as a result phrase in (65) (i.e. *cut*, *shake*, and *tear*) fit this description.<sup>83</sup>

- (65) a. Dropping down into the galley for a carving knife, he *cut* the rope *loose* from his neck.  
 b. She unplaited her hair and *shook* it out *loose*.  
 c. He *tore* Adam’s tie *loose*, undid his shirt and collar, and stuck his finger in Adam’s mouth to check that his tongue was free. (all from BNC)

The same is true of all the verbs which I have so far found to occur with *loose*, as summarized in Tables 10.19 and 10.20.

83. See the discussion of *free* in Chapter 19.



Table 10.19 BNC counts of 'V (NP) loose'

|                 | ____(NP) loose |
|-----------------|----------------|
| cut             | 38             |
| shake           | 28             |
| tear            | 14             |
| prise, pull     | 9              |
| swing           | 4              |
| jerk            | 3              |
| pry             | 2              |
| wrench, wriggle | 1              |

Table 10.20 WB counts of 'V (NP) loose'

|                              | ____(NP) loose |
|------------------------------|----------------|
| cut                          | 81             |
| shake                        | 18             |
| tear                         | 8              |
| pry, pull                    | 6              |
| prise, roll                  | 3              |
| kick, swing                  | 2              |
| comb, jerk, twist,<br>wrench | 1              |

To recapitulate, then, *loosely* is a manner adverb indicating that the degree of tightness is less than that with *tightly*, so it may describe an act of joining one thing with another. But *loose* as a result phrase means that the state of being loose is attained as a result of acting upon an entity that has already been firmly fixed or attached. Accordingly, *loose* appears with verbs which describe an act of weakening the constricting force by partly undoing the joining-together process. Because of this fundamental difference, *loose* and *loosely* do not alternate.

Contrary to the claim of Washio (1997), then, *tie - tight/loose* simply do not alternate with *tie - tightly/loosely*. The adjective pair and the adverb pair are fundamentally different. Accordingly, *tie - tight/loose* do not count as instances of spurious resultatives.

## 10.4 Conclusion

This chapter addressed the question of what are spurious resultatives. While Washio (1997) cites (66a), (66b) and (67) as instances of spurious resultatives, they are rather different.

- (66) a. He cut the meat {thick/thin}.  
 b. He spread the butter {thick/thin}.
- (67) He tied his shoelaces {tight/loose}.

With the resultatives in (66), the result phrase denotes a state that holds true of the entity having undergone a change. It so happens that when the same verbs (i.e. *cut* or *spread*) are modified by adverbs like *thinly*, the sentence as a whole comes to mean very nearly the same thing. This explains why the adjectival result phrase can be replaced with the corresponding *-ly* adverb without a significant change in meaning.

With the resultatives in (67), by contrast, the near synonymy between the adjectival result phrase and the *-ly* adverb holds with *tight*, but not with *loose*. In fact, *loose* does not acceptably appear as a result phrase in the first place. Accordingly, there seems to be no reason to treat the resultatives in (67) on a par with those in (66). Consequently, only those like (66) deserve to be called “spurious resultatives.”



## Resultatives with *open/shut*

### 11.0 Introduction<sup>84</sup>

The discussion in the preceding two chapters may create the impression that the characteristics exhibited by ‘change verb’ resultatives, including the failure of the ‘X causes Y to become Z by V-ing Y’-paraphrase, are exclusively due to the fact that they are based on change-of-state verbs. That is, those characteristics are necessarily due to the base verbs. It will be shown that this is not the case, however.<sup>85</sup>

Our focal example in this chapter is resultatives with *open* and *shut*, as seen in (1).<sup>86</sup>

- (1) a. He swung the door open.  
b. He swung the door shut.

While these sentences appear to be plain resultatives, they behave differently from other (ordinary) resultatives at least in the following respects. First, sentences like (1) behave like ‘change verb’ resultatives, despite the fact that they cannot possibly be such. As seen in 9.1, the ‘X causes Y to become Z’-paraphrase fails for ‘change verb’ resultatives.

- (2) a. He froze the ice cream solid.  
b. \*He caused the ice cream to become solid by freezing it.
- (3) a. The lake froze solid.  
b. \*The lake became solid by freezing.

---

84. This is a revised version of part of Iwata (2008b).

85. This point will be relevant in criticizing the analysis of Rappaport Hovav & Levin (2001). See Chapter 17.

86. The result phrases *open* and *shut* may also accompany verbs of sound emission as in (i).

- (i) a. The door creaked open.  
b. The door banged shut.

These sound-emission cases will be discussed in Chapter 21.

Curiously, the ‘X causes Y to become Z by V-ing Y’-paraphrase fails for sentences like (1) as well. Thus (4a) cannot be appropriately paraphrased with (4b), and neither is (5a) by (5b).<sup>87</sup>

- (4) a. He swung the door open.  
 b. \*He caused the door to become open by swinging the door.
- (5) c. The door swung open.  
 d. \*The door became open by swinging.

After all, when the door gets swung, the door is already open.

While the failure of paraphrasing in (2) and (3) can be safely attributed to the fact that the verb *freeze* entails a change of state which is further specified by the result phrase *solid*, the verb *swing* cannot plausibly be said to entail a state change of becoming open. So the failure of the ‘X causes Y to become Z by V-ing Y’-paraphrase cannot be accounted for by identifying sentences like (1) as instances of ‘change verb’ resultative.

What is more, sometimes the ‘X causes Y to become Z by V-ing Y’-paraphrase does work. Thus (6a) can be paraphrased with (6b), for the pushing event and the door’s becoming open are distinct from each other: Even if the door gets pushed, it may remain shut.

- (6) a. He pushed the door open.  
 b. He caused the door to become open by pushing it.

A question naturally arises, then, as to why resultatives with *open/shut* sometimes behave like ‘change verb’ resultatives and sometimes they do not.

## 11.1 How a door becomes *open/shut*

### 11.1.1 Resultative caused-motion?

Quite apart from the issue raised immediately above, it has already been noted in the literature that resultatives with *open/shut* behave somewhat differently from ordinary resultatives. Thus Goldberg & Jackendoff (2004) claim that the APs *open* and *shut*, along with a number of other APs (*free (of NP)*, *clear (of NP)*, and *apart*) can denote spatial configurations as in (7):

- (7) a. Willy {wiggled/squirmed/pried} {free/loose} (of the ropes).  
 b. Judy {jumped/leaped/skated/slid} clear of the rocks.  
 c. The bottle {broke/spilled/fell/smashed} open.

<sup>87</sup> Just like in Chapter 9, in this chapter I will use the ‘X causes Y to become Z by V-ing Y’ paraphrase as a litmus test to distinguish different types of resultatives with *open/shut*.

Willy ends up in a position in space where the ropes don't constrain him, and Judy ends up in a position in space where the rocks can't injure her. Likewise, *being open is not only a property but also a spatial configuration, affording free passage between the interior and exterior of the object; being shut precludes such access.* We therefore tentatively take these cases to be interpretable as either property resultatives or *spatial* resultatives.

(Goldberg & Jackendoff, 2004, p. 559, my emphasis)

According to Goldberg & Jackendoff (2004), then, because resultatives with *open/shut* describe a spatial configuration rather than a state, they are on a par with sentences like (8b), rather than those like (8a).<sup>88</sup>

- (8) a. The pond froze solid.  
b. Bill rolled out of the room.

A problem with this solution is that the APs *open/shut* are not on a par with path PPs. Thus replacing *open/shut* with directional path PPs results in unacceptability as in (9a), or a complete change of meaning as in (9b) and (9c).

- (9) a. ?\* The bottle broke *onto the table*.  
b. The door slid *to the wall*.  
c. The trap door fell *to the ground*.

Goldberg & Jackendoff's (2004) analysis is thus quite problematic.

### 11.1.2 Co-occurrence of motion and change of state

But exactly what kind of change do resultatives with *open/shut* describe? Let us begin by considering what is going on with sentences like (10).

- (10) a. The door *swung open*.  
b. The door *slides open*.

The key to understanding these expressions lies in the fact that the word *door* can refer to different (though related) components of a single entity: Besides conceptualizing a door as a unitary structure as in (11a), we can highlight either a movable, solid barrier as in (11b) or the aperture created when that barrier is moved as in (11c) (Jongen 1985, Pustejovsky (1991b, p. 432), Pustejovsky (1995, p. 28), Taylor (2003, p. 127), Cruse (2000, p. 111)).

88. A similar claim is made by Levin & Rappaport Hovav (1995) concerning sentences like (i).

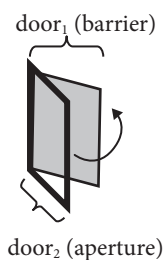
- (i) The refrigerator door clicked open.

Their claim will be critically examined in Chapter 21.

- (11) a. The room has two doors.  
 b. Open the door.  
 c. He walked through the door. (Taylor, 2003, p. 127)

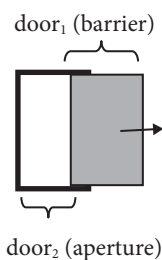
This seed of polysemy of *door*, which is so subtle that most speakers of English need to think twice before becoming aware of it, enables us to understand clearly what is going on. For convenience's sake, let us refer to a unitary structure as *door*<sub>0</sub>, a barrier part as *door*<sub>1</sub> and an aperture as *door*<sub>2</sub>. On the assumption that a door is said to be shut when the aperture is blocked by a barrier part and open when it is not, the scenes expressed by (10a) and (10b) can be described as in Figure 11.1 and Figure 11.2, respectively.

*door*<sub>0</sub> : a unitary structure, *door*<sub>1</sub> : a barrier part, *door*<sub>2</sub> : aperture



The door<sub>1</sub> swings and  
 the door<sub>0</sub> becomes open.

**Figure 11.1** *The door swung open*



The door<sub>1</sub> slides in grooves and  
 the door<sub>0</sub> becomes open.

**Figure 11.2** *The door slid open*

The door<sub>1</sub> undergoes a swinging motion and the door<sub>0</sub> becomes open in Figure 11.1; and the door<sub>1</sub> slides in grooves and the door<sub>0</sub> becomes open in Figure 11.2. Crucially, then, the motion described by the verb is predicated of only part of the whole entity.<sup>89</sup>

Thus it is not the case that resultatives with *open* are indeterminate between expressing a property and expressing a spatial configuration, as Goldberg &

<sup>89</sup>. Thus resultatives like (10a) and (10b) can be said to involve an “active zone” (Langacker 1999, p. 62–67), or a type of metonymy, in that only part of the door underwent a swinging motion and a sliding motion, parallel to sentences like (i), where it is only part of the cat that was bitten and it is her eyes that really blinked.

- (i) a. Your dog bit my cat.  
 b. She blinked.

But “active zone” is not a necessary feature of resultatives with *open* and *shut*. Thus in (ii) the lid and the lock are what actually moved.

Jackendoff (2004) claim. Rather, motion and change of state co-occur, and they are predicated of different entities: The motion is predicated of the movable entity, while the change of state is predicated of the whole entity.

The distinction between the motion and the change of state is further corroborated by the fact that they can receive different modifiers. In (12) the position of the door<sub>1</sub> is further specified by *inwards into the bedroom*, rather than *open*.

(12) The door *swung open inwards into the bedroom*.

Similarly, in (13) the position of a moved entity is further specified by *to the waist* and *on his fingers*, respectively.

- (13) a. Her robe *fell open to the waist*, her small jutting breasts exposed, heaving with indignation.  
 b. Kicked the radiator and screamed as the bonnet *fell shut on his fingers*.  
 (both from BNC)

On the other hand, in (14) *to darkness* and *to the public* modify *open*.

- (14) a. It *swung open to darkness*.  
 b. Checkout/replenishment assistants make a final tour of the store before the doors *swing open to the public*.  
 (both from BNC)

Consider also the sentences in (15).

- (15) a. Then suddenly the book *fell open* at a photo of La Paz and Illimania, and our Plan B stood before us with a strength that only fate can provide.  
 b. The dictionary *fell open* at meretrix, a harlot.  
 c. I flipped the pages resignedly and they *fell open* as if from use at the diagram in the first-aid section showing the pressure points for stopping arterial bleeding.  
 (all from BNC)

- 
- (ii) a. But it was Owen's fiddle-case, not his skull, it was aimed at, and as *the lid flew open* the Tan pounced on the fiddle and bow.  
 (BNC)  
 b. He smacked the bag on the table so violently that *the lock sprang open*.  
 [Dorothy L. Sayers, *Lord Peter*, p. 69]

In the following examples, both the whole entity (i.e. mouth) and a movable entity (i.e. lips) appear as subject of the Intransitive resultatives with *open*.

- (iii) a. *His mouth fell open* and he could not believe his eyes.  
 b. Her eyes widened to their full luminous extent, and *her lips fell open* in an expression of total, artless surprise.  
 (both from BNC)

Thus some degree of referential flexibility is allowed for resultatives with *open* and *shut*.



Books do not have a discrete part, corresponding to the barrier part of a door, whose simple removal allows access to the book's contents. Rather, the different parts of a book move away from each other, and as a result the book becomes open and the inside of it can be seen. Thus the downward movement of the pages is denoted by *fall*, and the part thereby made visible by *open*, as described in Figure 11.3.

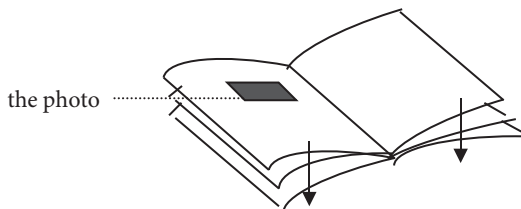


Figure 11.3 *The book fell open*

Notice that in (15) the *at*-PPs further specify the location of what has become visible: The photo, the item *meretrix*, and the diagram are on the page made visible, not on the cover.

### 11.1.3 Internalized translational motion

Thus with resultatives involving *open/shut*, while the door does not shift from one location to another in space, it does undergo a motion: Its barrier part undergoes a motion described by the verb, and an aperture is thereby created (*open*) or blocked (*shut*). Note that this type of motion has received little attention so far.

In the literature on motion verbs (Gruber 1976, Jackendoff 1983, 1990, Pinker 1989, Talmy 2000b, among many others), attention has been paid almost exclusively to *translational motion* as exemplified in (16a), with occasional references to *self-contained motion* as in (16b) and (16c).

- (16) a. The ball bounced/rolled down the hall.  
 b. The ball bounced up and down on the same floor tile.  
 c. The log rolled over and over in the water. (Talmy, 2000b, p. 36)

Clearly, the distinction between translational motion and self-contained motion hinges upon whether the motion results in a displacement of an entity, as can be seen in the following remark by Talmy (2000b).

In translational motion, an object's basic location shifts from one point to another in space. In self-contained motion, an object keeps its basic, or "average," location. Self-contained motion generally consists of oscillation, rotation, dilation (expansion or contraction), wiggle, local wander, or rest. (Talmy, 2000b, pp. 35–36)

The type of motion which a barrier part undergoes is clearly distinct from translational motion, in that an entity as a whole is not displaced. But it is distinct from self-contained motion as well: While an entity as a whole undergoes a motion in the former, only part of an entity does so in the latter. So this third type of motion calls for a new term.

It seems that this third type of motion bears a closer resemblance to translational motion than to self-contained motion. Since Talmy's pioneering work (Talmy 1985), it has been well-known that there are both verbs that lexically encode the manner of translational motion as in (17a) and verbs that lexically encode the path of translational motion as in (17b), which can be analyzed as incorporating the manner of motion and the path of motion, respectively.

- (17) a. roll, bounce, slide, glide, float, etc. (Manner-conflating motion verbs)  
 b. rise, fall, drop, ascend, descend, etc. (Path-conflating motion verbs)

Note that an entirely parallel claim can be made concerning the type of motion exhibited by *open/shut* expressions. Thus in both *The door swung open* and *The door slid shut*, the verbs describe the manner of motion of a barrier part, i.e. door<sub>1</sub>. Similar cases are abundant. In each case of (18) below, the verb indicates how the door<sub>1</sub> moved, leading to the door<sub>0</sub> being open. This point can be appreciated particularly well by looking at (18e) and (18f), which mean that the door<sub>1</sub> moved quickly and suddenly, rather than that it flew or was shot.

- (18) a. The door *slammed open* and Celia walked in.  
 b. Inside, the incantation stopped and then the door slowly *inched open*.  
 c. While she had been in the shower the bedroom door had *drifted open* a few more inches.  
 d. Sarcastic cheers as a bolt slides and the door *shudders open*.  
 e. The door *flew open* and Bunty danced in.  
 f. Its doors *shot open* and the mower lay smashed on the ground, the effort he had spent himself on, wasted. (all from BNC)

On the other hand, in (19) the verbs describe the direction of a barrier part's movement. That is, the trap door and his mouth underwent a downward movement, resulting in being open or shut, as in Figure 11.4 and Figure 11.5.

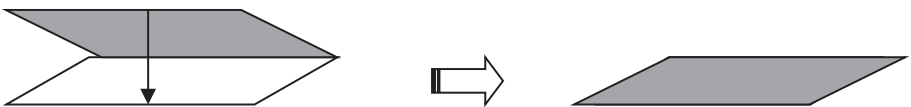


Figure 11.4 *The trap door fell shut*

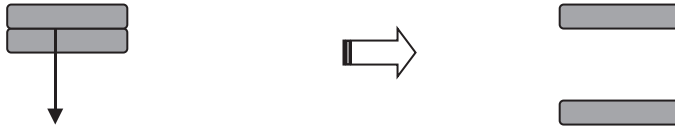


Figure 11.5 *His mouth fell open*

- (19) a. The trap door fell *shut*.  
 b. His mouth fell *open*.

Other cases involving the path of motion are the following.

- (20) a. Bull O'Malley's mouth *dropped open*.  
 b. I lay on my bed and my eyes finally *fell shut*. (both from BNC)

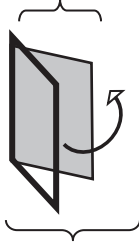
Thus all these examples can be characterized as describing either the manner or the path of motion.

Given this parallel with translational motion, then, it seems apt to refer to the third type of motion as *internalized translational motion*.<sup>90</sup>

#### 11.1.4 Co-extensiveness between change of state and internalized translational motion

Now an important characteristic of resultatives with *open/shut* is that change of state and internalized translational motion are co-extensive, as illustrated in Figure 11.6.

The door<sub>1</sub>'s swinging (=internalized translational motion)



The door<sub>0</sub>'s becoming open (=change of state)

Figure 11.6 Co-extensiveness between change of state and internalized translational motion

<sup>90</sup> Internalized translational motion thus defined is not limited to *open/shut* expressions. Another instance of internalized translational motion (i.e. *He jumped to his feet*) has already been discussed briefly in 2.3.1 (See also Iwata 2004a).

When the barrier part, which has so far blocked an aperture (=the state of being shut), undergoes motion, the door<sub>0</sub> necessarily becomes open. If, on the other hand, the door<sub>1</sub> that has been open undergoes motion, the door<sub>0</sub> necessarily goes toward the state of being shut. The motion and the change of state are thus inseparably connected: When the door<sub>1</sub> moves, the door<sub>0</sub> unavoidably changes its state, and in order for the door<sub>0</sub> to change its state, the door<sub>1</sub> must move. That is, an internalized translational motion described by the verb (e.g. *swing* or *fall*) and the change of state (i.e. the door's becoming open or shut) are two facets of one and the same event.

Since the *open/shut* expressions seen above cannot be plausibly analyzed in terms of two distinct subevents, it is no wonder that they cannot be appropriately paraphrased by (21), parallel to 'change verb' resultatives in (22).

- (21) a. The door swung open.  
b. \*The door became open by swinging.

- (22) a. The lake froze solid.  
b. \*The lake became solid by freezing.

At the same time, there is a fundamental difference between the two cases. While the co-extensiveness is an automatic consequence of the change being entailed by the verbal event in the case of *The lake froze solid*, it is required by the inherent nature of something becoming open/shut in the case of *The door swung open/shut*.

This is why despite the parallelism with 'change verb' resultatives in failing the 'X causes Y to become Z by V-ing Y'-paraphrase, resultatives with *open/shut* cannot be identified with 'change verb' resultatives.

## 11.2 Three types of *open/shut* expressions

### 11.2.1 Type 1

The preceding discussion is somewhat oversimplifying, however, in that there are actually three types of resultatives with *open/shut*. In the first type, which subsumes the instances that have been discussed up to this point, verbs alternate between intransitive and transitive variants, like *swing* or *slam*.

- (23) a. She *swung* the door *open*.  
b. Gary *slid* the door *open*.  
c. He *slammed* the door *open*. (all from BNC)

- (24) a. The door *swung open*.  
b. he door *slid open* again.  
c. The door *slammed open* and Celia walked in. (all from BNC)

The manner of the door's motion described by these verbs is co-extensive with the change of state, irrespective of whether the verb is transitive or intransitive. Thus in (25b), the swinging motion of a movable part and the change of state unfold at the same time, parallel to (25a), as described in Figure 11.7.

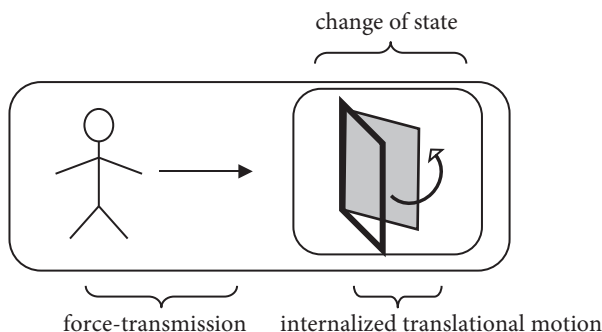


Figure 11.7 *Swing the door open*

- (25) a. The door swung open.  
b. He swung the door open.

Note that the manner of motion specified by each verb pertains to the caused event, not to the causing process (=force-transmission). This point may be better appreciated by looking at (26).

- (26) a. He *swung* the door *open* **without touching it**, apparently by putting weight on a concealed button. [E. S. Gardner, *Top of the Heap*, p. 177]  
b. He re-entered the hangar and searched for the switch to *slide* the double doors *open electrically*. (BNC)

One can swing an automatic door open without any part of his body swinging at all, as transitive *swing* means to cause something to swing (intransitively). So one has only to exert a force which will cause the door to swing open, as in (26a). Essentially the same remark applies to (26b).

Thus in (23) and (24) the verb describes the manner of an internalized translational motion, which in turn is co-extensive with a change of state. Consequently, the verbal event entails a change of state. This is why this type of resultative involving *open/shut* resists the 'X causes Y to become Z by V-ing Y'-paraphrase, as noted above.

- (27) a. He swung the door open.  
b. \*He caused the door to become open by swinging it.

## 11.2.2 Type 2

Now in the second type, verbs that appear transitively only (e.g. *pull*, *push*, *shove*, or *kick*) are followed by *open* or *shut*.

- (28) a. *Pushing* the door *open*, I was confronted by a tall, blonde, green-eyed version of myself.  
 b. After a minute he heard footsteps, and the door was *pulled open*.  
 c. Donna *shoved* the door *open*, steadying herself against the frame, the Beretta raised.  
 d. He *kicked* it *open* and dived into the small kitchen, rolling to the safety of the old, battered fridge. (all from BNC)

The verbal action specified by *push* or *pull* describes how the door gets acted on, and does not entail the internalized translational motion event. But like the first type, an internalized translational motion brought about via the pushing or pulling force is co-extensive with the change of state.

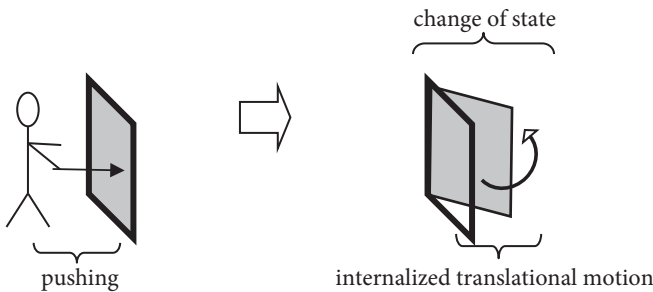


Figure 11.8 *Push the door open*

Since the verbal event does not entail a change of state, this type of resultative with *open/shut* is completely like ordinary resultatives like *hammer – flat*. Just as one can say (29a) of *hammer – flat*, so one can felicitously say (29b) of *push – open*.

- (29) a. He hammered the metal, but the metal didn't become flat.  
 b. He pushed the door, but it didn't budge an inch.

Accordingly, these sentences can be paraphrased by means of 'X causes Y to become Z by V-ing Y', as shown in (30).

- (30) a. He pushed the door open.  
 b. He caused the door to become open by pushing it.

## 11.2.3 Type 3

In the third type, change-of-state verbs like *break* are followed by *open*.

- (31) a. But it would include an Egyptian vulture that throws a stone at an ostrich's egg to *break* it *open*.  
 b. He *tore* the envelope *open*, his mind full of various pleasing conjectures.  
 c. Nolan's shirt was *ripped open*, showing a lot of hairy chest.  
 d. Someone looks closely and *cuts* it *open* to see what comes out.  
 (all from BNC)

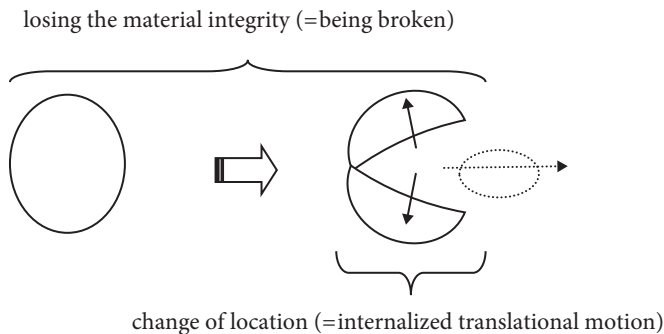
Like Type 1 seen above, Type 3 cannot be appropriately paraphrased by means of 'X causes Y to become Z by V-ing Y.'

- (32) a. He broke the egg open.  
 b. ≠He caused the egg to become open by breaking it.

In addition, the result phrase is not strictly predicated of the direct object. Thus (33a) does not entail (33b).

- (33) a. He broke the egg open.  
 b. #The egg was open.

These characteristics follow from how the state of being open is brought about. Unlike doors, eggs are not intrinsically made up of a barrier part and an aperture. But as an egg loses its material integrity, parts of the shell come apart and something like a barrier-aperture structure emerges. An internalized translational motion is thus effected, and hence the state change of becoming open, as described in Figure 11.9.



**Figure 11.9** The egg shell's breaking apart

Thus the breaking event and the change of state (=becoming open) unfold at the same time, which accounts for why (32a) cannot be appropriately paraphrased

with (32b); what undergoes an internalized translational motion emerges only after the egg breaks, which accounts for why (33a) does not entail (33b).

The three types seen thus far can be summarized as follows. With Type 1, verbs describe the manner of an internalized translational motion (e.g. *swing*, *slide*); with Type 2, verbs simply express exertion of force (e.g. *pull*, *push*); and with Type 3, change-of-state verbs entail separation of parts of an entity (e.g. *break*, *cut*).

### 11.3 What the existence of the three types tells us

#### 11.3.1 Washio's (1997) three types again

The existence of the three types of resultatives with *open/shut* has a very interesting consequence. Recall that Type 2 allows for a 'X causes Y to become Z by V-ing Y'-paraphrase. Thus (34a) can be paraphrased with (34b), exactly parallel to (35).

- (34) a. He pulled the door open.  
 b. He caused the door to become open by pulling it.
- (35) a. He hammered the metal flat.  
 b. He caused the metal to become flat by hammering it.

But Type 1 is not amenable to the same paraphrasing. Thus (36a) cannot be appropriately paraphrased with (36b).

- (36) a. He swung the door open.  
 b. \*He caused the door to become open by swinging it.

Note that in this respect, Type 1 behaves similarly to weak resultatives in the sense of Washio (1997).

- (37) a. He froze the ice cream solid.  
 b. \*He caused the ice cream to become solid by freezing it.

As for Type 3, again the 'X causes Y to become Z by V-ing Y'-paraphrase does not apply. Thus (38a) cannot be paraphrased with (38b).

- (38) a. He broke the egg open.  
 b. \*He caused the egg to become open by breaking it.

In addition, the result state is not strictly predicated of the direct object. Thus (39a) does not entail (39b).

- (39) a. He broke the egg open.  
 b. #The egg was open.



Notice that in these respects, Type 3 is exactly like spurious resultatives in Washio (1997). Recall that (40a) cannot be paraphrased with (40b), and (41a) does not entail (41b).

- (40) a. He cut the meat thin.  
 b. \*He caused the meat to become thin by cutting it.
- (41) a. He cut the meat thin.  
 b. #The meat was thin.

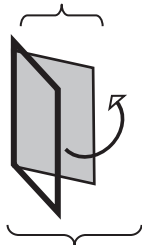
Thus Washio's (1997) three types (strong, weak, and spurious) all have counterparts in resultatives with *open/shut*.

### 11.3.2 Why *open* may appear in all the three types of resultatives

At this point, one may well wonder why all these three types of *open/shut* expressions are possible at all. Considering that Type 2 (e.g. *pull the door shut*) is like ordinary resultatives, this question turns into: Why Type 1 and Type 3 are available for *open* (and *shut*), but not for other adjectives like *flat* or *smooth*?

It turns out that the ultimate answer lies in what we have already seen. Namely, what is special about *open/shut* is the co-extensiveness between motion and change of state, as described in Figure 11.10.

The door<sub>1</sub>'s swinging (=internalized translational motion)



The door<sub>0</sub>'s becoming open (=change of state)

**Figure 11.10** Co-extensiveness between change of state and internalized translational motion

Type 1 behaves as it does precisely because of this co-extensiveness. Thus while *swing* in itself does not entail a change of becoming open or shut, it describes the manner of motion. Therefore, *swing* does entail a motion. The motion described (i.e. an internalized translational motion) in turn is co-extensive with a change of state (i.e. becoming open or shut), so (42a) entails a change of state.

The result phrase *open* or *shut* specifies which of the two possible states the door ends up being in.<sup>91</sup>

- (42) a. The door swung.  
b. The door swung *open/shut*.

As for Type 3, while the verb *break* in itself does not entail a change of becoming open, it does entail the loss of material integrity. Now the loss of material integrity means the coming apart of parts of an entity, which counts as an internalized translational motion. Since this internalized translational motion is co-extensive with a change of state (i.e. becoming open), (43a) ends up entailing a change of state.

- (43) a. He broke the egg.  
b. He broke the egg *open*.

Thus the reason why *open* as a result phrase is compatible with verbs of Type 1 and those of Type 3 is ultimately traced back to the fact that motion and change of state are co-extensive and are in fact two sides of the same coin.

### 11.3.3 A unified analysis under the force-recipient account

Given that the distinction between the three types of resultatives with *open/shut* ultimately comes from the difference as to how the state of being open or shut is brought about, maybe resultatives with *open/shut* are to be regarded as little different from ordinary resultatives. In this connection, notice that while the distinction between the three types is unavoidable under the ‘X causes Y to become Z by V-ing Y’-approach, this is not the case under the ‘‘X acts upon Y’’-approach, i.e. our force-recipient account. Thus all the three types can be uniformly handled, as shown in (44)–(46).

- (44) a. He pulled the door open.  
b. He did a pulling action on the door, and as a result the entity being thus acted upon was open.
- (45) a. He swung the door open.  
b. He did a swinging action on the door, and as a result the entity being thus acted upon was open.

<sup>91</sup> Actually, if we include the state of being ajar, as exemplified below, there are three possible result states.

(i) Harriet *pushed* the door *ajar* and removed the keys from the lock. (BNC)

- (46) a. He broke the egg open.  
 b. He did a breaking action on the egg, and the resulting entity was open.

Therefore, just as ‘change verb’ resultatives can be handled on a par with ordinary resultatives, so the three types of resultatives with *open/shut* can be uniformly handled under our force-recipient account.<sup>92</sup>

#### 11.4 Functional *open*

What is essential to resultatives with *open/shut* is thus the fact that an (internalized translational) motion and a change of state are co-extensive and in fact two sides of the same coin. But the co-extensiveness between motion and change of state does not hold when *open* is used in a different sense.

Observe that one can say (47) when a barrier part blocks an aperture.

- (47) [Answering a knock on the door]  
 Come in. The door is open.

This sense of *open* is clearly distinct from that of *open* as employed in the discussion so far: The *open* discussed up to now means “not shut,” i.e. the door<sub>1</sub> does not cover the door<sub>2</sub>, whereas in (47) *open* means “not locked,” and the door<sub>1</sub> covers the door<sub>2</sub>.

It seems that the two senses of *open* differ in how the state of being open is defined: In the former, it is defined primarily in terms of the positioning of a barrier part relative to an aperture, as already seen. For this reason, this sense of *open* is referred to as OPEN<sub>p</sub> (=positional). But when a barrier part no longer covers an aperture, thereby creating a state of being open, it also means enabling entry through the aperture. Thus OPEN<sub>p</sub> carries with it this functional aspect, besides the positional characteristic.

Note that in (47) the positional characteristic is dropped but the functional aspect is still retained, in that entry is not prohibited. Thus the contrast between the two senses of *open* is that of “positional/functional” vs. “functional.” For this reason, this second sense of *open* is referred to as OPEN<sub>f</sub> (=functional).

The contrast between the two senses may be well-illustrated in (48).

- (48) She used a card key to *open the door* and then *pulled it open*.  
 [M. Connelly, *The Black Echo*, p. 86]

<sup>92</sup>. It goes without saying that (44a)–(46a) can be accommodated by means of a result phrase-addition analysis as well.

Here the verb *open* means “to cause the door to become OPEN<sub>F</sub> (= functional *open*),” and *pull – open* is paraphrased by “pull – OPEN<sub>P</sub> (= positional *open*).” So this sentence describes first the action of unlocking the door with a card key, followed by the action of pulling the door fully open by one’s hands.

This functional *open* may appear as a result phrase. Consider (49).

(49) We’d reached the car, and Ranger *remoted* it *open*.

[J. Evanovich, *Eleven on Top*, p. 202]

One can cause the car door to become OPEN<sub>F</sub> by simply using a remote control.

Despite the superficial similarity to the *open/shut* expressions seen so far, *remote – open* exhibits different characteristics. First, the opposite meaning of *remote – open* may be expressed by *remote – locked*, as in (50), rather than by *remote – shut/closed*.

(50) She *remoted* the car *locked* and they walked into the mall.

(<https://www.fanfiction.net/s/2781565/7/RangeDay>)

Second, (51a) can be paraphrased as (51b), just like ordinary resultatives.

(51) a. He *remoted* the car *open*.

b. He caused the car to become open by *remoting* it.

This is to be expected, as the co-extensiveness between motion and change of state does not hold of functional *open*. Accordingly, of the three types discussed in 11.2, neither Type 1 (e.g. *swing – open*) nor Type 3 (e.g. *break – open*) is available; Type 2 (e.g. *pull – open*) is the only possibility.

## 11.5 Conclusion

This chapter discussed resultatives with *open/shut* (e.g. *The door swung open*). At the outset, it was noted that some instances of resultatives with *open/shut* cannot be paraphrased by means of ‘X causes Y to become Z by V-ing Y’. However, as we saw with the example of a door, the reason for this characteristic derives from an important fact: namely, an internalized translational motion of a barrier part (door<sub>1</sub>) and a change of state (becoming open/shut) are co-extensive and in fact two sides of the same coin. When the verbal event virtually entails a state change of becoming open/shut, as in *swing the door open/shut*, naturally the ‘X causes Y to become Z by V-ing Y’-paraphrase fails.

The co-extensiveness between motion and change of state, in turn, comes from the very lexical semantics of *open* and *shut*: In order for something to become open or shut, there should be a movable barrier part and an aperture created when the

barrier part is moved, be they inherent (e.g. doors) or emergent in the verbal process (e.g. eggs). With entities thus structured, an internalized translational motion and a change of state are necessarily co-extensive. Thus, there is nothing puzzling about the apparently puzzling behavioral characteristic of resultatives with *open/shut*, for it ultimately comes from the inherent meanings of *open* and *shut*.

PART V

## On the result component



## To result phrases vs. *into* result phrases

### 12.0 Introduction to Part V

In Chapter 9, it has been shown that through the analysis of ‘change verb’ resultatives, the causal chain needs to be modified from (1a) to (1b).

- (1) Causal chain for *Tracy wipes the table clean*
- a.            ACT ON                      CHANGE  
 Tracy —————> table —————> clean
- b.            ACT ON-phase                      RESULT-phase  
 Tracy —————> table —————> clean

Initially, the causal chain was held to consist of the ACT ON component and the CHANGE component, as shown in (1a), following Rappaport Hovav & Levin (2001). But now the causal chain consists of the ACT ON-phase and the RESULT-phase, as shown in (1b).

This modification reminds us that our proposed force-recipient account is still incomplete, in that only the ACT ON component has been discussed so far. The RESULT component needs to be examined as well.

In this connection, notice that there are still issues left unaccounted for which clearly have to do with the RESULT component. As is well-known, there are three options to encode a result, as shown in (2) (adjectival phrases, *to*-phrases, and *into*-phrases).

- (2) a. Bob shot him *dead*.  
 b. Bob shot him *to death*.  
 c. The victory threw him *into a frenzy*.

But these three options are not necessarily interchangeable. Thus, sometimes only prepositional phrases are allowed as in (3), and sometimes only adjectival phrases are allowed as in (4). So this invites the question: How to choose between APs and PPs?

- (3) a. He laughed himself *to death*.  
 b. \*He laughed himself *dead*.



- (4) a. He danced his feet *sore*.  
 b. \*He danced his feet *to soreness*. (Verspoor, 1997, p. 119)

Furthermore, a similar problem arises even between the two prepositional phrases. Thus sometimes only *to*-phrases are allowed as in (5), and sometimes only *into*-phrases are allowed as in (6). So this invites the further question: How to choose between *to*-phrases and *into*-phrases?

- (5) a. Bob shot him to death.  
 b. \*Bob shot him into death.
- (6) a. \*He fell to a coma.  
 b. He fell into a coma.

These questions are further manifestations of the fundamental question “Which resultatives are possible and which are not?” Part V addresses these questions by elucidating the RESULT component. We will first address the question of “How to choose between *to*-phrases and *into*-phrases?” in Chapter 12. Next, the question of “How to choose between APs and PPs?” will be addressed in Chapter 13.

## 12.1 *To a whisper*<sup>93</sup>

### 12.1.1 Point on a scale

Consider (7).

- (7) Her voice sank to a whisper. (BNC)

It seems that *to a whisper* is strongly preferred to *into a whisper*. This is indicated by the search results of the two corpora as summarized in Table 12.1: 48 attested examples of *to a whisper* are found in the BNC, but only two examples of *into a whisper*; and 13 attested examples of *to a whisper* are found in the WB, but no example of *into a whisper*.

Table 12.1 *To a whisper* vs. *into a whisper*

|     | V (NP) to a whisper | V (NP) into a whisper |
|-----|---------------------|-----------------------|
| BNC | 48                  | 2                     |
| WB  | 13                  | 0                     |

93. The material in 12.1 and 12.3 was presented at the Sixth International Conference on Construction Grammar, held at Charles University, Czech Republic (Iwata 2010). I'd like to thank the audience for their comments and suggestions.

This difference seems to be in accord with the native speaker intuition. Thus *sank to a whisper* is judged acceptable, but *sank into a whisper* questionable.

- (8) a. Her voice sank to a whisper.  
b. ?Her voice sank into a whisper.

Furthermore, a search of the two corpora reveals a very interesting fact. Besides *whisper*, other manner-of-speaking nouns like *roar* or *murmur* may also appear after *to*, as in (9), and generally obey the same pattern as that of *whisper*.<sup>94</sup>

- (9) a. Her voice *dropped to a whisper*.  
b. The murmur *swelled to a roar*.  
c. His voice *sank to a rough murmur*.  
d. Smallfry's voice *rose to a scream*.  
e. Her voice *rose to a thin shriek*.  
f. "... Which reminds me," he said, his voice *rising to a shout*.

(all from BNC)

Thus most of these manner-of-speaking nouns are far more frequently found after *to* than after *into*, as summarized in Tables 12.2 and 12.3.

**Table 12.2** BNC counts of manner-of-speaking nouns

|          | V (NP) to _____ | V (NP) into _____ |
|----------|-----------------|-------------------|
| a roar   | 12              | 2                 |
| a murmur | 11              | 0                 |
| a scream | 9               | 3                 |
| a shriek | 7               | 1                 |
| a shout  | 2               | 3                 |

**Table 12.3** WB counts of manner-of-speaking nouns

|          | V (NP) to _____ | V (NP) into _____ |
|----------|-----------------|-------------------|
| a roar   | 9               | 5                 |
| a murmur | 5               | 0                 |
| a scream | 5               | 0                 |
| a shriek | 2               | 0                 |
| a shout  | 4               | 0                 |

But what is it about manner-of-speaking nouns that accounts for their preference for *to*? What seems to be relevant in this connection is that all these

94. The term 'manner-of-speaking' has been borrowed from Zwicky (1971).

manner-of-speaking nouns can be regarded together as forming a scale measuring the “intensity of voice,” where *scream* and *shout* are located at higher positions and *whisper* at a lower position. Accordingly, the changes described in (10a) and (10b) can now be characterized as a downward movement and an upward movement on this scale, respectively, as depicted in Figure 12.1.

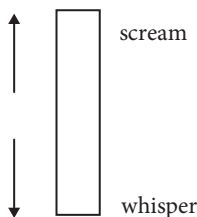


Figure 12.1 *Rise to a scream vs. sink to a whisper*

- (10) a. His voice sank to a whisper.  
b. His voice rose to a scream.

In other words, sentences like (10a) and (10b) are parallel to those like (11a) and (11b), which involve a downward movement and an upward movement on a numerical scale, as depicted in Figure 12.2.

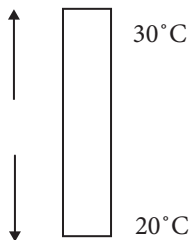


Figure 12.2 *Rise to 30 °C vs. drop to 20 °C*

- (11) a. The temperature dropped to 20 °C.  
b. The temperature rose to 30 °C.

That the changes are conceptualized in terms of movement on a scale is further confirmed when we consider which verbs are likely to appear with *to*-PPs. As can be seen in the above examples in (9), verbs like *drop*, *sink*, and *rise* are commonly found with *to a whisper* or *to a scream*. All these verbs are motion verbs incorporating a path of motion, as observed by Talmy (1985). Indeed, a BNC search reveals that these motion verbs are frequently found with *to a whisper* (Table 12.4) or with *to a murmur* (Table 12.5).

Table 12.4 BNC counts of *to a whisper* vs. *into a whisper*

|           | _____ to a whisper | _____ into a whisper |
|-----------|--------------------|----------------------|
| drop      | 18                 | 1                    |
| lower     | 10                 | 0                    |
| sink      | 6                  | 1                    |
| fall      | 4                  | 0                    |
| fade      | 3                  | 0                    |
| trail     | 2                  | 0                    |
| die       | 2                  | 0                    |
| evaporate | 1                  | 0                    |
| weaken    | 1                  | 0                    |
| reduce    | 1                  | 0                    |
| TOTAL     | 48                 | 2                    |

Table 12.5 BNC counts of *to a murmur* vs. *into a murmur*

|          | _____ to a murmur | _____ into a murmur |
|----------|-------------------|---------------------|
| sink     | 3                 | 0                   |
| lower    | 2                 | 0                   |
| fade     | 2                 | 0                   |
| move     | 1                 | 0                   |
| drag     | 1                 | 0                   |
| drop     | 1                 | 0                   |
| throttle | 1                 | 0                   |
| TOTAL    | 11                | 0                   |

It seems reasonable to suppose, therefore, that manner-of-speaking nouns like *whisper* go well with *to* precisely because the change is conceptualized in terms of motion along some scale. Since individual nouns like *whisper* or *murmur* count as an abstract goal located on this scale, it is no wonder that *to* is strongly preferred.

### 12.1.2 Other similar cases

Besides manner-of-speaking nouns, there are nouns which go well with *to*, rather than with *into*. These nouns include those having to do with temperature (12), color (13), pace of motion (14), and miscellaneous others (15).

- (12) The bathwater *cooled to lukewarm* ... [S. Grafton, *G Is for Gumshoe*, p. 28]

- (13) a. His olive complexion had *faded to the color of biscuit dough*.  
[S. Brown, *Ricochet*, p. 281]
- b. Darkness *lightened to gray* outside their window, and the sounds of dawn drifted in.  
[T. Gerritsen, *Vanish*, p. 253]
- (14) a. Out on Ventura, traffic had *slowed to a crawl*, drivers looking our way to see what was going on. [R. Crais, *The Monkey's Raincoat*, p. 68]
- b. I *slowed to a walk*, pouring sweat. [S. Grafton, *C Is for Corpse*, p. 23]
- c. We had *slowed to a cautious gait* ...  
[H. Lee, *To Kill a Mockingbird*, p. 255]
- (15) a. Outside, the heavy rain had *lightened to a drizzle*.  
[T. Gerritsen, *Body Double*, p. 275]
- b. The rain had *mellowed to a mist*, ... [J. Picoult, *My Sister's Keeper*, p. 80]

It is not difficult to see that all these cases can be handled along similar lines, by locating individual nouns on some scale.

Consequently, it seems safe to conclude that *to* is preferred when the change is construed in terms of reaching a point on some scale.

## 12.2 *To death*

### 12.2.1 Endpoint of a path

*To death* is quite often cited in the literature on resultatives, and is attested abundantly in both the BNC and the WB.

- (16) a. A MAN who *stabbed* his wife *to death* in front of their young son begged for the boy's forgiveness in court yesterday.
- b. Bachelor Brian Claydon, 59, was found *beaten to death* in a lavatory at Nottingham station with the glue for his toupee in a bag by his side.  
(both from BNC)

Yet in contrast to the vast number of *to deaths*, no instance of *into death* has been found in the corpora. Tables 12.6 and 12.7 list verbs which appear more than ten times with *to death* in the BNC and the WB, respectively.

**Table 12.6** BNC counts of *to death* vs. *into death*

|          | to death | into death |
|----------|----------|------------|
| stab     | 115      | 0          |
| beat     | 87       | 0          |
| starve   | 83       | 0          |
| bleed    | 59       | 0          |
| freeze   | 46       | 0          |
| batter   | 44       | 0          |
| burn     | 35       | 0          |
| choke    | 31       | 0          |
| crush    | 24       | 0          |
| stone    | 22       | 0          |
| bludgeon | 21       | 0          |
| hack     | 19       | 0          |
| torture  | 17       | 0          |
| kick     | 16       | 0          |
| trample  | 15       | 0          |
| shoot    | 14       | 0          |
| club     | 13       | 0          |
| drink    | 12       | 0          |
| knife    | 11       | 0          |

**Table 12.7** WB counts of *to death* vs. *into death*

|          | to death | into death |
|----------|----------|------------|
| stab     | 481      | 0          |
| beat     | 203      | 0          |
| starve   | 108      | 0          |
| crush    | 100      | 0          |
| batter   | 96       | 0          |
| bleed    | 89       | 0          |
| freeze   | 86       | 0          |
| burn     | 73       | 0          |
| hack     | 67       | 0          |
| bludgeon | 57       | 0          |
| shoot    | 55       | 0          |

*(continued)*

Table 12.7 WB counts of *to death* vs. *into death* (continued)

|          | to death | into death |
|----------|----------|------------|
| choke    | 46       | 0          |
| kick     | 41       | 0          |
| drink    | 37       | 0          |
| blast    | 35       | 0          |
| stone    | 31       | 0          |
| torture  | 31       | 0          |
| club     | 20       | 0          |
| strangle | 15       | 0          |
| trample  | 14       | 0          |
| flog     | 12       | 0          |
| shake    | 11       | 0          |

As can be seen, none of these verbs appear with *into death* in either corpus. It thus seems safe to conclude that *to death* is allowed but *into death* is not.

- (17) a. Bob shot him to death.  
 b. \*Bob shot him into death.

But why is *to death* the only possibility? Evidently this cannot be accounted for in the same way that *to a whisper* is preferred to *into a whisper*. While manner-of-speaking nouns like *whisper* or *scream* may well be regarded as together forming a scale measuring the intensity of voice, no comparable scale can be plausibly posited for *death*.

Rather, this is due to how *death* is metaphorically construed. Among the conceptual metaphors commonly cited in the literature (Lakoff & Johnson 1980, 1999) is LIFE IS A JOURNEY. Note that *death* is the ultimate endpoint of life as a journey. Given this understanding of *death*, then, it comes as no surprise that *death* is construed exclusively as a goal.

Now among the attested corpus data of *to death* are the following.

- (18) a. You frightened Alice *to death*.  
 b. It scares me *to death*.  
 c. I just love that guitar *to death*. (all from BNC)

Clearly, these sentences do not express a literal change of state ending in one's death. Rather, they are hyperbolically used (cf. Claridge 2011, Margerie 2011).

Interestingly enough, a strong correlation is observable between a hyperbolic reading and the *to*-PP. Specifically, a hyperbolic reading seems to be available only for *to*-PPs, and not for *into*-PPs. Thus in the BNC, 148 instances of *to death* in the

hyperbolic reading have been found, but no comparable instances of *into death* have been found, as summarized in Table 12.8. Similarly, in the WB, 215 instances of *to death* in the hyperbolic reading have been found, but no comparable instances of *into death* have been found, as summarized in Table 12.9.<sup>95</sup>

**Table 12.8** BNC counts of *to death/into death* in the ‘impossible hyperbole’ reading

|            | to death | into death |
|------------|----------|------------|
| frighten   | 51       | 0          |
| scare      | 34       | 0          |
| worry      | 17       | 0          |
| bore       | 15       | 0          |
| love       | 11       | 0          |
| tickle     | 5        | 0          |
| tire, work | 4        | 0          |
| talk       | 3        | 0          |
| play, nag  | 2        | 0          |
| TOTAL      | 148      | 0          |

**Table 12.9** WB counts of *to death/into death* in the ‘impossible hyperbole’ reading

|                                                                  | to death | into death |
|------------------------------------------------------------------|----------|------------|
| scare                                                            | 83       | 0          |
| frighten                                                         | 42       | 0          |
| bore                                                             | 33       | 0          |
| love                                                             | 27       | 0          |
| work                                                             | 12       | 0          |
| worry                                                            | 8        | 0          |
| nickel and dime                                                  | 2        | 0          |
| adore, bewitch, embarrass, excite, kiss, terrify, thrill, tickle | 1        | 0          |
| TOTAL                                                            | 215      | 0          |

It is quite straightforward to explain why *to death* may be used hyperbolically. As is well-known, the essence of hyperbole is to exaggerate a quantity that is more than expected (Colston 1997, 2015; Colston & Keller 1998). Now in order to overstate a degree, some scale is necessary. It follows, therefore, that *to* is chosen precisely because of the scale called for by a hyperbolic reading.

<sup>95</sup>. Note that the instances of hyperbolic *to death* in Tables 12.8 and 12.9 are separately counted from those of non-hyperbolic *to death* in Tables 12.6 and 12.7.



### 12.2.2 Short summary

By examining the cases in which only the *to*-PP is allowed, we have found (at least) three patterns: First, a new state is construed as a point on some scale (e.g. *to a whisper*); second, a new state is construed as an endpoint of a path (e.g. *to death*); and third, a named state is a hyperbole (e.g. *to death*). Given that scales are metaphorically construed abstract paths (Lakoff 1990, 1993), all three of the cases can be characterized in terms of reaching a goal as defined on some abstract path. Accordingly, the choice of *to* rather than *into* can be said to be well-motivated.

### 12.3 *Into a coma*

Let us go on to cases in which *into*-phrases are strongly preferred to *to*-phrases. *Into a coma*, as exemplified in (19), seems to be one such instance.

- (19) Finally, a shopkeeper dialed 999 as he fell *into a coma* by the road. (BNC)

The corpus search results, as summarized in Table 12.10, again give a unanimous pattern: 46 and 87 attested examples of *into a coma* have been found in the BNC and the WB, respectively, but not a single instance of *to a coma* has been found in either corpus.

Table 12.10 *To a coma vs. into a coma*

|     | V to a coma | V into a coma |
|-----|-------------|---------------|
| BNC | 0           | 46            |
| WB  | 0           | 87            |

We seem to be thus justified in saying that *into a coma* is allowed but *to a coma* is not.

- (20) a. \*He fell to a coma.  
b. He fell into a coma.

Interestingly enough, *a stupor* and *a torpor* behave exactly like *a coma*. Both of these nouns are found after *into* but never after *to*, as summarized in Tables 12.11 and 12.12.

Table 12.11 BNC counts of *torpor* and *stupor*

|          | V to _____ | V into _____ |
|----------|------------|--------------|
| a torpor | 0          | 7            |
| a stupor | 0          | 18           |

Table 12.12 WB counts of *torpor* and *stupor*

|          | V to _____ | V into _____ |
|----------|------------|--------------|
| a torpor | 0          | 1            |
| a stupor | 0          | 9            |

- (21) a. Last night, Waldegrave drank himself *into a stupor*.  
 b. Colonel Windsor had to prompt when Tubby relapsed once again *into a brooding torpor*. (both from BNC)

Furthermore, *a frenzy*, *raptures*, and *a trance*, as exemplified in (22), behave similarly, as summarized in Tables 12.13 and 12.14.

Table 12.13 BNC counts of *frenzy*, *raptures*, and *trance*

|          | V to _____ | V into _____ |
|----------|------------|--------------|
| a frenzy | 6          | 43           |
| raptures | 0          | 6            |
| a trance | 0          | 27           |

Table 12.14 WB counts of *frenzy*, *raptures*, and *trance*

|          | V to _____ | V into _____ |
|----------|------------|--------------|
| a frenzy | 13         | 116          |
| raptures | 0          | 26           |
| a trance | 0          | 45           |

- (22) a. He was then *thrown into a frenzy* by a letter ...  
 b. This prediction used to *send me into raptures* of anticipation.  
 c. She *fell into a trance* ... (all from BNC)

All these nouns denote psycho-somatic states that are non-volitional, where the states may or may not be completely inactive.

As also suggested by one of the reviewers of this study, this is quite natural in that mental/psychological states are often conceptualized as containers (e.g. *in a frenzy*, *in a rapture*, *in a trance*). This seems to suggest that *into* should be characterized in terms of the container schema, exactly like the spatial preposition *into* (e.g. *into the room*), as shown in Figure 12.3: Since the boundary separates the inside of a container from the outside, entering a container means entering into

a new state (=inside) which is entirely different from the former state (=outside), and from which one cannot escape if nothing is done.<sup>96</sup>

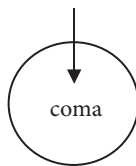
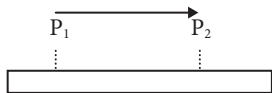


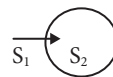
Figure 12.3 Fall into a coma

Consequently, when *into* is used in an abstract sense, this image-schematic property allows *into* to be suitable for expressing a change in mental/psychological state, where the new state is a rather noticeable departure from the normal state, and the new state will likely continue for some time.

Thus we have arrived at a very interesting characterization of *to* and *into*: As seen in the previous section, *to* is preferred when the change is construed as an abstract movement on some scale; now *into* seems to be preferred when the new state is construed in terms of entering a container, as shown in Figure 12.4.



(a) moving to a point on some scale (*to*-PP)



(b) entering a container (*into*-PP)

Figure 12.4 Two types of change

Essentially, this means that *to* is *to*, and *into* is *into*, after all.

## 12.4 *To pieces vs. into pieces*

### 12.4.1 Corpus data

We have first seen cases in which *to*-PPs are strongly preferred, and then those in which *into*-PPs are strongly preferred, and have differentially characterized *to*-PPs and *into*-PPs in terms of the contrast between reaching a goal on some abstract path vs. entering a container. What would appear to be rather unexpected for this

<sup>96</sup> Note that the state is only temporary, and that escaping the state is not impossible.

(i) Maggie came *out of her trance*, flushing rose-pink, her eyes avoiding his. (BNC)

Probably, this is one reason why *\*into death* is not allowed.

differential characterization, then, would be cases in which both prepositions are equally frequent. But such a case does exist.

Since Simpson (1983), *into pieces* has been among the most oft-cited result phrases in the literature.

- (23) a. I *broke* the vase *into pieces*.  
 b. The vase *broke into pieces*. (Simpson, 1983, p. 143)

What has tended to be overlooked in the literature, however, is the fact that *to pieces* is also available.

- (24) Except in the extreme and anomalous calm of the Sargasso Sea, big floating seaweeds would simply be *broken to pieces*. (BNC)

In fact, *to pieces* outnumberes *into pieces* in the two corpora. In the BNC, in contrast to the 275 instances of *into pieces*, as many as 418 instances of *to pieces* have been found, as summarized in Tables 12.15 and 12.16.

**Table 12.15** BNC counts of ‘V (NP) into pieces’

|                                                                                                                                                  | _____ (NP) into pieces |
|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| cut                                                                                                                                              | 108                    |
| break                                                                                                                                            | 46                     |
| chop                                                                                                                                             | 21                     |
| tear                                                                                                                                             | 16                     |
| divide, shatter                                                                                                                                  | 12                     |
| split                                                                                                                                            | 10                     |
| smash                                                                                                                                            | 6                      |
| rip                                                                                                                                              | 5                      |
| slice                                                                                                                                            | 4                      |
| snip                                                                                                                                             | 3                      |
| burst, disintegrate, fragment, grind, hack, separate, splinter                                                                                   | 2                      |
| chew, chomp, crack, crumble, decompose, disassemble, disperse, explode, fall, file, flake, scatter, screw, section, shoot off, slash, snap, trim | 1                      |
| TOTAL                                                                                                                                            | 275                    |

Table 12.16 BNC counts of ‘V (NP) to pieces’

|                                                                                                                                                             | _____ (NP) to pieces |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| go                                                                                                                                                          | 68                   |
| tear                                                                                                                                                        | 67                   |
| fall                                                                                                                                                        | 61                   |
| cut, take                                                                                                                                                   | 24                   |
| blow                                                                                                                                                        | 21                   |
| smash                                                                                                                                                       | 18                   |
| rip                                                                                                                                                         | 15                   |
| shake                                                                                                                                                       | 12                   |
| hack, pull, shoot                                                                                                                                           | 11                   |
| fall                                                                                                                                                        | 9                    |
| break                                                                                                                                                       | 6                    |
| blast                                                                                                                                                       | 5                    |
| fly                                                                                                                                                         | 4                    |
| chop, come, dash, drop, pick, shatter, thrill                                                                                                               | 3                    |
| crumble, get, knock, wear                                                                                                                                   | 2                    |
| beat, bore, chew, compile, crack, flog, grind, jump, kick, love, pound, punch, ravage, rend, scratch, shiver, slash, slice, splash, splinter, spoil, wrench | 1                    |
| TOTAL                                                                                                                                                       | 418                  |

The same is true with the WB: In contrast to the 256 instances of *into pieces*, 340 instances of *to pieces* have been found, as summarized in Tables 12.17 and 12.18.

Table 12.17 WB counts of ‘V (NP) into pieces’

|                                             | _____ (NP) into pieces |
|---------------------------------------------|------------------------|
| cut                                         | 103                    |
| break                                       | 28                     |
| chop                                        | 24                     |
| divide                                      | 11                     |
| slice                                       | 10                     |
| shatter, smash, tear                        | 9                      |
| blow                                        | 6                      |
| split                                       | 5                      |
| hack, shred                                 | 4                      |
| rip                                         | 3                      |
| chew, dice, disintegrate, explode, fragment | 2                      |

Table 12.17 WB counts of ‘V (NP) into pieces’ (*continued*)

|                                                                                                                                                               | _____ (NP) into pieces |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| analyze, burn, carve, chain-saw, crack, crumble, dissect, fall, grind,<br>mangle, move, pull, saw, scatter, shape, smooth, snap, snip, splash,<br>strip, turn | 1                      |
| TOTAL                                                                                                                                                         | 256                    |

Table 12.18 WB counts of ‘V (NP) to pieces’

|                                                                                                                                                            | _____ (NP) to pieces |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| go                                                                                                                                                         | 65                   |
| fall                                                                                                                                                       | 48                   |
| tear                                                                                                                                                       | 28                   |
| blow, rip                                                                                                                                                  | 27                   |
| cut                                                                                                                                                        | 23                   |
| shoot                                                                                                                                                      | 20                   |
| smash                                                                                                                                                      | 18                   |
| take                                                                                                                                                       | 12                   |
| love                                                                                                                                                       | 10                   |
| hack, pull                                                                                                                                                 | 9                    |
| kick                                                                                                                                                       | 6                    |
| shake                                                                                                                                                      | 4                    |
| break, dash, pick                                                                                                                                          | 3                    |
| chop, drop                                                                                                                                                 | 2                    |
| batter, beat, blast, booze, chew, chuff, come, crumble, crumple, fly,<br>knock, maul, pound, rattle, scratch, shell, shiver, shred, slice, thrill,<br>turn | 1                    |
| TOTAL                                                                                                                                                      | 340                  |

Given our differential characterization of *to*-PPs and *into*-PPs, this fact may be taken to indicate that the change in question can be construed either in terms of reaching a goal on some path or in terms of entering a container equally well. But this begs the question why the change of becoming “pieces” is open to two construals, unlike the other cases seen so far.

The key to resolving this apparent puzzle comes from a crucial difference between *to pieces* and *into pieces* observed across the two corpora. With *into pieces*, *pieces* may be modified by various adjectives, ranging from those pertaining to the number as in (25), the size as in (26) and (27), or whatever is appropriate for characterizing the pieces as in (28).

- (25) a. Break the cinnamon sticks *into two or three pieces* and add to the pan.  
 b. ... although it broke up *into several pieces*, the cockpit remained intact.  
 c. ... it fell to the floor with a tremendous noise and shattered *into a thousand pieces*.
- (26) a. Chop the fennel *into small pieces* and flake the smoked trout.  
 b. Rip it *into tiny pieces* and throw it at the bride and groom at the next wedding you see.
- (27) a. Chop the potatoes *into bite-sized pieces* and place in a large bowl with the artichoke hearts, tomatoes and peas.  
 b. Cut potatoes *into equal-sized pieces* to ensure even cooking.  
 c. Peel all the vegetables and cut *into matchstick-sized pieces*, keeping the beetroot chips to one side to stop the other vegetables turning pink.  
 d. Cut your chosen vegetable at a slight diagonal *into 5 cm/2in pieces*.
- (28) a. When the merchant had tried to open the chest in the temple the feasters had been blasted by lightning and some, in their madness, had torn each other *into bloodied pieces*.  
 b. ... laminated glass which could break *into large, sharp and dangerous pieces*. (all from BNC)

What is more, such modified instances are the majority, as summarized in Table 12.19: In the BNC, in contrast to the 214 instances of *into Adj. pieces* (=78%), only 61 instances of plain, unmodified *into pieces* (=22%) are found. Similarly, in the WB, in contrast to the 199 instances of *into Adj. pieces* (=77.7%), only 57 instances of unmodified *into pieces* (=22.3%) are found.

Table 12.19 'Into Adj. pieces' vs. 'into pieces' in BNC and WB

|     | into Adj. pieces | into pieces | TOTAL |
|-----|------------------|-------------|-------|
| BNC | 214 (=78%)       | 61 (=22%)   | 275   |
| WB  | 199 (=77.7%)     | 57 (=22.3%) | 256   |

By contrast, only one instance of *to Adj. pieces* is found in the BNC and the WB, respectively, as summarized in Table 12.20. And even that one instance in the BNC does not seem to be an ordinary case of adjectival modification, as shown in (29a).

Table 12.20 'To Adj. pieces' vs. 'to pieces' in BNC and WB

|     | to Adj. pieces | to pieces     | TOTAL |
|-----|----------------|---------------|-------|
| BNC | 1 (=0.002%)    | 417 (=99.98%) | 418   |
| WB  | 1 (=0.03%)     | 339 (=99.7%)  | 340   |

- (29) a. And I spring out of bed, naked as I am, and I just start to *tear* him *to fucking pieces*. (BNC)
- b. As well as breathing fire, Spyro can also bash things with his horns and do a massive diving jump that helps him *smash* the dark gems *to tiny pieces*. (WB)

So the difference between *to pieces* and *into pieces* with respect to adjectival modification is undeniable.

What does this difference indicate, then? The answer seems to be that *pieces* is referential in ‘into pieces’ but not in ‘to pieces.’

## 12.4.2 Different aspects of becoming “pieces”

### 12.4.2.1 Into pieces

This referential/non-referential distinction can be accounted for by supposing that *into pieces* and *to pieces* encode different aspects of becoming “pieces.” Let us begin with *into pieces*. Besides the adjectival modification noted above, the referential character of *pieces* in ‘into pieces’ is further supported by the fact that it can be the antecedent for pronominals. Thus in (30) the pronoun *them* clearly refers to the pieces created, and in (31) *each one* and *each of which* do the same job.

- (30) a. *Break* the chocolate *into small pieces* and put **them** in a small heavy-bottomed pan.
- b. Then I take the sausages out and *cut* them up *into pieces*, put **them** back and add a tin of chopped tomatoes.
- (31) a. Remove the dough from the bowl, *cut into 8 pieces* and shape **each one** into a ball.
- b. It is recommended that each mat is *divided into four equal pieces*, **each of which** incorporates a 2 1/2 in. long ‘bend-down’ fixing anchor ...
- (all from WB)

This suggests that *into pieces* depicts a type of change that yields a physical object.<sup>97</sup>

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97. A reviewer comments that “one alternative analysis could be that the ‘into pieces’ is preferred in cases in which the resulting state of the postverbal object can be counted in terms of individual pieces, so that the relevant distinction is a count vs. non-count one.”

I do not see why this counts as an “alternative.” Note that “pieces” being countable is a consequence of “pieces” being a physical object, but not the other way around. If “pieces” were treated simply as countable, then “pieces” in *into pieces* could refer to abstract entities, which is not the case. So speaking of the count vs. non-count distinction as an “alternative analysis” to treating *pieces* as a physical object is putting the cart before the horse.



Accordingly, the following picture of *into pieces* suggests itself. The change of becoming “pieces” consists in a physical object losing its material integrity. When this change is construed from a physical perspective alone, it is simply a change in appearance: A whole object is now pieces, but physical objects are still physical objects even after becoming pieces.

Consequently, *into pieces* can be characterized as coding a “change in appearance” due to decomposition. This characterization allows us to capture a number of things. First and foremost, it explains why *pieces* is referential. Next, it explains why *into pieces* is frequently found with verbs of decomposition. Thus in the BNC, *cut, break, chop, tear, divide, and shatter* are the six most frequent verbs (as seen in Table 12.15), and in the WB, *cut, break, chop, divide, and slice* the five most frequent verbs (as seen in Table 12.17). All of these verbs depict a decomposition of physical objects, and are therefore fully compatible with a “change in appearance” due to decomposition. And third, since a change in appearance is clearly a significant departure from the former state and the new state will definitely continue, this characterization allows us to account for why the preposition is *into*, after all.

#### 12.4.2.2 To pieces

Let us now address *to pieces*. It turns out that *to pieces* is open to interpretations that have to do with aspects of becoming “pieces” other than that of a change in appearance.

An examination of the corpus data reveals that there are (at least) three senses of *to pieces*. The first one is illustrated in (32).

- (32) a. My mother, I’m afraid, *went quite to pieces* after his death.  
 b. The Soviet Union is *falling to pieces*. (both from BNC)

Here *pieces* means a psychologically or functionally dysfunctional state. As a matter of fact, dictionaries define *go to pieces* as follows: “to be so nervous or worried that you cannot behave in a sensible way” (Macmillan); “to be so upset or nervous that you cannot think or behave normally” (LDOCE).

It seems that this sense comes from the following aspect of becoming pieces: When something loses its material integrity and becomes “pieces,” it can no longer function properly. With *pieces* thus understood, many other instances of *to pieces* can easily be made sense of. Thus in (33) the post-verbal NP entity is asserted to become dysfunctional as a result of the tearing or ripping. This means that the entity in question is damaged very severely.

- (33) a. She would *tear him to pieces*. (BNC)  
 b. “We were awful in the first half and Newcastle *ripped us to pieces*.” (WB)

One might feel that when an object is physically damaged, the difference between *to pieces* and *into pieces* becomes subtle. Still, with *to pieces* the focus is on the damage, rather than on the creation of a resulting object (=pieces). Thus what results from the act of cutting something to pieces are not necessarily “pieces”: In (34a) the troops may have suffered serious damage, but they are still troops. The same is true of *we* in (34b). They are still living humans, not pieces thereof.

- (34) a. Mardonios was killed, his finest troops were *cut to pieces*, and when the Persians broke, their allies left the field.  
 b. We were *cut to pieces* by Watford, though the defence did not help itself by defending too deeply. (both from BNC)

In this connection, a very interesting thing is observable between *cut – into pieces* and *cut – to pieces*. In both the BNC and the WB, the majority of *cut – into pieces* examples are found in recipe contexts, as illustrated in (35).

- (35) a. You sprinkle it on and then *cut* the pie *into pieces*.  
 b. For example, would you *cut* the chocolate *into pieces* and eat them slowly, perhaps accompanied by a drink.  
 c. *Cut* spinach *into pieces*. (all from BNC)

In fact, 80 instances of the total of 108 (=74%) are in recipe contexts in the BNC, and 79 instances of the total 103 (=77%) are so in the WB. In contrast, most of the instances of *cut – to pieces* are like those in (34); not a single instance is found in recipe contexts, as summarized in Table 12.21.

**Table 12.21** *Cut – into pieces* vs. *cut – to pieces* in recipe contexts

|     | <i>cut – into pieces</i> | <i>cut – to pieces</i> |
|-----|--------------------------|------------------------|
| BNC | 80/108 (=74%)            | 0/24 (=0%)             |
| WB  | 79/103 (=77%)            | 0/23 (=0%)             |

Now the second sense of *to pieces* is exemplified in (36).

- (36) a. Grégoire’s ability to *take* a clock *to pieces* **and put it together again** ...  
 b. The BMWs slowly roll down the impressive new production line where the team of mechanics eagerly await their arrival – so they can carefully *take* the cars *to pieces*. (both from WB)

Here the clock and the cars are not damaged in any way, unlike the first sense. Rather, they are simply disassembled into parts. So here *take – to pieces* is nearly synonymous with *take – apart*. But this second sense may be closely related to the first sense. After all, when machines are disassembled, they cannot function properly any longer.

The third sense of *to pieces* is hyperbolic, and is found when *to pieces* accompanies predicates of mental state. Thus one cannot become pieces by being bored as in (37a) or thrilled as in (37b), and one cannot cause somebody to become pieces by loving her as in (37c).

- (37) a. Maybe you are absolutely *bored to pieces* at work. (BNC)  
 b. I know she's *thrilled to pieces* with it. (BNC)  
 c. I *love Emily to pieces*. (WB)

Just like *to death*, a hyperbolic reading seems to be available only for *to*-PPs, and not for *into*-PPs. Thus in both the BNC and the WB, a small number of instances of *to pieces* in the hyperbolic reading have been found, but no comparable instances of *into pieces* have been found, as summarized in Tables 12.22 and 12.23.

**Table 12.22** Hyperbolic uses of *to pieces* vs. *into pieces* in BNC

|             | <i>to pieces</i> | <i>into pieces</i> |
|-------------|------------------|--------------------|
| be thrilled | 3                | 0                  |
| be bored    | 1                | 0                  |
| love        | 1                | 0                  |

**Table 12.23** Hyperbolic uses of *to pieces* vs. *into pieces* in WB

|             | <i>to pieces</i> | <i>into pieces</i> |
|-------------|------------------|--------------------|
| love        | 10               | 0                  |
| be chuffed  | 1                | 0                  |
| be thrilled | 1                | 0                  |

To recapitulate, there are (at least) three senses of *to pieces*: (1) “becoming dysfunctional,” (2) “becoming disassembled,” and (3) “to an extreme degree.” As noted above, the state of being dysfunctional is a functional or psychological aspect of being pieces. So the first sense (e.g. *go to pieces*) may be taken to arise by locating the state of being pieces on some property scale. And the third, hyperbolic reading (e.g. *love Emily to pieces*) necessarily involves some scale, as already noted in our discussion of *to death*. So for both the first and third senses, reference to some notion of path is essential. In this sense, the choice of *to* is motivated.

As for the second sense (e.g. *take a clock to pieces*), it seems difficult to find an equally compelling reason for choosing *to*. Note, however, that there is good reason *not* to choose *into*. When one takes a clock to pieces, the clock as a whole becomes dysfunctional, but each piece still retains its functionality. Accordingly, when these pieces are assembled together, the clock recovers its functionality. By contrast, when a clock is broken into pieces, each of the resulting pieces no longer retains its functionality. So the use of *into* instead of *to* will necessarily lead to the

wrong meaning. The choice of *to* is, so to speak, a consequence of the division of labor between *to pieces* and *into pieces*.<sup>98</sup>

We are now in a position to answer the question raised at the outset. The change of becoming pieces can be construed either in terms of reaching a goal on some path or in terms of entering a container equally well precisely because different aspects of becoming pieces are coded by *into pieces* and *to pieces*. When the change is construed purely physically as a change in appearance due to decomposition, *into pieces* is used. Otherwise, *to pieces* is used.

### 12.4.3 Other expressions for decomposition

Interestingly enough, the same contrast seems to be observable with other expressions for decomposition. In English we have such expressions as *into bits*, *into dust*, *into shreds*, and *into smithereens*. In the corpora their counterparts with *to* are also found.

- (38) a. *Tear* the paper *into bits*, and flush it down the toilet.  
 b. “If I don’t,” he thought, “they’ll very likely *tear* me *to bits*: and much good may it do them.” (both from BNC)
- (39) a. ... and just as Egyptian mummies *crumbled into dust* when exposed to the shock of air ...  
 b. One by one, she felt her certainties *crumble to dust*. (both from BNC)
- (40) a. 3 slices fresh root ginger, peeled and *cut into shreds*.  
 b. One could hardly wear garments that were *ripped to shreds* and spattered with blood. (both from BNC)
- (41) a. Such bombs often smash into other bigger, stationary boulders at the base of the cone, *shattering into smithereens*, but in doing so they leave their own mark on the boulder.  
 b. He says an overweight lorry in a crash will *smash* a car *to smithereens*. (both from BNC)

<sup>98</sup> Tony Higgins (personal communication) has suggested to me that it might still be valid to conceptualize *take – to pieces* in reference to a path: *Take – to pieces* means approximately the same as *take apart*, and “apart” is the opposite end of the spectrum from “together.” Accordingly, *to pieces* could be seen as virtually representing a path with “together” and “apart” at the opposite ends. In fact, this conceptualization may be reflected in the flexibility of interpretation: *To pieces* does not require a meaning of being *completely* apart. Thus “to take a clock to pieces” allows for an interpretation in which the clock could have most of its parts disassembled (while still leaving the frame and stand intact), besides an interpretation where every single part of the clock has been detached, and they are all lying unconnected on a tabletop. This could be seen as indicating a path-like character of *to pieces* in *take – to pieces*.

As with *pieces* in *into pieces*, so too *bits*, *dust*, and *shreds* may be modified in their respective *into* form as in (42).

- (42) a. ... when I came to this house I had to have split all my furniture *into little bits* ...  
 b. Squeezing her fist together she crumbled it *into fine powdery dust*.  
 c. Cut remaining leek greens *into fine shreds*. (all from BNC)

But few instances of adjectivally modified *bits*, *dust*, and *shreds* in their respective *to* form have been found in the BNC or the WB.

Furthermore, the second and third senses of *to pieces* are also available for *to bits*: (43a) is clearly hyperbolic, and in (43b) *take – to bits* means to disassemble something into its parts.

- (43) a. We love him *to bits*.  
 b. ... and the battery is *taken to bits* with every part – acid, lead and plastic casing – sent for recycling. (both from WB)

Thus the differential characterization of *to pieces* and *into pieces* seems to be applicable to all these expressions as well.

## 12.5 *In/Into* alternation

### 12.5.1 *In* result phrase

Lastly, let us consider still another type of result phrase. It has been customary in the literature to recognize only two types of prepositional result phrases: *to*-PPs and *into*-PPs. In recent years, however, it has been noted that there is a third possibility (Ramchand 2008, Ono 2010). Thus Ono (2010) observes that an *in*-PP is possible as a result phrase, as shown in (44).

- (44) a. John broke the stick *into pieces*.  
 b. John broke the stick *in pieces*.

As Ono (2010) notes, an *in* result phrase is attested in the BNC.

- (45) a. They were given losh, the thin local bread, cold mutton *cut in pieces*, hard-boiled eggs taken from their shells and halved, and the fruit of the arbutus.  
 b. Two hours outside Wasserburg a back wheel *broke in pieces* and there we were stranded. (both from BNC)

I myself have found 26 instances and 22 instances of an *in* result phrase in the BNC and the WB, respectively, as summarized in Tables 12.24 and 12.25. These are far from a negligible figure.

**Table 12.24** BNC counts of ‘V (NP) in pieces’

|                               | _____ (NP) in pieces |
|-------------------------------|----------------------|
| cut                           | 11                   |
| break                         | 5                    |
| tear                          | 3                    |
| dash                          | 2                    |
| chop, hack, hew, slice, split | 1                    |
| TOTAL                         | 26                   |

**Table 12.25** WB counts of ‘V (NP) in pieces’

|                                          | _____ (NP) in pieces |
|------------------------------------------|----------------------|
| cut                                      | 9                    |
| tear                                     | 4                    |
| break                                    | 3                    |
| crash, fall, fracture, pull, slice, snap | 1                    |
| TOTAL                                    | 22                   |

Significantly, almost all the verbs allowing an *in* result phrase lexically entail a change of state (‘change verb’ resultatives). Thus the *in* result phrase is not allowed with verbs that do not entail a change.

- (46) a. John pounded the metal {to/into} pieces.  
 b. \*John pounded the metal in pieces.
- (47) a. Children ran themselves {to/into} exhaustion.  
 b. \*Children ran themselves in exhaustion.
- (48) a. She talked herself {to/into} sleep.  
 b. \*She talked herself in sleep. (Ono 2010)

### 12.5.2 Parallel with spatial paths

What appears to bear a striking resemblance to the *in/into* alternation just discussed is the alternation between locative prepositions like *in* or *on* and their goal counterparts like *into* or *onto*. Thus while *in* and *on* are locative prepositions, they may receive a goal interpretation, as in (49a) and (49b) (Thomas 2004; Nikitina 2008; Beavers, Levin & Weitham 2010, among others).

- (49) a. John walked in the room.  
 b. Kim jumped on the bed. (Beavers, Levin & Weitham, 2010, p. 363)

Beavers, Levin & Weitham (2010, p. 363) observe that locative phrases are understood as goals precisely in those contexts that allow a reader or hearer to infer that a goal interpretation is intended. Thus a goal interpretation is available if John is standing just outside the room in (49a) and if Kim is standing next to the bed in (49b).

This observation can be taken to indicate that the alternation is possible when the distance between the location and the theme entity is very tiny. Note that in the case of 'change verb' resultatives, since the verb meaning entails a change, the distance between the verbal event and the change of state is nil. So a clear parallel can be drawn here.

But this is not the whole story. If what counts is the entailed change alone, this will predict that all change verbs should be able to exhibit the *in/into* alternation. But this is clearly not the case. Thus *fall* in *fall into a coma* may be regarded as entailing a metaphorical downward movement, so that it should be possible for *into* to alternate with *in*. But not a single instance of *fall in a coma* has been found either in the BNC or in the WB, as summarized in Table 12.26.

Table 12.26 *Fall into a coma* vs. *fall in a coma*

|     | fall into a coma | fall in a coma |
|-----|------------------|----------------|
| BNC | 7                | 0              |
| WB  | 22               | 0              |

- (50) Finally, a shopkeeper dialed 999 as he fell *into a coma* by the road. (BNC)

What is it that differentiates the *into* in *into pieces* from the *into* in *into a coma*?

Recall in this connection that *into pieces* may be modified by adjectives.

- (51) a. Cut potatoes *into equal-sized pieces* to ensure even cooking.  
 b. Chop the fennel *into small pieces* and flake the smoked trout.  
 (both from BNC)

Significantly, *in pieces* as in (45) may also undergo adjectival modification.

- (52) a. Add the cooked pork, cut *in small pieces* to the chicken livers in the blender.  
 b. Put in a fireproof dish eight carrots cut *in round pieces*, about half an inch thick.  
 (both from BNC)

This strongly indicates that *in pieces* pertains to a change in appearance due to decomposition, in exactly the same way as *into pieces*.

It seems, therefore, that the *in/into* alternation is possible when (1) the verbal event entails a change, and (2) the resulting object is referential. This characterization not only distinguishes *into pieces* from cases like *into a coma*, but also predicts that an *in/into* alternation should be possible even apart from examples like (44).

This prediction is in fact borne out. In both the BNC and the WB, both *into a smile* and *in a smile* are available for a certain class of verbs.

- (53) a. Her lips curved *into a small smile*.  
 b. Her lips curved suddenly *in an unpleasant smile*.
- (54) a. His mouth twisted *into a devastating smile*.  
 b. His mouth twisted *in a derisive smile*. (all from BNC)

The set of verbs participating in this alternation in the two corpora is summarized in Tables 12.27 and 12.28.

**Table 12.27** BNC counts of ‘V into a smile’ and ‘V in a smile’

|         | _____ into a smile | _____ in a smile |
|---------|--------------------|------------------|
| curve   | 21                 | 19               |
| twist   | 16                 | 12               |
| crease  | 15                 | 3                |
| curl    | 9                  | 3                |
| stretch | 4                  | 3                |
| crack   | 2                  | 1                |
| crinkle | 2                  | 2                |
| twitch  | 2                  | 1                |
| purse   | 1                  | 1                |

**Table 12.28** WB counts of ‘V into a smile’ and ‘V in a smile’

|        | _____ into a smile | _____ in a smile |
|--------|--------------------|------------------|
| break  | 19                 | 1                |
| crease | 2                  | 2                |
| spread | 1                  | 1                |
| twist  | 1                  | 1                |

Note that all the verbs listed in these tables somehow specify how one’s lips or mouth is moved to form a smile. Here a smile is intended to be a certain configuration of one’s mouth or lips, and therefore the forming of a smile consists in exactly those specified movements of one’s lips or mouth. From here it is a short step to realizing that one does not curve one’s mouth and then a smile is formed. Rather, when



one's mouth is curved, one is already smiling.<sup>99</sup> This is exactly parallel to the case of *cut – into pieces*, in that the verbal event (the lips' curving) entails a change of state (forming a smile). At the same time, the resulting object, i.e. a smile on one's face, can be said to be referential. So both of the conditions noted above are satisfied.

To sum, the *into* result phrase may alternate with the *in* result phrase, parallel to *into*- and *in*-PPs in the spatial sense. This is still another indication that *into* is *into*, after all.

## 12.6 Conclusion

This chapter has revealed that the choice between *to* result phrases and *into* result phrases is a reflection of how the result is construed: *To* is used when the result is characterized in terms of reaching a goal on some abstract path, and *into* is used when the result is construed in terms of entering a container. Since *to* and *into* can be thus differentially characterized in terms of their image-schematic properties, we can safely say that *to* and *into* as part of result phrases are fundamentally the same as *to* and *into* as spatial prepositions, rather than being purely grammatical markers.<sup>100</sup> Thus the semantics of both *to* result phrases and *into*

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99. This is reminiscent of why resultatives with *open* and *shut* behave similarly to 'change verb' resultatives. Recall that the verb *swing* in itself does not entail the state of being open or shut, but when a door swings, it practically entails the state of being open or shut (Chapter 11). Similarly, the verb *curve* in itself does not entail a smile, but when one's mouth is curved, it practically entails a smile.

100. A reviewer comments as follows: "This is absolutely right and perhaps the conclusion overall is a bit underwhelming. In other words: Would anyone want to deny these obvious observations?"

I do not think this is an obvious observation. First, there is no guarantee that various senses of *to* and *into* are fundamentally the same as *to* and *into* as spatial prepositions. Thus one cannot say confidently that the infinitival marker *to* is the same as the spatial preposition *to* in the face of sentences like *He was surprised to hear the news*, where the *to* cannot be straightforwardly regarded as expressing a goal.

Second, as far as I can see, no previous account explicitly demonstrates that this is the case. On the contrary, a number of scholars avoid delving into the fundamental nature of *to* and *into* result phrases. Thus Goldberg (1995, p. 192) and Goldberg & Jackendoff (2004, p. 561) practically treat the contrast in (i) as a matter of "conventionalization."

- (i) a. She cried herself to sleep.  
 b. ?She cried herself asleep.

If "*To is to, into is into*" is as obvious as this reviewer claims, how come these previous studies do not attempt an explanation along those lines?

result phrases turn out to be highly motivated by the inherent meanings of the two prepositions in question.



## Adjectival result phrases vs. prepositional result phrases

### 13.0 Introduction<sup>101</sup>

The last chapter has provided an answer to the question: How to choose between *to*-PPs and *into*-PPs? It is now time to address the other question: How to choose between APs and PPs? Apparently, the choice of result phrases seems very arbitrary. Sometimes only the adjectival result phrase is allowed as in (1a), sometimes only the prepositional result phrase is allowed as in (1b), and sometimes both are allowed as in (1c).

- (1) a. He wiped his plate {*clean*/\**to cleanliness*}.
- b. He sang the baby {\**asleep*/*to sleep*}.
- c. Bob shot him {*dead*/*to death*}.

It will be shown that adjectival result phrases and prepositional result phrases are systematically different, and that the paradigm as presented in (1) is far from arbitrary.

### 13.1 Previous analyses

#### 13.1.1 A matter of conventionalization?

Just like the distinction between *to*-PPs and *into*-PPs, the distinction between adjectival result phrases and prepositional result phrases has been rarely, if ever, seriously investigated. Most of the previous studies on resultatives simply observe that both options are available (Rivière 1982, Simpson 1983, Jackendoff 1990, Carrier & Randall 1992, Levin & Rappaport Hovav 1995, Goldberg 1995, Goldberg & Jackendoff 2004, among many others). A couple of studies note that the two categories of result phrases are not always interchangeable, but do not go

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<sup>101</sup> An earlier version of this chapter was presented at a symposium at the 33rd Annual Meeting of the English Linguistic Society of Japan (Iwata 2015b). I'd like to thank the audience for their comments.

much further than that. Thus while Verspoor (1997) observes that adjectival and prepositional result phrases cannot always be substituted for each other, citing the data in (2)–(6), she takes these facts as evidence for the conventionalization of resultatives: “Thus some mechanism for encoding conventional constraints is needed” (Verspoor, 1997, p. 120).

- (2) a. He laughed himself to death.  
b. \*He laughed himself dead.
- (3) a. He laughed himself to sleep.  
b. \*He laughed himself {sleepy/asleep}.
- (4) a. He laughed himself out of a job.  
b. \*He laughed himself {jobless/unemployed}.
- (5) a. He danced himself to fame.  
b. \*He danced himself famous.
- (6) a. He danced his feet sore.  
b. \*He danced his feet to soreness. (Verspoor, 1997, p. 119)

Boas (2003), repeating Verspoor’s (1997) data, concurs, saying that “the data thus suggest that a verb’s ability to occur with resultative constructions is a matter of conventionalization.” (Boas, 2003, p. 126)

But to say that all these differences are simply a matter of conventionalization is not very revealing. After all, this begs the question why the (a) versions should be conventionalized but the (b) versions should not, and not the other way around.

Now a “preemptive account” of the AP/PP contrast is hinted at in Goldberg & Jackendoff (2004, p. 561) and Robenalt & Goldberg (2015, p. 498). Thus Robenalt & Goldberg (2015) suggest that one explanation of the contrast in (7) is that (7a) is statistically preempted (=blocked) by (7b).

- (7) a. ?She cried herself asleep.  
b. She cried herself to sleep. (Robenalt & Goldberg, 2015, p. 498)

But this preemptive account is no better than the “conventionalization” account, in that it again begs the question why *to sleep* should be more frequent than *asleep* as a result phrase in the first place, and not the other way around. In the worst scenario, this account might end up saying that this is a purely arbitrary fact.<sup>102</sup>

102. Why *cry oneself to sleep*, not \**cry oneself asleep*, is acceptable will be accounted for in 14.2.2.

## 13.1.2 Tsuzuki (2003a, 2003b)

In this connection, a very interesting proposal is made by Tsuzuki (2003a, 2003b). Tsuzuki (2003a, 2003b) carefully examines the data reported in Boas (2000), which are drawn from the BNC, and notes that the choice between AP and PP is governed by the following three principles. The first principle concerns morphological complexity: When an adjectival result phrase is properly included in its prepositional counterpart, then the adjectival result phrase, which is morphologically simpler, is chosen over the prepositional result phrase, which is morphologically more complex. Thus in (8), where the AP is consistently chosen over the PP, *clean* is properly included in *to [clean]-liness*, and *smooth* in *to [smooth]-ness*.

- (8) a. Hargreave wiped his plate {*clean*/\**to cleanliness*} with a piece of garlic bread.  
 b. ... but their comparative softness made it a simple matter to rub them {*smooth*/\**to smoothness*} and set them en cabochon. (Boas, 2003, p. 128)

Tsuzuki argues that this is a kind of blocking effect, which is well-known in studies on word formation (See Aronoff (1976, p. 43) and Plag (2003, pp. 63–68)). When a lexical item already exists for expressing a particular meaning (e.g. *clean*), it blocks the formation of a more complex form which is purported to express basically the same meaning (e.g. *to cleanliness*), so the argument goes.

Second, when such a proper inclusion relation does not hold between AP and PP, then the PP is chosen. Thus in (9), where the PP is consistently chosen over the AP, *exhausted* is not properly included in *to exhaustion*, and *dusty* is not in *to dust*.

- (9) a. ... we basically danced ourselves {*to exhaustion*/\**exhausted*}.  
 b. ... we danced ourselves {*to dust*/\**dusty*}. (Tsuzuki, 2003a, pp. 110–111)

To put it differently, in the absence of a blocking effect, the choice of the PP is “unmarked”: Unlike the AP, which basically expresses a state, the *to*-PP is fundamentally a path expression. According to Tsuzuki (2003a, 2003b), resultatives express bringing about a change of state, so PPs, which express a process leading up to a new state, are more compatible with the semantics of resultatives than APs, which denote states.

Now the pair *dead*/*to death* is rather exceptional, in that both adjectival and prepositional result phrases are available.

- (10) a. Defender Andres Escobar was *shot dead* shortly after scoring an own goal in the 2–1 defeat by the United States in USA 94 ...  
 b. ... and a whore holding up the severed head of a blameless man who refused to sleep with her, and a man bound and slowly *shot to death* with arrows. (Tsuzuki, 2003a, p. 124)

And here comes the third principle: When both AP and PP are available, the PP is used where the process leading up to a result state is emphasized, but the AP is used where the stativity of the result state is salient. In support of this principle, Tsuzuki (2003a, 2003b) observes that when *shoot – dead* is used, the death is caused instantaneously by a single shot, as in (10a), while with *shoot – to death*, it takes some time before the man finally becomes dead, as a result of a number of arrows, as in (10b).<sup>103</sup>

Tsuzuki's account is summarized in (11).

- (11) Tsuzuki's account
- a. When an adjectival result phrase is properly included in its prepositional counterpart, then the adjectival result phrase is chosen.
  - b. When such a proper inclusion relation does not hold between AP and PP, then the PP is chosen.
  - c. When both AP and PP are available, the PP is used where the process leading up to a result state is emphasized, but the AP is used where the stativity of the result state is salient.

According to Tsuzuki, then, how to choose between AP and PP is determined by the complex interplay between morphological complexity, the “unmarked” status of the PP, and the notional distinction between “state-oriented” and “process-oriented.”

### 13.1.3 Problems with Tsuzuki (2003a, 2003b)

While very interesting, Tsuzuki's proposal has a number of serious problems. First and foremost, her proposal is built on two conflicting assumptions. The second and third principles in (11b) and (11c) clearly assume that adjectival result phrases and prepositional result phrases are semantically distinct, in that the former denote a state and the latter a process leading up to a new state.

For the blocking effect to be operative, however, the two forms should be identical in meaning (e.g. *thief – \*stealer*). That is, the first principle in (11a) is tantamount to claiming that adjectival result phrases and prepositional result phrases are synonymous.

103. Essentially the same observation is made by Goldberg & Jackendoff (2004). Goldberg & Jackendoff (2004) observe that with *shoot, dead* is used when the death is instantaneous, as in (ia), but *to death* is preferred when more than one shot is used, as in (ib).

- (i) a. Firing a single bullet to the heart, Billy Bob shot him {dead/??to death}.
- b. Riddling him with 16 bullets, Billy Bob shot him {??dead/to death}.

(Goldberg & Jackendoff, 2004, p. 561)

So Tsuzuki (2003a, 2003b) is assuming that adjectival result phrases and prepositional result phrases are semantically distinct enough for the latter to be preferred over the former as “unmarked,” but are similar enough for the “blocking” to take effect. Clearly, however, the two assumptions do not stand together.

The second problem concerns the putative “unmarked” status of prepositional result phrases. It does not seem plausible to suppose that PPs are more appropriate than APs as result phrases. Rather, the ‘PP only’ cases which Tsuzuki (2003a) attempts to account for in terms of the “unmarked” status of PPs can be accounted for in some other way.

Thus both (12a) and (12b) are clearly hyperbolic and/or metaphorical: We do not literally become dust as a result of dancing or extinct as a result of running.

- (12) a. ... we danced ourselves {*to dust*/\**dusty*}.  
 b. Congratulations on your golf score, but we don't have to run ourselves {*into extinction*/\**extinct*}. (Tsuzuki, 2003a, p. 111)

So these examples are not ideal to serve as evidence for the “unmarked” status of PPs.

Furthermore, even with a literal interpretation, *dusty* is problematic as a result phrase. (13a) and (13b) are clearly neither hyperbolic nor metaphorical, but the result phrase *to dust* cannot be replaced with *dusty*, as shown in (14).

- (13) a. Anyway, the trees were all *burnt to dust*.  
 b. Those buried with a daughter of the Roman general Stilicho around A.D. 400 are said to have *fallen instantly to dust* when her tomb was opened in 1544. (both from BNC)
- (14) a. \*Anyway, the trees were all *burnt dusty*.  
 b. \*Those buried with a daughter of the Roman general Stilicho around A.D. 400 are said to have *fallen instantly dusty* when her tomb was opened in 1544.

Notice that the adjective *dusty* is semantically anomalous here. According to the COBUILD dictionary, the definition of *dusty* goes as follows: “If places, roads, or other things outside are dusty, they are *covered with tiny bits of earth or sand*, usually because it has not rained for a long time.” That is, *dusty* means “being covered with dust,” not “being dust.” But the latter meaning is exactly what is expected of the result phrase in (14a) and (14b): The trees and the buried people are said to have become “dust.”

Thus *to dust*, rather than *dusty*, is chosen as a result phrase simply because *dusty* is not semantically appropriate. That is, *to dust* is chosen not because it is an unmarked form, but because it is the only semantically viable option available.



Third, given that the choice between AP and PP is so severely constrained by the “unmarked” status of PPs, as Tsuzuki (2003a, 2003b) claims, this begs the question of why both *dead* and *to death* are “exceptionally” available at all.

## 13.2 The difference between an AP and a *to*-PP

### 13.2.1 Aspectual integration of the verbal event and the change of state

Despite the number of serious problems noted above, there seems to be one thing in Tsuzuki’s account that promises to lead us to the correct solution. That is, Tsuzuki (2003a, 2003b) indeed seems to be right in observing that adjectival result phrases denote states, as opposed to prepositional result phrases, which denote processes leading up to new states.<sup>104</sup> Based on this observation, let us consider how the two types of result phrases depict a change of state.

Let us start with adjectival result phrases. Consider (15).

(15) He hammered the metal *flat*.

Since one normally hammers metal in order to make it flat, the hammering stops when the objective is achieved, i.e. when the metal becomes flat. Accordingly, the verbal event and the change of state may be described as in Figure 13.1.

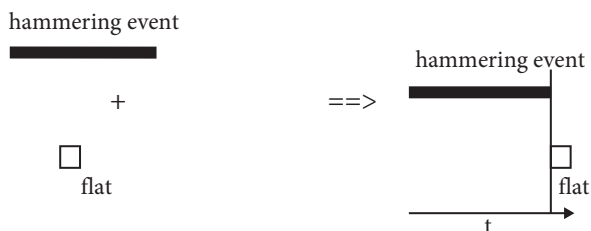


Figure 13.1 *Hammer – flat*

The hammering event, which is durative, is expressed in a bold line. The state of being flat, which comes to obtain immediately after the hammering event is over, is expressed as a small box placed at the end of the verbal event.

But this does not mean that the state denoted by the adjectival result phrase necessarily comes to obtain when the verbal activity is over. We have already seen in Chapter 6 that with goal-oriented activities like hammering the metal the result phrase marks an endpoint of the verbal activity, but with non-goal-oriented activities this is not the case. Recall the discussion of *drink oneself silly* (6.4). One

104. Tsuzuki’s observation is inspired by Morita (1998) and Kusayama & Miyata (2000).

normally continues to drink even after one becomes “silly”; the drinking activity and the result state of being silly can go on together. Hence the atelic reading, as evidenced by a *for*-PP in (16).

(16) He drank himself silly for two hours.

Thus the situation described by (16) can be illustrated as in Figure 13.2: As a result of drinking alcohol, the subject entity becomes silly at  $t_1$ . But the state of being silly goes on concurrently with the drinking activity for some time including  $t_2$ . Then the drinking finally ends at  $t_3$ , but since the effect of alcohol does not vanish instantly, the state of being silly lingers for some more time.

drinking event

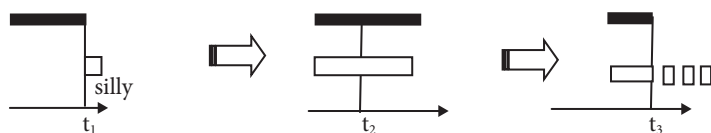


Figure 13.2 *He drank himself silly*

Also, recall the discussion of (17) in Chapter 7.

(17) He laughed himself silly.

Like *drink oneself silly*, the state of being silly goes on for some time, concurrently with the laughing activity. But with *laugh oneself silly*, the state of being silly (i.e. that of being “unable to think or behave sensibly”) holds only when the laughing activity is going on. Once the person stops laughing, he will soon return to his normal condition, i.e. not being silly. In other words, the result state holds only concurrently with the laughing activity, as described in Figure 13.3.

laughing event

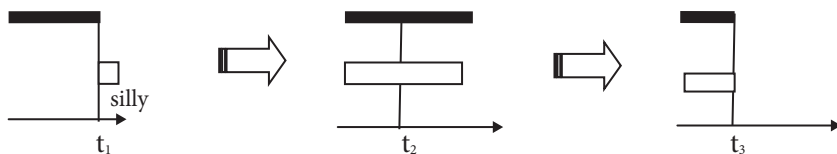


Figure 13.3 *He laughed himself silly*

Thus the state denoted by the adjectival result phrase does not necessarily come to obtain when the verbal activity is over. Rather, what is crucial seems to be that the result state comes to obtain *immediately after the verbal force takes effect* (wiping force for the state of being clean; alcohol for the state of being silly, etc.). Whether

the verbal activity still goes on even after a new state has obtained is determined by our world knowledge.

Let us next turn to prepositional result phrases. Consider (18).

- (18) In London today, the coroner said singer Amy Winehouse *drank herself to death*. (COCA)

Significantly, note that some time must have elapsed between the drinking event and the death. One does not normally die immediately after one takes in the last drop of alcohol. Accordingly, *drink oneself to death* can be described as in Figure 13.4.

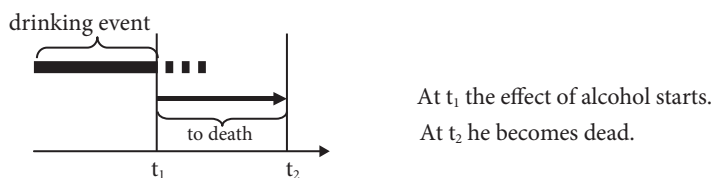
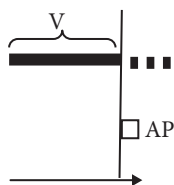


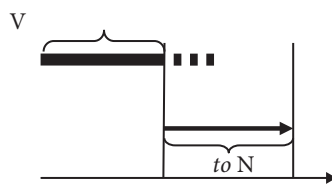
Figure 13.4 *Drink oneself to death*

A person starts drinking alcohol, and eventually the consumed alcohol takes effect at  $t_1$ . Then that person finally dies at  $t_2$ .

All this indicates a clear contrast between adjectival result phrases and *to* result phrases. With adjectival result phrases, the named state begins to obtain when the verbal force takes effect, as shown in Figure 13.5 (a). With *to* result phrases, by contrast, it is the process leading up to a new state that begins when the verbal force takes effect, as shown in Figure 13.5 (b).<sup>105</sup>



(a) AP resultatives



(b) *to*-PP resultatives

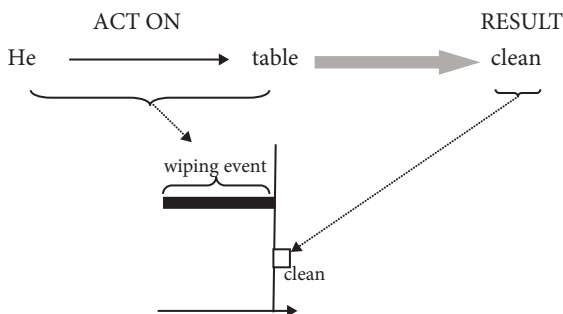
105. In COCA the following instances of *drink oneself dead* are found:

- (i) a. If she's been trying to *drink herself dead* for sixty-five years with no luck, I wouldn't start worrying about her now.  
 b. Why do you want to *drink yourself dead*, Mrs. O'Dougal? (both from COCA)

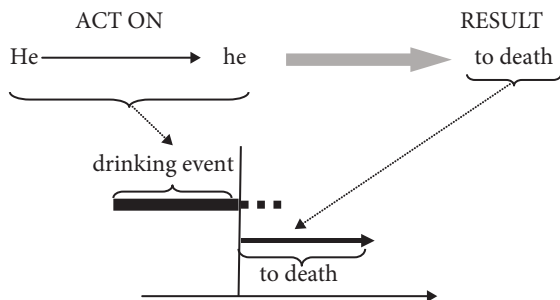
But in contrast to the 107 instances of *drink oneself to death*, only these two instances of *drink oneself dead* are attested in COCA. Perhaps these two are real exceptions.

**Figure 13.5** Two ways of aspectual integration

Remarkably, this difference between AP and *to*-PP turns out to be very natural when seen from the viewpoint of the force-recipient account. Thus in the case of *wipe – clean*, the causal chain and the aspectually integrated structure are aligned as in Figure 13.6. The ACT ON component and the RESULT component in the causal chain correspond to the wiping event and the state of being clean, respectively.

**Figure 13.6** Causal chain and aspectual integration for *wipe – clean*

On the other hand, in the case of *drink oneself to death*, the causal chain and the aspectually integrated structure are aligned as in Figure 13.7.

**Figure 13.7** Causal chain and aspectual integration for *drink oneself to death*

The fundamental insight of the force-recipient account is that as a result of the verbal force being exerted, a result ensues in the recipient of the verbal force. The two figures clearly indicate that in both cases the result follows from the force exerted. When the result is coded by an AP, this means that a new state results immediately after the verbal force takes effect. If, on the other hand, the result is coded by a *to*-PP, this means that a process leading up to a new state sets in.

Thus when the categorical distinction between adjectives and prepositions is coupled with our force-recipient account, the observed difference between adjectival result phrases and *to*-prepositional result phrases automatically follows.

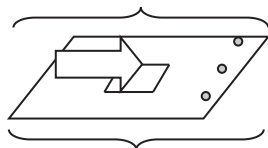
## 13.2.2 'AP only' cases

Given this differential characterization of resultatives with adjectival result phrases and those with *to*-prepositional result phrases, let us re-examine the data. Recall that some resultatives are accompanied by adjectival result phrases alone.

- (19) Hargreave wiped his plate {*clean*/\**to cleanliness*} with a piece of garlic bread.  
(Boas, 2003, p. 128)

We simply do not first wipe a plate and then wait for the plate to become clean some time later. Rather, the state of being clean immediately follows when the 'WIPE-AS-RUB' force is applied and takes effect, as depicted in Figure 13.8.

He does a 'WIPE-AS-PUSH' action on the crumbs



He does a 'WIPE-AS-RUB' action on the table

Figure 13.8 *Wipe the table clean*

This is simply a case of physics: If a surface is rubbed, something on the surface will be removed, unless it stubbornly sticks to the position.<sup>106</sup> In other words, the state of being clean is an automatic consequence when the force being applied takes effect, i.e. whatever substance (such as crumbs) on the plate's surface will be moved. Thus it is quite natural that only the adjectival result phrase is allowed.

Basically the same can be said of other 'AP only' cases. Thus in (20a) we do not wait for emeralds to become smooth some time after rubbing them. Nor do we expect to become silly some time after dancing in (20b). Rather, the state of being smooth or being silly immediately follows when the verbal force takes effect.

- (20) a. ... but their (=emeralds') comparative softness made it a simple matter to rub them {*smooth*/\**to smoothness*} and set them en cabochon.  
(Boas, 2003, p. 128)
- b. It's true that we didn't get much sleep the night before, and we had danced ourselves {*silly*/\**to silliness*}. (Boas, 2003, p. 127)

It thus seems that in all these instances only adjectival result phrases are allowed precisely because the result state immediately follows when the verbal force takes effect.

106. See footnote 33 of Chapter 3.

### 13.2.3 ‘To-PP only’ cases

By contrast, a careful examination of the ‘to-PP only’ cases suggests that a new state does not obtain immediately. This is clearly seen by looking at examples involving *to death*. Like *drink oneself to death*, one does not die immediately after taking the last bite in (21).

- (21) a. It has long been known that Presley effectively *ate himself to death*, but only now are full details emerging of his gargantuan binges.  
 b. Medics warned he was *gorging himself to death* on fry-ups, kebabs and chips. (both from WB)

Rather, because of illness caused by overeating and overdrinking, one will eventually die.

Similarly, one normally does not die as a direct result of smoking *per se*, but because of the conditions induced by smoking, e.g. lung cancer.

- (22) ONE in 12 British children will *smoke themselves to death* by the time they reach their parents’ age. (WB)

Even when a toxic substance is responsible for one’s death, one does not die immediately upon intake. Rather, time is usually required before the death.

- (23) a. One of the boys at school knew a kid whose father worked with a man whose cousin died of rabies after being bitten by a rat from Bradford Beck. They went for the throat or the genitals, and the smallest scratch from their long black claws could *poison a man to death*.  
 b. It shows the same throw-away attitude to human life which animates abortionism and the practice of *sedating* new-born handicapped children *to death*. (both from BNC)

It is possible to cite still further instances which illustrate that some time must elapse before death occurs. Thus (24a) is about anorexics, who refuse to eat enough food and become thinner and thinner. Naturally, the starving goes on for a long period of time before they finally die. (24b) is about what should not be done in gardening. Water is necessary for the healthy growth of plants, but giving too much water will cause the plants to eventually die.

- (24) a. Ten to 15 percent of anorexic youth literally *starve themselves to death*.  
 b. SELECT AND USE YOUR FERTILISER CAREFULLY AND DON’T WATER YOUR PLANTS TO DEATH. Plants have three basic requirements to ensure healthy growth – sunlight, water and nutrients from the soil. (both from WB)

In short, *to result* phrases are appropriate for these cases precisely because the death does not occur instantly.

### 13.2.4 *Shoot – dead vs. shoot – to death*

Thus the choice between AP and PP is a reflection of whether a new state comes to obtain immediately after the verbal force takes effect or not. Accordingly, the ‘AP-only’ cases are those in which the state necessarily results immediately after the verbal force takes effect (e.g. *wipe – clean*), and the ‘PP-only’ cases those in which some time must elapse before the state comes to obtain (e.g. *drink oneself to death*).

Clearly, this difference comes from a complex interplay between the verbal activity and the result state. Purely physical states like being clean may be caused to obtain rather mechanically. On the other hand, death may or may not be caused instantaneously. We have seen in 13.2.3 cases in which death does not result immediately after the verbal force is exerted:

- (25) a. It has long been known that Presley effectively *ate himself to death*, but only now are full details emerging of his gargantuan binges.  
 b. ONE in 12 British children will *smoke themselves to death* by the time they reach their parents’ age. (both from WB)

Eating or smoking first causes one to lose one’s health, which will lead to one’s death. In a sense, the verbal force is not purely physical in these cases.

But death may be caused by exerting physical force as well. Thus by shooting someone with a gun, one can kill that person instantly, just like the physical change of breaking a glass is caused instantly. But if one simply exerts a strong physical force onto someone without using a gun, normally it takes some time before the person finally dies. This is why both *dead* and *to death* are allowed as in (26).

- (26) a. Defender Andres Escobar was *shot dead* shortly after scoring an own goal in the 2–1 defeat by the United States in USA 94 ...  
 b. ... and a whore holding up the severed head of a blameless man who refused to sleep with her, and a man bound and slowly *shot to death* with arrows. (Tsuzuki, 2003a, p. 124)

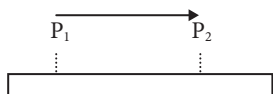
Thus the fact that both *dead* and *to death* are “exceptionally” available as result phrases is due to the fact that death may be caused instantaneously or protractedly when physical forces are exerted.<sup>107</sup>

107. No doubt this is due in large part to the invention of guns, after which it has become possible to cause death instantaneously as well as protractedly. There are of course other ways to

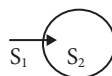
### 13.3 Differences between APs, *to*-PPs, and *into*-PPs

#### 13.3.1 Into-PPs

It is now time to address *into* result phrases. In the last chapter, *into* result phrases are distinguished from *to* result phrases in that the former describe a change in terms of entering a container, but the latter in terms of moving to a point on some scale (i.e. abstract path), as summarized in Figure 13.9.



(a) moving to a point on some scale (*to*-PP)



(b) entering a container (*into*-PP)

**Figure 13.9** Two types of change

The question that arises in the present context is how the entrance into a container denoted by *into*-PPs is integrated with the verbal activity.

In this connection, note that *drink* with fake reflexives may be accompanied by all three types of result phrases: an AP (e.g. *silly*), an *into*-PP (e.g. *into a stupor*), and a *to*-PP (e.g. *to death*).

- (27) a. He drank himself silly.  
 b. He drank himself into a stupor.  
 c. He drank himself to death.

So this is a good starting point to explore how the change is described when an *into* result phrase is chosen.

Recall that *drink* with fake reflexives is to be characterized against several domains (Chapter 6), one of which is the inebriation domain.

Inebriation domain:

When one drinks alcohol, one first becomes cheerful ('enjoyment' stage); then one begins to lose control over what one says or does ('behavioral deterioration' stage) and/or one cannot see or hear properly ('bodily function deterioration' stage); finally one falls asleep ('loss of consciousness' stage).

Because the alcohol serves as a verbal force, the physiological effect of alcohol counts as the direct result of drinking. So when the effects of alcohol are described, the result phrases are predominantly APs.

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effect slow or rapid death with the self-same instrument, but it is safe to say that the method of shooting is probably the most emblematic.



- (28) a. The Alberta liquor laws laid down that no minors might drink, but it was not difficult to obtain beer or liquor, and he had often *drunk* himself *silly*. (BNC)
- b. ... and would either work their way up or they *drink* themselves *stupid* or they get mixed up with someone or ... (BNC)
- c. He was a hell-raiser. He'd fight and drink a lot of white whiskey. He would *drink* himself *dangerous*. (COCA)
- (29) a. That's the reason I have brought you to this quiet garden, not to some tavern where I would *drink* myself *senseless*. (BNC)
- b. He'd locked himself in their room and *drunk* himself *insensible*. (BNC)
- c. It was of no health benefit for dealers to have delivered fresh orange juice and cordon bleu sandwiches midday if they *drank* themselves *blind* on champagne, quality wines and designer beers in the evenings. (BNC)
- d. And my father's way of handling that was to *drink* himself *numb*. (COCA)

However, *into*-PPs are also possible.

- (30) a. Last night, Waldegrave *drank* himself *into a stupor*. (BNC)
- b. I *drank* myself *into oblivion*. (BNC)
- c. ... when he *drank* himself *into a coma* or broke both legs while mixing martinis on skis. (COCA)

This suggests that in these examples the *into*-PPs describe the results that ensue immediately after the verbal force takes effect, like adjectival result phrases.

Let us move on to the Alcoholism domain.

Alcoholism domain:

People who cannot stop drinking large quantities of alcohol spend much money on alcohol; they do poorly on their jobs so they often get fired; they gather together at an anonymous meeting to overcome alcoholism.

This domain concerns physical and/or social consequences of alcoholism, rather than the physiological effects of drinking alcohol. There is a distance, both temporal and causal, between the drinking activity and the named result states. Naturally, *to*-PPs are appropriate.

- (31) We talk casually of someone drowning in work or *drinking* themselves *to death* long before a terminal illness shows itself or their suicidal drive is detected. (BNC)

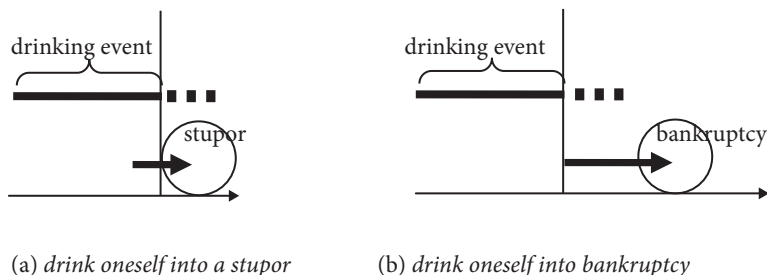
As amply demonstrated by now, one does not die immediately after drinking alcohol. Instead, some significant time must elapse before one finally dies.

Remarkably, such a distance between the verbal activity and the result state is allowed even with *into* result phrases. Consider the following.

- (32) a. Archy had acquired a few additional slaves from a farmer in nearby Shannon who had *drunk* himself *into bankruptcy*.  
 b. But he was an alcoholic of cosmic dimensions and *drunk* himself *into such chronic debt* that he started selling off the rights to his compositions.  
 c. Once a director of glitzy commercial successes, he *drunk* himself *into failure* after Bridie left him. (all from COCA)

Clearly, one does not lose much money immediately after drinking alcohol. Rather, a significant amount of time must pass before one becomes bankrupt.

Thus, *into* result phrases may describe result states that come to obtain immediately after the verbal force takes effect, like adjectival result phrases, as shown in Figure 13.10 (a). But they may also describe result states that take some time to obtain, exactly like *to* result phrases, as shown in Figure 13.10 (b).



**Figure 13.10** Two ways of aspectual integration for *into*-PPs

Conceivably, this is because the change described by *into*-PPs is compatible with either. When used in the spatial sense, *into*-PPs may describe both a short-distance path as in (33) and a long-distance path as in (34).

- (33) Martha *put* a fifty-pound note *into the pocket* of an apron you subsequently wore, thinking it to be yours. (BNC)  
 (34) a. Tommy was in trouble again. He'd *hit* his ball *into the creek* and he was taking a drop.  
 b. He *kicked* a pebble *into the sea* in exasperation. (both from BNC)

(30) and (32) may well be regarded as non-spatial counterparts of cases like (33) and those like (34), respectively.<sup>108</sup>

<sup>108</sup> The contrast between (33) and (34) in turn probably comes from the contrast between continuous causation and onset causation (Shibatani 1976, Talmy 2000a, among others).

Thus *into*-PPs may express entry into a result state when the old state and the new state correspond to the verbal process stage and the state named by the result phrase as in Figure 13.10 (a). But this is not possible with *to*-PPs: A goal can be reached only after traversing a path of some length, and this path can find its place in the RESULT phase alone as in Figure 13.11 (b); the configuration in Figure 13.11 (a) is ruled out because a process along the abstract path cannot start before the verbal force takes effect.



(a) \**drink oneself to death* (immediate death)

(b) *drink oneself to death*

Figure 13.11 Limitation of *to*-PP aspectual integration

Thus the difference between *to* result phrases and *into* result phrases can be ascribed to the difference in their image-schematic structures. This once again confirms that *to* is *to*, and *into* is *into*.

### 13.3.2 Summary

We have now arrived at the distinction between the three types of result phrases: With adjectival result phrases, the state comes to obtain immediately after the verbal force takes effect; with *to* result phrases, the process leading up to the state starts when the verbal force takes effect; and with *into* result phrases, both options are available.

One thing that warrants mention here is that the interpretation in which the verbal activity and the result state are temporally/causally distant is not limited to *to*-PPs, or for that matter, to goal PP. Thus in the following, *out of* PPs clearly describe results that come to obtain after some considerable time has passed following the verbal force taking effect. After all, one does not lose one's job or get divorced immediately after one drinks alcohol.

- (35) a. He *drank himself out of a job*.  
 b. Well, I do. I was a cop, a detective. I *drank myself off the police force*.  
 c. Our problems were different. I had *drunk myself out of this marriage* ten years ago, but it didn't mean we weren't in love. (all from COCA)

Thus the categorical distinction between APs and PPs seems to be quite consistent throughout the whole range of resultatives.<sup>109</sup>

### 13.4 How the choice of result phrases is really to be accounted for

#### 13.4.1 Tsuzuki's (2003a, 2003b) proposal once again

Having established our alternative analysis, it is now time to look at Tsuzuki's (2003a, 2003b) account once again, which is summarized as in (36).

- (36) Tsuzuki's account
- a. When an adjectival result phrase is properly included in its prepositional counterpart, then the adjectival result phrase is chosen.
  - b. When such a proper inclusion relation does not hold between AP and PP, then the PP is chosen.
  - c. When both AP and PP are available, the PP is used where the process leading up to a result state is emphasized, but the AP is used where the stativity of the result state is salient.

As already pointed out in 13.1.3, the second principle, which assumes that prepositional result phrases are “unmarked,” is rather suspect. And our investigation has revealed that there is no reason to regard prepositional result phrases as being “unmarked.”

As for the first principle, it has been shown that the unacceptability of *\*wipe – to cleanliness* can be accounted for without any appeal to morphology. After all, we do not first wipe a plate and then wait for the plate to become clean some time later.

- (37) Hargreave wiped his plate {*clean/\*to cleanliness*} with a piece of garlic bread.

While the morphological complexity may well contribute to a clumsiness, it actually plays a very tiny, if any, role in deciding between AP and PP.

Only the third principle seems to be correct. But then, Tsuzuki's theory is no longer a “morphological blocking theory.”

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109. It goes without saying that the temporal/causal distance typically observed with *to* result phrases – or the instantaneous result state with adjectival result phrases for that matter – is not about the objective reality. Thus in *He drank himself to death* it could be ten years or more before he finally died, but in *He shot the bear to death* it may well be a matter of only a couple of minutes. Rather, the semantic distinction between adjectival result phrases and prepositional result phrases is a matter of construal.

### 13.4.2 Verspoor's (1997) data once again

Let us next consider how the data observed by Verspoor (1997) are to be handled. Consider (38).

- (38) a. He laughed himself to death.  
 b. \*He laughed himself dead. (Verspoor, 1997, p. 119)

Here a great degree is expressed hyperbolically. Hyperbole is based on the notion of scale, and scales are abstract paths, so the PP, rather than the AP, is chosen.

The answer to the contrast in (39) has also been given already (13.3.2).

- (39) a. He laughed himself out of a job.  
 b. \*He laughed himself jobless/unemployed. (Verspoor, 1997, p. 119)

It is simply impossible for one to lose one's job immediately after one laughs. Rather, there are several steps between one's laughing and one's losing the job. So the PP is chosen.

The following contrast is accounted for in the same way.

- (40) a. He danced himself to fame.  
 b. \*He danced himself famous. (Verspoor, 1997, p. 119)

One cannot become famous immediately after one dances. So the PP is the only option available.<sup>110</sup>

Finally, the contrast in (41) can be readily accounted for.

- (41) a. He danced his feet sore.  
 b. \*He danced his feet to soreness. (Verspoor, 1997, p. 119)

For becoming sore is a physiological change effected by dancing, and such physiological effects ensue immediately after the verbal activity. So this time only the AP is available.

Thus the apparently chaotic state presented by all these data, which both Verspoor (1997) and Boas (2003) take to be a matter of conventionalization, can be straightforwardly accounted for, given an adequate theory of how to distinguish between the three types of result phrases.

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110. The following contrast can be accounted for similarly.

- (i) a. He laughed himself to sleep.  
 b. \*He laughed himself {sleepy/asleep}. (Verspoor, 1997, p. 119)

As will be argued in the next chapter, it is practically impossible to cause someone to become asleep. All one can do is to relax the person and to wait for that person to eventually fall asleep. So the PP is the only acceptable option.

### 13.5 Implications for the force-recipient account

Recall that in Chapter 9 we revised our force-recipient account as in Figure 13.12.

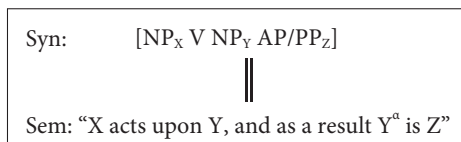


Figure 13.12 Transitive resultative construction (version 2)

But until Chapter 9 only the ACT ON component of the causal chain had been discussed; the RESULT component had been left out.

Now that the distinction between adjectival result phrases and prepositional result phrases has been clarified, we can complete our causal chain. The distinction between the two types of result phrases can be best illustrated with the following figures (again!).

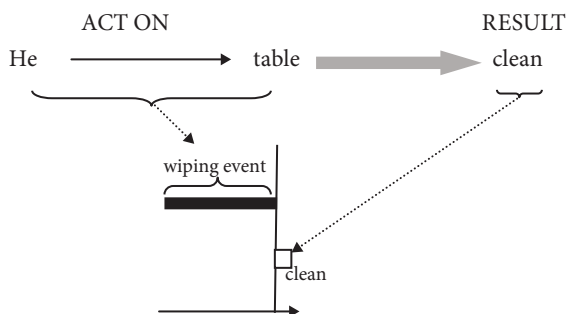


Figure 13.13 Causal chain and aspectual integration for *wipe - clean*

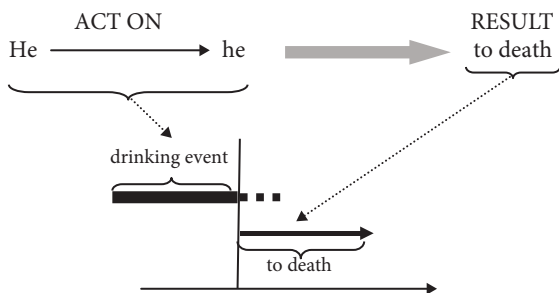


Figure 13.14 Causal chain and aspectual integration for *drink oneself to death*

As these figures show, Transitive resultatives with adjectival result phrases and those with prepositional result phrases are to be differentiated semantically: The adjectival result phrase denotes a state, and the prepositional result phrase an

abstract path to a goal. This distinction needs to be incorporated into our force-recipient account.

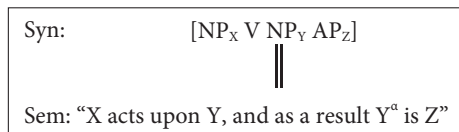
Actually, nothing needs to be changed in the case of resultatives with adjectival result phrases. Thus (42a) is paraphrased with (42b).

- (42) a. He wiped the table clean.  
 b. He did a 'WIPE-AS-RUB' action upon the table, and as a result the entity being thus acted upon was clean.

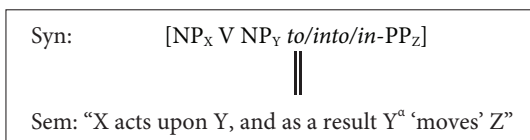
With prepositional result phrases, however, the RESULT component needs to be modified. Thus (43a) is paraphrased as in (43b).

- (43) a. He drank himself to death.  
 b. He did a 'DRINK-AS-POUR ALCOHOL IN' action upon himself, and as a result the entity being thus acted upon 'moved' to death.

Accordingly, our force-recipient account of Transitive resultatives is to be revised as follows. Transitive resultatives with adjectival result phrases are to be handled by means of the construction in Figure 13.15, which is unchanged from the previous version. In addition, we need the construction in Figure 13.16 to accommodate Transitive resultatives with prepositional result phrases.

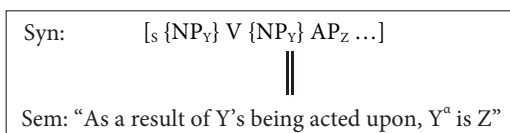


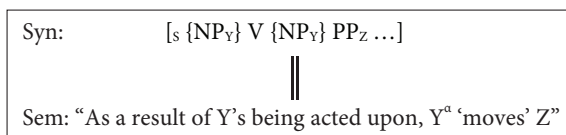
**Figure 13.15** Transitive resultative construction with adjectival result phrases (version 3)



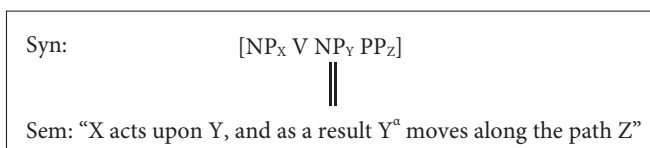
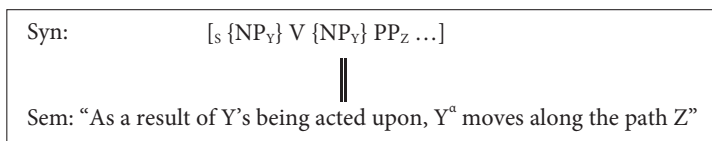
**Figure 13.16** Transitive resultative construction with prepositional result phrases (version 3)

In this connection, recall that we allow for a result phrase-addition analysis as well. So we need to posit separate result phrase constructions as shown in Figure 13.17 and Figure 13.18.



**Figure 13.17** Adjectival result phrase construction**Figure 13.18** Prepositional result phrase construction

As for resultative caused-motion sentences, nothing is changed, as only the path PP is available as a result phrase. So we need the argument structure construction in Figure 13.19 and the path result phrase construction in Figure 13.20.

**Figure 13.19** Resultative caused-motion construction (version 2)**Figure 13.20** A path result phrase construction

Thus Figures 13.15 to 13.20 together constitute our force-recipient account of English Transitive resultatives.

## 13.6 Conclusion

This chapter has revealed that the choice between adjectival result phrases and prepositional result phrases is far from arbitrary. On the contrary, the choice is determined by the notional difference between adjectives, which denote states, and prepositions, which denote processes. When this notional difference is combined with the force-recipient account, it follows that adjectival result phrases are chosen when a new state results immediately after the verbal force takes effect, but prepositional result phrases are chosen when a process leading up to a new state starts when the verbal force takes effect.





## Consequences of the AP/PP distinction

### 14.0 Introduction

The last chapter has uncovered a fundamental difference between adjectival result phrases and prepositional result phrases, which has been little recognized in the previous literature. A number of consequences follow from this finding, two of which will be discussed in this chapter: One has to do with apparently conflicting observations among scholars, and the other serves to clarify the basic characterization of resultatives in the proposed force-recipient account.

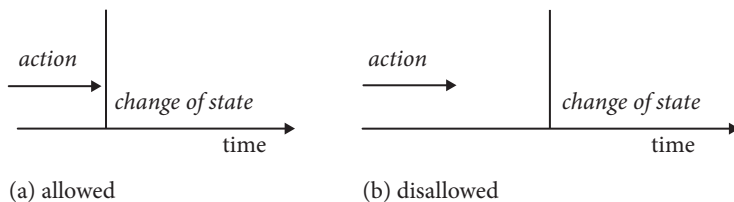
### 14.1 Aspectual constraint

#### 14.1.1 Immediate result or not?

In the literature, there has been a debate as to how the result state is aspectually related to the verbal event. On the one hand, Goldberg (1995) argues that the result state immediately follows the endpoint of the verbal event, and proposes an Aspectual constraint:

- (1) Aspectual constraint: The change of state must occur simultaneously with the endpoint of the action denoted by the verb. (Goldberg, 1995, p. 194)

Goldberg (1995) illustrates this constraint in Figure 14.1.



**Figure 14.1** Aspectual constraint in Goldberg (1995)

This constraint is claimed to rule out cases in which there is any time delay between the verbal action and the change of state.

As evidence for this constraint, Goldberg (1995) makes the following observations. First, (2) “necessarily implies that the agent’s continuous eating made him sick; it does not mean that the meal he ate made him sick” (Goldberg, 1995, p. 194).

- (2) He ate himself sick.

Similarly, Goldberg (1995) says of (3) as follows:<sup>111</sup>

- (3) Sam cut himself free.

This sentence cannot be used to mean that Sam cut himself, causing his captors to release him in order to clean him up. It must mean that he cut whatever bonds were preventing him from being free, thereby immediately gaining his freedom.

(Goldberg, 1995, p. 194)

Goldberg (1995, p. 195) also observes that (4) “cannot be used to mean that Chris shot Pat and Pat later died in the hospital; instead it must mean that Pat died immediately from the shot.”

- (4) Chris shot Pat dead. (Goldberg, 1995, p. 195)

On the other hand, Rappaport Hovav & Levin (2001) present a different view. According to Rappaport Hovav & Levin (2001, p. 775), in (5) the hoarseness is achieved some time after the singing is over.

- (5) Sam sang enthusiastically during the class play. He woke up hoarse the next morning and said, “Well, I guess I’ve sung myself hoarse.”  
(Rappaport Hovav & Levin, 2001, p. 775)

Rappaport Hovav & Levin (2001) also cite (6), saying that “it is most likely that the path to being out of a job did not start when the partying began.”

- (6) Matt Leblanc has his Friends’ co-stars worried he is about to party himself out of a job. (Rappaport Hovav & Levin, 2001, p. 775)

Thus Rappaport Hovav & Levin (2001) claim that with certain resultatives, there may be a temporal gap between the verbal event and the result state, exactly opposite of Goldberg’s (1995) claim.

In this connection, Croft (2012) makes an intriguing observation. According to Croft (2012), the aspectual behaviors of the two cases which Rappaport Hovav & Levin (2001) cite are actually different. First, the example in (5) does not really prove Rappaport Hovav & Levin’s point, since the resultative sentence is in the present perfect. Accordingly, it is compatible with an analysis in which “Sam

111. The resultative *cut – free* will be analyzed in Chapter 19.

became hoarse immediately or shortly after singing, but did not realize it while asleep and did not notice it until he woke up” (Croft, 2012, p. 291).

Next, Croft (2012, p. 291) observes that (7) “is quite compatible with a gap between Leblanc’s last wild party (say, on a Saturday) and his being fired (on Monday).”

- (7) Matt Leblanc partied himself out of a job in three weeks.

This is tantamount to admitting that Rappaport Hovav & Levin’s (2001) observation is at least correct for (7).

#### 14.1.2 APs and PPs behave differently

So there are both resultatives that argue in favor of the Aspectual Constraint (i.e. (2), (3), and (4)) and those that argue against it (i.e. (6)). This apparent puzzle, however, turns out to be no puzzle at all once we pay attention to the category of the result phrase. Note that all the examples that conform to the Aspectual Constraint are resultatives with adjectival result phrases.

- (8) a. He ate himself *sick*.  
 b. Sam cut himself *free*.  
 c. Chris shot Pat *dead*.

As amply demonstrated in the last chapter, the result state denoted by an adjectival result phrase occurs immediately after the verbal force takes effect. So it comes as no surprise that in all these examples, the change of state occurs simultaneously with the endpoint of the verbal action.

Things are different with prepositional result phrases, though. *To* result phrases denote a process that starts when the verbal force takes effect. Accordingly, there is a temporal gap between the verbal event and the result state (which is indicated by the N inside the PP). Thus in (9) the man (=Elvis Presley) did not die immediately after eating. Rather, a significant amount of time elapsed before his death.

- (9) Here was a man who, to all intents and purposes, *ate himself to death*. By the time of his final concerts in Las Vegas, they virtually had to put him on wheels to get him on and off the stage. (WB)

Remarkably, the “Matt Leblanc” example, which Rappaport Hovav & Levin (2001) and Croft (2012) both discuss, involves a prepositional result phrase.

- (10) Matt Leblanc partied himself *out of a job* in three weeks.

The *out of*-PP marks a Source, rather than a Goal. Nevertheless, the *out of*-PP also allows for a temporal gap between the verbal event and the newly arrived at state,

exactly like the *to*-PP, as noted in the last chapter. This is why (10) appears to argue in favor of Rappaport Hovav & Levin (2001).

As a matter of fact, *out of*-PPs generally allow for a temporal gap: In (11a) *price themselves out of jobs* means that if the employees try to sell themselves at a higher price than they should do (from the viewpoint of Government and employers), then they will end up being out of jobs; in (11b) the subject person talked too bluntly at the interview, and she ended up losing the other jobs; and in (11c), due to stealing (on the job), the person lost every good job that he or she had since high school.

- (11) a. It also had the effect – along with other schemes – of lowering teenage wages, a response to the argument put forward by Government and employers that they were “*pricing themselves out of jobs*.” (BNC)  
 b. “I decided that was the job that appealed and it’s just as well because at the interview I *talked myself out of the other jobs* by being so keen on the post office.” (BNC)  
 c. I *stole myself out of every good job* since high school! (WB)

(12) is about a unit of Canadian soldiers who work in small groups at bases in insurgent-ridden areas in Afghanistan, in collaboration with Afghan troops. The resultative sentence means that if their work takes effect, eventually their work will be no longer necessary.

- (12) “We are the ones who help mentor the Afghan national security forces so that they can take care of security in their own country,” Blondin said.  
 “When the Afghans can take care of their own security, it will help them set up the conditions necessary for development and reconstruction. Our job is to *work ourselves out of a job*.” (WB)

Similarly, (13a) means that the person became an alcoholic and eventually had to get divorced; and (13b) means that the player ate so much that he almost reached the point where he was not fit to be a football player.

- (13) a. Our problems were different. I had *drunk myself out of this marriage* ten years ago, but it didn’t mean we weren’t in love. (COCA)  
 b. Didi used to scoff down Big Macs before games. DIDIER DROGBA almost *ate himself out of football*. (WB)

Clearly, there is a significant temporal gap between the verbal event and the result state in all these cases.

This is quite understandable, in that losing a job cannot occur simultaneously with the endpoint of the verbal action. There is necessarily a long sequence of causal chains that leads to one’s being fired. Once we realize this point, there is

nothing surprising about the fact that the prepositional *out of a job* cannot be replaced with the adjectival *jobless*.

- (14) a. \*He drank himself jobless.  
 b. \*I stole myself jobless.  
 c. \*Our job is to work ourselves jobless.

To sum up the discussion so far, then, the apparently conflicting observations reported in the previous literature come from the failure to realize that adjectival result phrases and prepositional result phrases make aspectually different contributions to the overall meaning. Goldberg's (1995) Aspectual Constraint is valid only for a subtype of resultatives and is ultimately ascribable to the inherent nature of adjectival result phrases, not to that of resultatives in general.<sup>112</sup>

#### 14.1.3 Prepositional result phrases vs. path result phrases

In this connection, a word is in order about the following observation by Rappaport Hovav & Levin (2001). Rappaport Hovav & Levin (2001, pp. 792–793) observe that the subevents of the resultatives in (15) are temporally dependent, while the subevents of those in (16) need not be.<sup>113</sup>

- (15) a. We all pulled the crate out of the water.  
 b. They yanked the nails out of the board.  
 c. The coast guard tugged the raft back to shore.
- (16) a. Clara rocked the baby to sleep.  
 b. The police shot the robber to death.

(Rappaport Hovav & Levin, 2001, p. 793)

This means that there is a temporal gap between the verbal action and the result state in (16), but not in (15), despite the fact that in both cases the result phrases are prepositional.

Rappaport Hovav & Levin (2001) argue as follows:

112. Goldberg (1995, p. 195) notes that the Aspectual constraint may follow from a more general constraint that the causation must be direct, but this supposition is accordingly called into question.

113. Rappaport Hovav & Levin (2001) cite (i) as a third example of (16).

(i) The critics panned the play right out of town.

This sentence is not attested in any of the three corpora, however.

The verbs in [(15)] are verbs of exerting force. ... when the force does cause a displacement, as in [(15)], then it must be exerted until the result location is attained. Thus, the exertion of force and the displacement occur in tandem. In contrast, the subevents of the resultatives in [(16)] need not unfold together.

(Rappaport Hovav & Levin, 2001, p. 793)

From our viewpoint, it becomes immediately clear that Rappaport Hovav & Levin (2001) miss two important points. First and foremost, the sentences in (15) are resultative caused-motion sentences, and those in (16) are (state-changing) resultatives. That is, the PPs in (15) are path result phrases, which specify a change of location, but the PPs in (16) are result phrases, which specify a change of state. So the sentences in (15) are not relevant to the discussion at hand. After all, prepositional result phrases are the only option for resultative caused-motion sentences. But in (16), prepositional result phrases are chosen as opposed to adjectival result phrases. It is no wonder, therefore, that the sentences in (16) allow for a temporal gap between the verbal event and the result state.

But does it follow that the sentences in (15) do not allow a temporal gap *because* they are resultative caused-motion sentences? Not necessarily. And this leads to the second point which Rappaport Hovav & Levin (2001) miss, namely that all the sentences in (15) involve continuous causation, as opposed to onset causation (Shibatani 1976, Talmy 2000a, among many others). This point can be appreciated by noting that some resultative caused-motion sentences readily allow for a reading in which some time elapses before the result location is attained.

(17) He hit the ball into center field.

It is clearly not the case that he continued to hit the ball until the ball ended up being in center field. Rather, all he had to do is exert force to the ball by hitting it just once.

Thus while Rappaport Hovav & Levin's (2001) exposition might create the impression that with verbs of exerting force, there is necessarily no temporal gap between the verbal event and the result state, this is an illusion. After all, there is a temporal gap in (17), despite the fact that the verb *hit* involves exertion of force. Rather, what counts is that the sentences in (15) involve continuous causation, but (17) involves onset causation. Accordingly, there is no temporal gap between the verbal event and the result state in (15), not because the verbs *pull*, *yank*, and *tug* are verbs of exerting force, but because these verbs all involve continuous causation.

Consequently, in order to account for why there is a temporal gap between the verbal event and the result state in some cases but not in others, we must take into consideration the type of causation as well, besides the categorical distinction of the result phrase.

## 14.2 *She cried herself to sleep*

### 14.2.1 Enabling causation

The second issue to be discussed in this chapter concerns the notion of causality. While it is customary to regard the notion of causality as essential to resultatives, some resultatives with fake reflexive objects are not strictly causal. The following examples are among them.

- (18) a. Eventually, she *cried herself to sleep*.  
 b. I figure he'll *read himself to sleep*.  
 c. I *laughed myself to sleep* every night. (all from COCA)

Taken literally, these resultative sentences mean very strange things. After all, it should not be possible to “cause oneself to become asleep by crying, reading, or laughing” unless crying/reading/laughing induces the secretion of a chemical substance inside one’s body that has the power of making oneself sleep.

This seeming peculiarity cannot be attributed to the fact that the sentences in (18) are non-subcategorized object resultatives; a very similar thing can be said of subcategorized object cases as well. Thus in (19a) and (19b) the post-verbal NPs are subcategorized objects of *lull* and *rock*.

- (19) a. Orpheus *lulled him to sleep* with soft music.  
 b. She was usually able to *rock him back to sleep* quite quickly. (both from BNC)

Again, it does not seem plausible to claim that one causes someone to become asleep by lulling or rocking that someone, either. After all, lulling and rocking in themselves do not seem to have the power of directly making someone be in a state of sleep.

Note, however, that the post-verbal NPs in (19) should be force-recipients, for they are subcategorized objects. This is in fact confirmed by the fact that these post-verbal NPs can be the subjects of the corresponding passive sentences, as seen in (20).

- (20) a. Many babies are *lulled to sleep* in cars ...  
 b. No baby would be *rocked to sleep* with that ... (both from BNC)

Accordingly, *She lulled the baby to sleep* should receive the causal chain representation in (21).

- (21) Causal chain for *She lulled the baby to sleep*  
 she  $\longrightarrow$  baby  $\longrightarrow$  to sleep



This suggests that the resultatives in (19) should be handled on a par with all the resultatives seen so far, despite the fact that they are not strictly causal. But then, maybe the resultatives in (18) should be so handled, too.

A reviewer of the study suggests that what is involved in (18) and (19) is enabling causation. This characterization certainly seems to be on the right track. At the same time, however, this immediately invites the following question: Is it a coincidence that resultatives with *to sleep* involve an enabling causation relation, irrespective of whether they are with subcategorized objects or not?

It turns out that it is far from a coincidence. What is more, the reason why the sentences in (18) and (19) should involve enabling causation has to do with the AP/PP distinction of result phrases. Specifically, the key lies in the fact that *to sleep*, not *asleep*, is allowed as a result phrase.<sup>114</sup>

- (22) a. Orpheus *lulled* him *to sleep* with soft music. (BNC)  
 b. \*Orpheus *lulled* him *asleep* with soft music.

As just seen in the last chapter, the AP/PP contrast reveals a significant difference as to how the change is effected.

#### 14.2.2 How to enable someone to sleep

##### 14.2.2.1 To sleep vs. awake

The special character of *to sleep* may be better appreciated by first having a look at resultatives describing a change opposite to that involving sleep, i.e. becoming awake. This time, *awake*, but not *to awakening*, is allowed as a result phrase.

- (23) a. He *shook* her *awake*. (BNC)  
 b. \*He *shook* her *to awakening*.

As already seen in Chapter 3, not only verbs involving a violent force (e.g. kick) as in (24) but also those involving a slight force (e.g. touch, kiss) as in (25) and (26) are attested as resultatives.

114. Rothstein (2004, p. 78) cites the following example.

- (i) John sang himself *asleep*.

But no fake reflexive resultatives with *asleep* are attested either in the BNC or the WB; only one instance is found in COCA.

- (ii) Emma has *cried herself asleep*. (COCA)

By contrast, fake reflexive resultatives with *to sleep* are attested 28 times in the BNC, 47 times in the WB, and 232 times in COCA, as will be shown in 14.2.3.1. It seems safe to conclude, therefore, that fake reflexive resultatives with *asleep* are not acceptable.

- (24) Without compunction, Fox *kicked* him *awake*. (BNC)
- (25) a. So I get nervous until Father *pats* me *awake*.  
 b. The sound of his breath reassured her and she turned to *kiss* him *awake* ...  
 c. At 2:35, as Fielder slept, Driben *tapped* Walker *awake*. (all from COCA)
- (26) For the first time in over a week I slept through the night, finally staggering out of bed when Peppy *nosed* me *awake* a little after eight.  
 [S. Paretzky, *Total Recall*, p. 324]

This is because one can be not only “half awake” as in (27) but also “fully awake” as in (28).

- (27) a. He was only *half awake*.  
 b. It was one of those dreams that are more like daydreams; I have them when I am *half awake and half asleep* ... (both from BNC)
- (28) a. The sleep vanished, and she was *fully awake* at once.  
 b. And suddenly she was *wide awake*. (both from BNC)

A slight force is sufficient to cause someone to become half awake, but most likely a strong force is required to cause someone to become fully awake.

Either way, it is possible to cause someone to become awake by exerting a physical force. Since the result state of being awake immediately follows after the verbal force takes effect, the adjectival result phrase is the only choice. Thus *shake – awake* receives the representation in Figure 14.2.

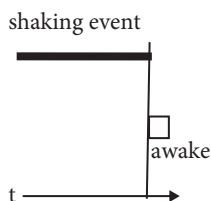


Figure 14.2 *Shake – awake*

But this is not the case with sleep. It is impossible to cause someone to fall asleep by exerting a physical force, be it slight or strong.

- (29) a. \*Father *pats* me *asleep*.  
 b. \*She *kissed* him *asleep*.  
 c. \*Driben *tapped* Walker *asleep*.
- (30) a. \*He *shook* her *asleep*.  
 b. \*Fox *kicked* him *asleep*.

If a particularly strong force is exerted, the resulting state will be that of being unconscious or that of being senseless, as in (31), rather than as in (32).

- (31) a. He was *knocked unconscious*.  
 b. ... until he eventually *beat her senseless* and killed her. (both from BNC)
- (32) a. \*He was knocked asleep.  
 b. \*He eventually beat her asleep.

Rather, all one can do is to relax the person by whatever means and wait for that person to eventually fall asleep. That is, it takes some time for the change of state to come to obtain. Accordingly, *lull – to sleep* is to be represented as in Figure 14.3.

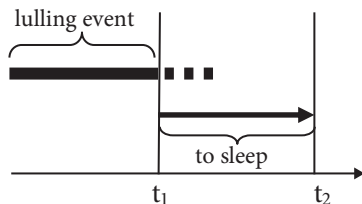


Figure 14.3 *Lull – to sleep*

This is why *to sleep*, not *asleep*, is chosen as a result phrase.

#### 14.2.2.2 A soothing/calming force

Once this point is acknowledged, a force-recipient account is quite straightforward. Let us start with subcategorized object cases.

- (33) a. Orpheus *lulled him to sleep* with soft music.  
 b. She was usually able to *rock him back to sleep* quite quickly.  
 (both from BNC)

Crucially, both lulling and rocking involve a gentle, rhythmical movement which has a soothing/calming effect on a person. In this sense, these verbs may well be regarded as involving a soothing/calming force.

Let us next turn to non-subcategorized object cases. In (34) the post-verbal NP is not subcategorized by the verb *sing*, but other than that exactly the same account is given as before: A gentle, rhythmical sequence of sounds has a soothing effect on a person.

- (34) I was *singing little Hareton to sleep* when Catherine came in. (BNC)

Besides *sing*, *read* also belongs here. In (35) the subject entity reads a poem to the post-verbal NP entity, which has a soothing/calming effect.

- (35) Then we shall *read the little ones to sleep* with Clement Clarke Moore's classic poem "'Twas the night before Holiday." (COCA)

### 14.2.3 How to enable oneself to sleep

#### 14.2.3.1 Fake reflexive cases

It is now time to turn to resultatives with reflexive objects. The resultatives with subcategorized reflexive objects as in (36) pose no problems, for they can be accounted for in exactly the same way as the subcategorized object cases, by claiming that the post-verbal NP receives a soothing/calming force.

- (36) a. So therefore you can just *lull yourself to sleep*. (COCA)  
 b. I'd *rock myself to sleep*. (COCA)  
 c. I stroke my beard, ..., trying to *soothe myself to sleep*. (BNC)

As for fake reflexive objects, the range of verbs found to occur is different. The results of searching the three corpora are summarized in Tables 14.1 to 14.3.

Roughly four types can be immediately recognized: the *sing*-type (*sing, chant, hum*), the *read*-type (*read*), the *drink*-type (*drink*), and the *cry*-type (*cry, weep, sob*). We will examine them in turn.

**Table 14.1** BNC counts of 'V oneself to sleep'

|                                     | _____ oneself to sleep |
|-------------------------------------|------------------------|
| cry                                 | 20                     |
| drink                               | 2                      |
| chant, eat, murmur, sob, talk, weep | 1                      |
| TOTAL                               | 28                     |

**Table 14.2** WB counts of 'V oneself to sleep'

|                                | _____ oneself to sleep |
|--------------------------------|------------------------|
| cry                            | 36                     |
| settle                         | 4                      |
| booze                          | 2                      |
| chuckle, pray, read, sing, sob | 1                      |
| TOTAL                          | 47                     |

Table 14.3 COCA counts of 'V oneself to sleep'

|                                                                                        | oneself to sleep |
|----------------------------------------------------------------------------------------|------------------|
| cry                                                                                    | 150              |
| read                                                                                   | 20               |
| drink                                                                                  | 19               |
| sob                                                                                    | 12               |
| laugh, talk                                                                            | 5                |
| sing                                                                                   | 4                |
| weep                                                                                   | 3                |
| hum                                                                                    | 2                |
| betake, chant, coo, count, fume,<br>mutter, nod, purr, shiver, sweat,<br>whimper, yawn | 1                |
| TOTAL                                                                                  | 232              |

#### 14.2.3.2 Sing-type and read-type

The *sing*-type, as exemplified in (37), is quite straightforwardly accommodated.

- (37) I think the girl is comforting herself, calming herself down, *singing herself to sleep* by telling herself who she is. (COCA)

Clearly, this is a reflexive object version of (38), which itself is a resultative with a non-subcategorized object.

- (38) I *sang* the baby *to sleep*.

Just like in (38), in (37) a gentle, rhythmical sequence of sounds has a soothing effect on a person.

Other members of the *sing*-type are the following:

- (39) a. At last they left me and I *chanted myself to sleep*.  
b. Jamie *hums himself to sleep*, the tune buzzing into his dreams.  
(both from COCA)

*Talk himself to sleep* in (40) also seems to belong to this type, in that his own voice is comforting himself.

- (40) Downer was a talker, too. In his case, the sound of his own voice comforted him. He used to *talk himself to sleep* when he was a kid ... (COCA)

Now *read oneself to sleep* is also attested in the corpora.

- (41) Chief Bud Benoit would have to *read himself to sleep* from now on. (WB)

It might appear that *read oneself to sleep* also belongs to the *sing*-type, in that *read – to sleep* with a non-subcategorized object as in (42) has been claimed to belong to the *sing*-type above.

- (42) Then we shall *read the little ones to sleep* with Clement Clarke Moore’s classic poem “’Twas the night before Holiday.” (COCA)

But *read oneself to sleep* does not seem to be a simple reflexive object counterpart of (42). In (42) the subject entity reads aloud something to the children, and the reading voice is taken to have a calming effect. By contrast, in *read oneself to sleep* one does not have to read aloud. If anything, one is more likely to read silently.

For this reason, we seem to be justified in positing a different type, the *read*-type. This type is characterized by the fact that the subject entity does some mental activity that relaxes oneself. Maybe counting the number of sheep until falling asleep as in (43) also belongs here.

- (43) ... such as the way two sisters *count themselves to sleep* ... (COCA)

One more thing to be mentioned about this type is that not any activity will do. As (44) illustrates, activities which demand concentration, which are laborious, or which are exciting are no good; they will cause one to become more awake.

- (44) Then I spend a couple of hours trying to *read myself to sleep*, but Peterson’s Field Guide proves too stimulating. (COCA)

### 14.2.3.3 Drink-type

We have already seen in Chapter 6 that *drink oneself* may be accompanied by the result phrase *to sleep*.

- (45) And she *drunk herself to sleep*. (BNC)

Here the alcohol taken in is responsible for her eventual sleep. Since the relevant verbal force is different from those of the previous two types, we should recognize a third type.

It might be argued that *drink oneself to sleep* is no different, as alcohol has a soothing effect. Indeed, in the following attested example alcohol is explicitly stated as a means of soothing oneself.

- (46) Try as he might, he could only *soothe himself to sleep with liquor*. (COCA)

Nevertheless, drinking alcohol is to be distinguished from singing a song or reading a book silently, in that it is the only conceivable way to practically *force* oneself to sleep. Thus in (47) a person resorts to alcohol to overcome nightmares or an extreme case of insomnia.

- (47) a. For years afterward, he *drank himself to sleep* each night to smother guilt-spawned nightmares.  
 b. Since his return to Fort Drum, New York, in 2005, Cherry says, “Many times I’ve *drunk myself to sleep* because I can’t fall asleep, and the meds they gave me didn’t help.” He exhibits the symptoms of post-traumatic stress disorder, and he’s not alone. (both from COCA)

#### 14.2.3.4 Cry-type

Among the verbs that occur in the ‘V oneself to sleep’ construction, *cry* is by far the most frequent: 20 instances out of 28 (=71%) in the BNC; 36 out of 47 (=76%) in the WB; and 150 out of 232 (=65%) in COCA. But why does one cry before falling asleep? This is because one cannot fall asleep because of some emotional state one is in, as is well-illustrated by the underlined parts in the following sentences.

- (48) a. I remember I would be in my bedroom at night *crying myself to sleep* because I was sad they got a divorce.  
 b. I was stunned and for months *cried myself to sleep* over the loss.  
 c. I laid down in bed and, boy, I just about *cried myself to sleep* because I says, Oh, my God. Everyone’s going to find out.  
 d. Often I *cried myself to sleep*, wondering why I had been born to make my mother’s life so miserable. (all from COCA)

The subject entities are so sad or worried that they cannot fall asleep without crying. Crying has the effect of easing/lessening the sadness or worry by releasing the sad feeling out of oneself. Thus crying can be said to have a soothing/calming effect on oneself. Other members of this type are the following:

- (49) a. ... the sound of her brother Charles *sobbing himself to sleep* ... (BNC)  
 b. “Angelica *wept herself to sleep*, so isolated she feels.” (COCA)

Now there are a number of instances of ‘V oneself to sleep’ which seem to be somehow related to *cry oneself to sleep*: *whimper oneself to sleep* in (50); *shiver oneself to sleep* in (51a) and *yawn oneself to sleep* in (51b); and *fume oneself to sleep* in (52).

- (50) ... one of the Oxfam babies with the stick limbs and staring eyes who *whimpers itself to sleep* each night because there’s no food. (COCA)  
 (51) a. I wrapped myself tight in my blanket and eventually *shivered myself to sleep*.  
 b. He stopped, and after a moment or two he *yawned himself to sleep*. (both from COCA)  
 (52) ... where his inconsolable wife sighed and *fumed herself to sleep* as he lay staring at the pale circle cast by the flashlight onto the ceiling. (COCA)

All these instances of ‘V oneself to sleep’ are attested only once in COCA, so they may well be regarded as one-off extensions from *cry oneself to sleep*. But how are they to be related?

Tony Higgins (personal communication) has pointed out that all these instances of ‘V oneself to sleep’ have “emotional release” in common with *cry oneself to sleep*: One feels emotional release when one lets these emotional impulses flow freely in their respective involuntary activities. It is this sense of release which in turn provides the cathartic, calming effect that leads to one’s falling asleep, regardless of which one of the many possible emotions (or mixture of emotions) that happens to precipitate that effect in a given instance.

Seen in this light, *laugh oneself to sleep*, as exemplified in (53), can also be analyzed as belonging to this type, in that laughing is a psycho-somatic, involuntary activity with a resulting cathartic feeling.

- (53) a. That’s always funny stuff. We’ve seen it before, though and a lot of us are getting tired of watching reruns of your favorite late-night talk shows due to the never-ending writers strike. New programs, though, may be on the horizon to help you *laugh yourself to sleep*.
- b. We are denying Americans the freedom to go there, and I think Fidel Castro frankly *laughs himself to sleep* every night knowing that he is forcing the greatest country in the world to adopt some of the same bad habits as his own banana republic. (both from COCA)

All these extensions are related to *cry oneself to sleep* as described in Figure 14.4.

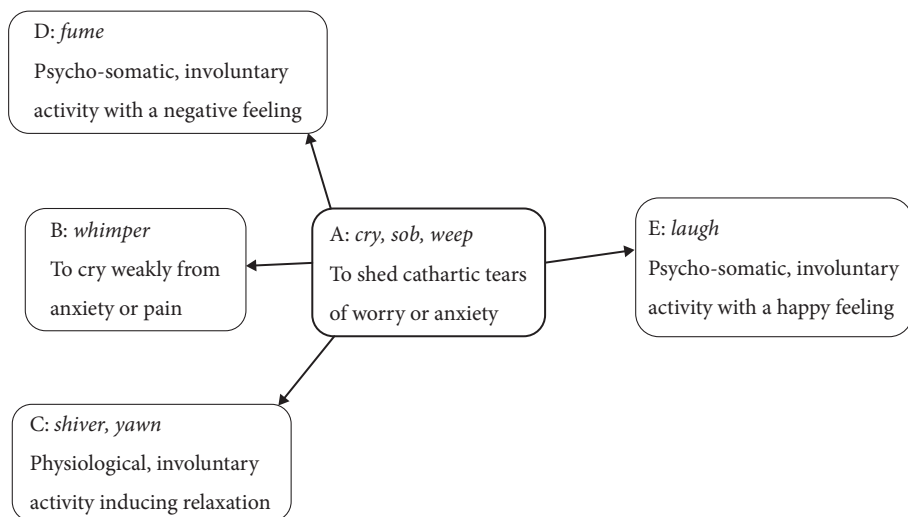


Figure 14.4 *Cry oneself to sleep* and its extensions



To recapitulate, in all the four types of ‘V oneself to sleep’ (the *sing*-type, the *read*-type, the *drink*-type, and the *cry*-type), the verbal activity can be analyzed as involving a soothing/calming force, which leads to one’s eventual sleep. The four types differ as to the specifics of the soothing/calming force, and in this respect they are of the equal status. But the *cry*-type, which is so frequent that it is definitely the prototype of this category, may serve as a model upon which further extensions are based.

#### 14.2.4 Enabling causation in force dynamics

Given that with *cry oneself to sleep*, along with a number of other types of ‘V oneself to sleep’, the verbal activity can be analyzed as involving a soothing/calming force, which in turn consists in “emotional release,” it comes as no surprise that an enabling causation relation is involved in these resultatives. In force-dynamic terms, while causation as normally understood in the linguistic literature can be characterized in terms of the Antagonist’s force overcoming the Agonist’s, enabling causation can be analyzed as removing a barrier to the Agonist’s movement (Talmy 2000a, pp. 504–508). Now, as seen above, when one cannot fall asleep because of some emotional state one is in, the activity of crying has the effect of removing the sadness or worry (other instances can be analyzed similarly). So this fits the force-dynamic pattern of enabling causation.

It follows, then, that *She lulled the baby to sleep* receives the causal chain representation in (54) in exactly the same way that *Fox kicked him awake* receives the one in (55). In both cases, because of the verbal force exerted to the post-verbal NP entity, a result ensues.

(54) Causal chain for *She lulled the baby to sleep*  
 she  $\longrightarrow$  baby  $\longrightarrow$  to sleep

(55) Causal chain for *Fox kicked him awake*  
 Fox  $\longrightarrow$  he  $\longrightarrow$  awake

What differentiates (54) from (55) is that the soothing/calming force exerted onto the baby counts as a release of restraint. This is why the relation between the verbal activity and the resulting state is one of enabling causation.

Thus, while in most of the cases the resultative sentences involve causation, the causal chain as exemplified in (54) and (55) in itself does not strictly encode causation. Rather, depending upon the verbal force exerted onto the post-verbal

NP entity, the relation between the verbal activity and the resulting state may be one of causation or one of enabling causation.<sup>115</sup>

### 14.3 Conclusion

This chapter has discussed two consequences of the distinction between adjectival result phrases and prepositional result phrases, which has been uncovered in Chapter 13. On the one hand, the conflicting observations surrounding the Aspectual constraint in Goldberg (1995) simply result from the fact that different scholars have been focusing on different types of resultatives, i.e. those with adjectival result phrases and those with prepositional result phrases. It is no wonder that both Goldberg (1995) and Rappaport Hovav & Levin (2001) seem plausible in their respective claims and within their respective perspectives.

On the other hand, the apparent puzzle posed by *cry oneself to sleep* has been resolved by starting with the observation that *to sleep* cannot be replaced with the adjectival result phrase *asleep*. This in turn is because it is practically impossible to directly cause someone to sleep. Rather, all one can do is to soothe/calm someone and wait for that person to eventually fall asleep. The soothing/calming force thus exerted can be construed as removing an obstacle to movement, and this is why *cry oneself to sleep* involves enabling causation.

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115. Thus, from the viewpoint of the proposed force-recipient account, it is not necessary to stipulate direct causation as a property of resultatives, despite the fact that many scholars claim that direct causation is an important characteristic of resultatives (Goldberg & Jackendoff 2004, Kratzer 2005, *inter alia*). First, in the case of resultatives with adjectival result phrases, indeed no intermediate event is allowed between the verbal event and the result state, but this follows from the force-recipient account (the result state denoted by the adjectival result phrase comes to obtain immediately after the verbal force takes effect). Second, in the case of resultatives with prepositional result phrases, intervening events are actually possible, as has been amply demonstrated so far. And third, the relation between the verbal event and the result state is not necessarily causal, as just seen.



PART VI

## **Still further issues surrounding adjectival result phrases**



## Maximal end-point constraint reconsidered

### 15.0 Introduction to Part VI

In Part V, we have seen that adjectival result phrases and prepositional result phrases are semantically different, and that the choice between APs and PPs is far from arbitrary. Now in the literature, there are a couple of issues surrounding adjectival result phrases: The selectional restriction on the result phrase, and the temporal relation between the result state and the verbal event. Part VI will address these issues. In Chapters 15 and 16, we will see what new light our finding about adjectival result phrases sheds on the issue of selectional restrictions. Chapter 17 will address the temporal relation by comparing the proposed force-recipient account with two (potentially) competing theories.

### 15.1 Wechsler (2005a, 2005b)

One of the puzzles surrounding resultatives concerns the selectional restriction on the result phrase. Since Green's (1972) observation in (1) and (2), it has been well-known that not every adjective can appear as a result phrase, even though the intended scene is easily imaginable in our daily lives.

- (1) a. He hammered it {flat/smooth/shiny}.  
 b. He wiped it {clean/dry/smooth}. (Green, 1972, p. 83)
- (2) a. \*He hammered it {beautiful/safe/tubular}.  
 b. \*He wiped it {damp/dirty/stained}. (Green, 1972, p. 84)

Obviously, this is still another manifestation of the question "Which resultatives are possible and which are not?" So we need to address the issue of selectional restrictions on adjectival result phrases.

Now, in recent years some scholars have attempted to solve these puzzles by referring to the scalar property of an adjective, to the effect that only adjectives with a maximal end-point are allowed to occur in the result phrase (Goldberg 1995, Vanden Wyngaerd 2001, Wechsler 2005a, 2005b). In what follows, we will concentrate on the proposal by Wechsler (2005a, 2005b).

Wechsler (2005a, 2005b) divides resultatives into two types, according to whether the result phrase is predicated of a semantic argument of the main verb, as in (3), or not, as in (4), and calls them Control resultatives (=resultatives whose subjects and objects are arguments) and ECM (Exceptional Case Marking) resultatives (=resultatives with non-subcategorized objects), respectively.

- (3) a. He wiped *the table* clean.  $\Rightarrow$  He wiped the table.  
 b. *The water* froze solid.  $\Rightarrow$  The water froze.
- (4) a. The dog barked *itself* hoarse.  $\nRightarrow^*$ The dog barked itself.  
 b. Mary ran *the soles* off her shoes.  $\nRightarrow^*$ Mary ran the soles.

Assuming that what is essential about resultatives is their telicity, Wechsler applies a homomorphic account along the lines of Krifka (1992, 1998) to resultatives.

1. The telic event and the path must be (a) homomorphic (parts of the event must correspond to parts of the path and vice versa) and (b) coextensive (the event must begin when the affected theme is at the start of the path and end when the affected theme reaches the end of the path).
2. The affected theme must be an argument of the event-denoting predicate.  
 (Wechsler, 2005a, p. 260)

Essentially, a homomorphic account is based on the idea that some property of the affected argument changes by degrees along a scale due to the action described by the verb, until it reaches a bound. Wechsler maintains that in the case of resultatives, the property scale is expressed by the result phrase.

Since the result phrase is predicated of a semantic argument of the main verb in the case of Control resultatives, but not in the case of ECM resultatives, homomorphism and coextension between property scale and event should be required with the former, but not with the latter.

It follows, therefore, that with Control resultatives, the telicity of the event depends on the scalar structure of the adjective. At the same time, this means that the range of adjectives permissible as result phrases should meet certain requirements. Wechsler claims that this is why only certain adjectives are acceptable as result phrases.

Drawing on a number of works on the scale structure of adjectives (Hay, Kennedy & Levin 1999, Kennedy & McNally 1999, Rotstein & Winter 2004), Wechsler divides gradable adjectives into 'closed-scale' adjectives (e.g. *full*, *empty*, *straight*, *dry*), which supply an inherent lexical standard, and 'open-scale' adjectives (e.g. *tall*, *long*, *wide*, *short*, *cool*), which lack inherent maxima, as shown in Figure 15.1.

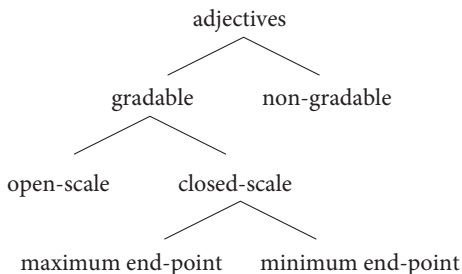


Figure 15.1 Typology of adjectives (Wechsler, 2005a, p. 263)

Whether a given adjective is gradable or not is claimed to be confirmed by the compatibility of that adjective with certain modifiers. According to Wechsler, gradable adjectives can be modified by *very/quite/extremely*, but this is not the case with non-gradable adjectives.

- (5) a. Gradable adjectives:  
       *very/quite/extremely* {long/flat/expensive/straight/full/dull}
- b. Non-gradable adjectives:  
       ?? *very/quite/extremely* {dead/triangular/invited/sold}  
       ?? *more* {dead/triangular/invited/sold}

Gradable adjectives in turn are divided into closed-scale and open-scale types, depending on whether they can be modified by *completely* or not.

- (6) a. *completely* {full/empty/straight/dry} (closed scale)  
 b. ?? *completely* {long/wide/short/cool} (open scale)

(Wechsler, 2005a, p. 262)

Now Wechsler further divides Control resultatives into three types, and claims that these three types impose different constraints on the result phrase. First, when the verb is durative, the result phrase must be a gradable, maximal end-point closed-scale adjective.

- (7) Mary *hammered* the metal *flat*. (Wechsler, 2005a, p. 264)

Second, when the verb is punctual, the result phrase is a non-gradable adjective.

- (8) At another mill, the Fox mill, he and a confederate *shot* the miller *dead*.  
 (Wechsler, 2005a, p. 266)

Third, the result phrase is a path PP whose object NP specifies the bound.

- (9) The rabbits had apparently been *battered* {*\*dead/to death*}.  
 (Wechsler, 2005a, p. 267)



Now back to Green's (1972) observation.

- (10) He wiped it {clean/dry/smooth/\*damp/\*dirty/\*stained/\*wet}.

Since the verb *wipe* is durative, Wechsler argues that the observed selectional restrictions on the result phrase in (10) can be attributed to the constraint on the first type, namely that the adjective must be of a maximal end-point type. And indeed, *clean*, *dry*, and *smooth* are all maximal end-point closed-scale adjectives, whereas *damp*, *dirty*, *stained*, and *wet* are minimal end-point adjectives (Wechsler, 2005a, p. 265).

## 15.2 Problems

A closer examination reveals that the maximal end-point thesis suffers from a number of problems, however. First, as Kearns (2007) observes, *wet* and *dirty* may have maximal values, as in (11a). If what really matters is whether a suitable maximum can be provided or not, as Wechsler claims, then we should expect that *wet* and *dirty* thus modified should acceptably appear as result phrases. This is not the case, as shown in (11b).<sup>116</sup>

- (11) a. The towel was completely {wet/dirty}. (Kearns, 2007, p. 59, fn 19)  
 b. \*He wiped the table {completely wet/completely dirty}.

Second, open scale adjectives and minimal end-point adjectives are actually attested as result phrases. Wechsler (2005a) classifies *long*, *wide*, and *short* as open scale adjectives, as seen in (6), repeated here as (12).

- (12) a. completely {full/empty/straight/dry} (closed scale)  
 b. ??completely {long/wide/short/cool} (open scale)  
 (Wechsler, 2005a, p. 262)

<sup>116</sup> Larson (2014) claims that sentences like (11a) are acceptable on a reading that is “not relevant” to the discussion of the maximality of adjectives:

*The table was completely wet* has a perfectly sensible construal according to which it asserts, not that the table is wet to the maximal degree, but rather that all relevant parts of the table are wet. Only the availability of the former reading is relevant to the evaluation of whether an adjective is closed versus open scale. (Larson, 2014, p. 299, n 23)

I do not see why the latter reading is not relevant to the homomorphic account, however. After all, even under the latter reading, some property of the affected argument does change by degrees due to the action described by the verb, fully in accordance with the homomorphic account.

Wechsler's theory predicts, therefore, that these adjectives cannot appear as result phrases. But it is not difficult to find resultatives with these open scale adjectives, as shown in (13).

- (13) a. The shadows *stretched long* over the road.  
 b. ... and then the door *opened wide*.  
 c. She's *cut* it (=my hair) *real short*, so it feels all bristly when I rub my hands over it. (all from BNC)

Also, minimal end-point adjectives like *dirty* and *loose* are attested as result phrases, as in (14).

- (14) a. "You wash clean and *dry dirty*, that's always been your trouble."  
 b. A few *shook* themselves *loose* from the tangle. (both from BNC)

Third, even when certain adverbials indicate that the maximal end-point value is not reached, this does not result in ungrammaticality. Thus the adjective may be modified by *almost* as in (15), *nearly* as in (16), *half* as in (17), and *relatively* as in (18).

- (15) a. When the dirt storm subsides, seconds later, the vandals have vanished, and the defaced wall has been *scoured almost clean*.  
 b. ... the whole thing is either *squashed almost flat*, or stretched lengthways so as to be almost unrecognisable as the original design, which can happen on some design systems. (both from BNC)

- (16) a. The hair on his arms was *bleached nearly white*.  
 [S. Grafton, *E Is for Evidence*, p. 103]  
 b. While some people prefer the dark rings produced by a cast-iron surface, we like the results of a nonstick surface that has been coated with oil, then quickly *wiped nearly clean* with a paper towel. (COCA)

- (17) The palisaded earthwork that once lay across the neck of the promontory, beside which they foregathered, was *beaten half flat*. (BNC)

- (18) The opening loomed before them, sliced into the bank, *brushed relatively clean*. (BNC)

Fourth, the result phrase can be in the comparative form, as observed by Jackendoff (1996) and Goldberg & Jackendoff (2004).

- (19) a. Bill stoked fire *hotter and hotter*.  
 b. Bill hammered the metal *flatter and flatter*. (Jackendoff, 1996, p. 332)
- (20) For hours, Bill hammered the metal *ever flatter*.  
 (Goldberg & Jackendoff, 2004, p. 543)



In order to be consistent with the facts in (24)–(26), one might be tempted to claim that *open* is coerced into a maximal end-point adjective, in line with Wechsler’s account. But notice that *open* serves unambiguously as a minimal end-point adjective in (27), as indicated by *open a fraction* and *open a crack*.

- (27) a. Eventually Rosie, the youngest of the nursery maids, *pushed* the door *open a fraction*, a handkerchief to her face.  
 b. “Oh shit,” she said, surreptitiously *pushing* the access hatch *open a crack* and thrusting her fingers through, hoping nobody would notice.  
 (both from BNC)

Note further that *ajar*, which cannot possibly be a maximal end-point adjective, can occur as a result phrase.

- (28) Harriet *pushed* the door *ajar* and removed the keys from the lock. (BNC)

Thus *open* (and *ajar*, for that matter) truly contradicts the maximal end-point thesis.

All these facts seriously undermine the maximal end-point constraint.

### 15.3 Well-behaved data?

#### 15.3.1 Wechsler (2012, 2015)

Now in response to a number of studies pointing out counter-examples (Boas 2003, Broccias 2003, Iwata 2008c), Wechsler (2012, 2015) argues that the maximal end-point constraint is still valid. For one thing, Wechsler states that his maximal end-point constraint is not an absolute constraint:

The Maximal Endpoint Hypothesis does not impose an absolute constraint on which adjectives can appear in the resultative construction, but rather predicts that scalar structure of the adjective should be a factor. It does not exclude other factors such as the influence of pragmatic context. (Wechsler, 2012, pp. 133–134)

Accordingly, resultatives are now held to *favor*, not require, maximal end-point adjectives as result phrases.

Assuming the event-argument homomorphism theory of telicity (Krifka 1998; Jackendoff 1996), we predict that resultatives, being telic, would *favor* adjectives with scales bounded by an inherent maximum, hence MaxEndpt adjectives.  
 (Wechsler, 2012, p. 123, emphasis mine)

For another, Wechsler (2012, 2015) claims that the correlation between resultatives and maximal end-point adjectives is statistically significant. Wechsler (2012) presents Tables 15.1, 15.2, and 15.3, which are based on Boas' (2000) corpus study.

**Table 15.1** Maximum endpoint closed scale adjectives in Wechsler (2012, p. 125)

| MaxEndpt    | all   | Resultatives | ECM | make/etc. | causative verb   |
|-------------|-------|--------------|-----|-----------|------------------|
| awake       | 1379  | 39           | 2   | 0         |                  |
| clean       | 6092  | 102          | 0   | 6         |                  |
| dry         | 6236  | 77           | 1   | 8         |                  |
| empty       | 5409  | 1            | 1   | 0         |                  |
| flat        | 5899  | 34           | 0   | 2         | 1 make; 1 render |
| full        | 26545 | 35           | 0   | 1         |                  |
| open        | 20457 | 395          | 0   | 1         |                  |
| red         | 11609 | 11           | 0   | 4         |                  |
| shut        | 5333  | 207          | 0   | 0         |                  |
| smooth      | 3045  | 5            | 0   | 12        |                  |
| solid       | 3990  | 3            | 0   | 2         |                  |
| sober       | 605   | 0            | 1   | 2         |                  |
| unconscious | 1386  | 29           | 1   | 0         |                  |
| TOTAL       | 97985 | 938          | 6   | 38        |                  |

**Table 15.2** Minimum endpoint closed scale adjectives in Wechsler (2012, p. 125)

| MinEndpt | all  | Resultatives | ECM | make/etc. | causative verb |
|----------|------|--------------|-----|-----------|----------------|
| dirty    | 2591 | 0            | 0   | 41        | 8 make; 33 get |
| wet      | 3787 | 0            | 0   | 12        |                |
| TOTAL    | 6378 | 0            | 0   | 53        |                |

The three tables are for maximal end-point adjectives, minimal end-point adjectives, and open scale adjectives, respectively. In each table, the “all” column shows the total number of tokens of this adjective in the corpus. The “resultative” column shows how many of those tokens occur in resultative constructions where the adjective heads the result phrase. The “ECM” (Exceptional Case Marking) column is for resultatives with non-subcategorized objects. The “make/etc.” column lists the number of occurrences of this adjective with lexical causatives like *make*.

By combining the TOTALs in the three tables, the numbers of maximal end-point adjectives and non-maximal end-point adjectives (=minimal end-point adjectives and open scale adjectives) are as summarized in Table 15.4.

**Table 15.3** Open scale gradable adjectives in Wechsler (2012, p. 126)

| open scale | all   | Resultatives | ECM | make/etc. | causative verb             |
|------------|-------|--------------|-----|-----------|----------------------------|
| crooked    | 314   | 2            | 0   | 1         |                            |
| famous     | 6344  | 0            | 0   | 37        |                            |
| fat        | 4137  | 0            | 0   | 5         |                            |
| ill        | 4808  | 0            | 0   | 65        |                            |
| sleepy     | 401   | 0            | 0   | 19        |                            |
| sore       | 852   | 1            | 0   | 11        |                            |
| tired      | 3989  | 0            | 0   | 18        |                            |
| insane     | 384   | 0            | 0   | 25        | 23 drive; 1 send; 1 make   |
| safe       | 8069  | 0            | 0   | 67        |                            |
| mad        | 2847  | 0            | 0   | 148       | 108 drive; 5 send; 35 make |
| hoarse     | 236   | 0            | 9   | 1         |                            |
| sick       | 4243  | 1            | 12  | 136       |                            |
| soft       | 1107  | 1            | 0   | 0         |                            |
| stupid     | 3083  | 3            | 5   | 6         | 5 make; 1 drive            |
| tender     | 1632  | 0            | 0   | 3         |                            |
| thin       | 5081  | 12           | 0   | 10        |                            |
| TOTAL      | 47527 | 20           | 26  | 552       |                            |

**Table 15.4** Frequency of adjectives by type in resultative versus other functions in Wechsler (2012, p. 126)

|              | All    | Resultative | non-Resultative | % resultative |
|--------------|--------|-------------|-----------------|---------------|
| MaxEndpt     | 97,985 | 938         | 97,047          | 0.957%        |
| Non-MaxEndpt | 53,905 | 20          | 53,885          | 0.037%        |

As shown in the right-most column, the number of resultatives as a percentage of total occurrences of adjectives is much higher for maximal end-point adjectives (almost 1%) than for non-maximal end-point adjectives (less than .04%).

Given these corpus counts and a statistical analysis thereof, Wechsler (2012) states: “Rarely is data this well-behaved in any field of science, let alone data involving human behavior, as in social science or linguistics.” (Wechsler, 2012, p. 130)

### 15.3.2 The “well-behaved” data as an illusion

A closer scrutiny reveals that the data are not as “well-behaved” as Wechsler (2012, 2015) claims them to be, however. First and foremost, the following facts

are entirely missed from the counts: The adjective in question may be modified by such adverbs as *almost* and *half*.<sup>117</sup>

- (29) a. When the dirt storm subsides, seconds later, the vandals have vanished, and the defaced wall has been *scoured almost clean*.  
 b. The palisaded earthwork that once lay across the neck of the promontory, beside which they foregathered, was *beaten half flat*.  
 (both from BNC)

The adjective may be in the comparative form.

- (30) a. I *pulled* my scarf *tighter* and shivered.  
 b. Not only is the end product more valuable than slurry or FYM, but it can be *spread much thinner*.  
 c. Uncle was always wanting to have that tail *cut shorter* and we had quite a few battles about it, but I won and Prince kept his long tail.  
 (all from BNC)

Some adjectives like *open* can be a minimal end-point adjective as well as a maximal end-point adjective.

- (31) Eventually Rosie, the youngest of the nursery maids, *pushed* the door *open a fraction*, a handkerchief to her face. (BNC)

The same is true of *awake*. Thus one can be fully awake as in (32) but one can be also half awake as in (33).

- (32) a. The sleep vanished, and she was *fully awake* at once.  
 b. And suddenly she was *wide awake*. (both from BNC)
- (33) a. He was only *half awake*.  
 b. It was one of those dreams that are more like daydreams; I have them when I am *half awake and half asleep* ... (both from BNC)

This indicates that *awake* can be a minimal endpoint adjective as well as a maximal endpoint one, exactly like *open*.

All these facts that argue against the maximal end-point analysis are conveniently neglected in the counts.

Now a conceivable reply from Wechsler would be that only the adjectival head, not the result phrase as a whole, is subject to the maximal end-point con-

117. The same points can be readily made by using the WB data as well. But the main point of this subsection is to show a flaw in Wechsler's analysis, which is based on the BNC data alone. So only the BNC data are cited in this subsection.

straint. As a matter of fact, a claim to this effect is found in the following passage from Wechsler (2005b):

Interestingly, the requirements that resultatives place on the scalar structure apply to the adjective heading the result phrase, *not to the interpretation of the whole AP in context*. For example, the AP *flat as a pancake* is nongradable, since the value of the degree variable on the adjective has been fixed (hence *\*very flat as a pancake*). But the fact that *flat* is a maximal endpoint gradable adjective is apparently sufficient to license a sentence like *Mary hammered the metal flat as a pancake*.  
(Wechsler, 2005b, p. 470, emphasis mine)

This “solution” is no solution at all, however. First, it is not clear how Wechsler manages to reconcile the claim in this passage with that in the following passage, which is as a response to a counter-example in (34) provided by Boas (2003):

- (34) Dip a soft cloth in the solution, *wring* it *damp* and wipe furniture with it.  
(1998/12/31, Newsgroups: rec.antiques)

Interestingly, it is clear that [(34)] is to be interpreted so that the action of wringing the cloth is making it drier, not damper. In other words, [(34)] appears to violate the constraint posited above, perhaps *due to coercion by the context*. Similarly, *context can sometimes provide a suitable maximum* to a partial or open-scale gradable.  
(Wechsler, 2005b, p. 471, emphasis mine)

Obviously, here Wechsler is claiming that context does come into play, which is logically inconsistent with the claim that the constraint in question does not apply to the interpretation of “the whole AP in context”.<sup>118</sup> That Wechsler has to make two contradictory claims in order to save his maximal end-point constraint seems to suggest that his theory is fundamentally mistaken.

Second, to say that only the adjectival head is subject to the maximal end-point constraint is not logically consistent with the homomorphic mapping analysis, which dictates that the adjectival result phrase, not the adjectival head alone, denote the maximal end-point.

The severity of this problem can be appreciated by noticing that in no other instance of homomorphic mapping is the boundedness requirement limited to the head. Thus it has been well-known in the literature (Verkuyl 1978, Dowty 1979, among many others) that whether the direct object is bounded or not is crucial for the determination of the aspectual property of the VP, as in (35).

118. Thus a reviewer’s suggestion that “those cases which do not seem to conform to Wechsler’s constraint ... involve construal and coercion of some type in order to have the sentence and resultative phrase be interpreted as a maximal end point” is not only very implausible for cases like *push the door open a fraction*. It actually contradicts Wechsler’s observation above concerning *Mary hammered the metal flat as a pancake*.



- (35) a. John ate three apples {in/\*for} two minutes.  
 b. John ate apples {\*in/for} five minutes.

Wechsler (2012, 2015) will have to explain why adjectival result phrases alone should behave differently from other instances of homomorphic mapping.

Now Wechsler's (2012) counts are problematic for a theory-internal reason as well. As noted above, Wechsler (2005a) distinguishes Type I and Type II according to whether the verb is durative or punctual.

Type I: The verb is durative; the resultative predicate is a gradable, closed-scale adjective.

- (36) Mary *hammered* the metal *flat*. (Wechsler, 2005a, p. 264)

Type II: The verb is punctual; the resultative predicate is a non-gradable adjective.

- (37) At another mill, the Fox mill, he and a confederate *shot* the miller *dead*.  
 (Wechsler, 2005a, p. 266)

This is because due to the requirement that the event and the change be coextensive, when the verb is punctual, there is no reason why the adjective should be a maximal end-point one.

Apparently, however, Wechsler does not seem to take the trouble to exclude cases involving punctual verbs from the counts. And as a matter of fact, in the BNC data, some adjectival result phrases like *awake* or *unconscious*, which are mentioned in Table 15.1, may occur with punctual verbs, as shown in (38).

- (38) a. When the phone rang Sam *jolted awake* but for two seconds did not register which phone was ringing.  
 b. He was *knocked unconscious*. (both from BNC)

This means that among the instances counted, examples like (38) are included, where the verbs are clearly punctual.

This is of course a flaw in Wechsler's (2012) counts. Note, however, that a still deeper problem is also found here. That instances like (38) are included in the counts can be taken to indicate that maximal end-point adjectives are "preferred" irrespective of whether the verb is durative or punctual. This might appear to argue in favor of Wechsler's theory, but it does not, for it means that the observed "preference for maximal end-point adjectives" actually has nothing to do with the homomorphic mapping in the first place.

In short, Wechsler's "well-behaved data" are obtained by counting the number of adjectives without paying any attention to whether the whole AP denotes a maximal end-point or not, whether the adjective is really used as a maximal

end-point adjective or not, or whether the verb is durative or punctual. Wechsler is analyzing figures, not actual linguistic facts.

#### 15.4 What is wrong with the maximal end-point constraint?

Thus Wechsler's (2012, 2015) analysis suffers from problem after problem. But the most serious one among them seems to be that adjectival result phrases do not behave as expected as instances of homomorphic mapping. This casts serious doubt on the very application of the homomorphic mapping analysis to adjectival result phrases. From my viewpoint, however, this is rather to be expected.

To see this, let us once again review the fundamental idea behind Wechsler's analysis, which is succinctly summarized in the following exposition. Wechsler (2015) claims that (39a) can be paraphrased as in (39b), and (40a) as in (40b).

- (39) a. Mary wiped the table dry.  
 b. As Mary wiped the table, the table became drier and drier, until it was dry. (Wechsler, 2015, p. 299)
- (40) a. ??Mary wiped the table wet.  
 b. # As Mary wiped the table, the table became wetter and wetter, until it was wet. (Wechsler, 2015, p. 300)

Wechsler (2015) reasons as follows: "Since *wet* has a minimal endpoint, the table becomes wet at the very beginning of the process. As a consequence, the last part of the paraphrase in [(40b)], 'until it was wet,' does not make sense." (Wechsler, 2015, p. 300)

Note that in the present framework, the putative contrast can be described as in Figure 15.2.

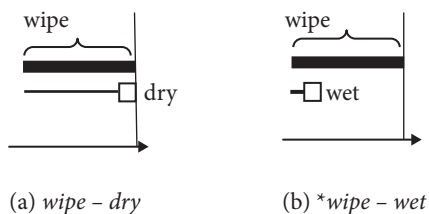


Figure 15.2 Wechsler's view of resultatives

As these figures clearly show, the homomorphic mapping between the adjective's property scale and the temporal structure of the verb-denoted event is based upon

a view that the process leading up to a new state could be construed as a path. Let us refer to this view as a ‘result state as endpoint of path’ thesis.<sup>119</sup>

The ‘result state as endpoint of path’ thesis is not correct, however. As seen in Chapter 13, adjectival result phrases denote states, not paths. Thus *wipe – dry* should be described as in Figure 15.3, instead.

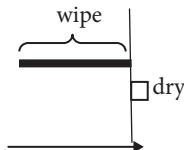


Figure 15.3 *Wipe – dry*

Needless to say, this view of adjectival result phrases has been shown to be able to account for a number of apparently puzzling facts about resultatives and is therefore independently motivated. Now according to this view, the process leading up to a new state is part of a verbal process and is not part of the meaning of the adjectival result phrase, flatly contradicting the ‘result state as endpoint of path’ thesis.<sup>120</sup>

It can thus be concluded that Wechsler’s (2005a, 2005b, 2012, 2015) maximal end-point analysis is based on a mistaken view of resultatives.<sup>121</sup>

## 15.5 Conclusion

This chapter critically examined Wechsler’s (2005a, 2005b, 2012, 2015) maximal end-point constraint, which is claimed to account for the selectional restrictions on adjectival result phrases (*He wiped it {clean/dry/smooth/\*damp/\*dirty/\*stain*

119. A reviewer comments that “previous accounts by Boas (2003) and Wechsler (2005a) acknowledge the fact that APs and PPs describe changes differently.” This comment is mistaken in both counts. First, as already seen in Chapter 13, Boas (2003) simply observes that the distribution of APs differs from that of PPs, not that APs and PPs describe changes differently. If Boas (2003) really acknowledged so, he would not have dismissed the distributional differences as a matter of “conventionalization.” Second, Wechsler (2005a) is committed to the ‘result phrase as endpoint of path’ thesis, which means that APs and PPs describe the result state in fundamentally the same way, the only difference being that APs denote the final goal of the abstract path.

120. Notice, further, that becoming dry is not necessarily durative, and therefore the *until* clause in (39b) is not essential. Thus one can easily imagine wiping the table dry with a single stroke. This suggests that the “becoming drier and drier” stage is not essential to this resultative expression.

121. The ‘result state as endpoint of path’ thesis is assumed by a number of scholars, besides Wechsler. See Chapter 23.

*ed/\*wet*). It is not difficult to find counter-examples to the maximal end-point constraint, and the “solutions” which Wechsler proposes actually force the theory to be internally incoherent as a version of homomorphic mapping accounts.

From the viewpoint of the force-recipient account, however, it comes as no surprise that Wechsler’s maximal-endpoint constraint suffers from a number of problems. After all, this constraint is built on the ‘result state as endpoint of a path’ thesis, which is mistaken.



## Selectional restrictions on adjectival result phrases

### 16.0 Introduction

Given that Wechsler's (2005a, 2005b, 2012, 2015) maximal end-point constraint on adjectival result phrases is untenable, a natural question that arises is how the observed selectional restrictions on the adjectival result phrase as seen in (1) are to be accounted for, then.

- (1) a. wipe the table {clean/dry/\*dirty/\*wet}  
 b. hammer the metal {flat/smooth/into the ground/\*beautiful/\*safe/\*tubular}  
 c. The puddle froze {solid/\*slippery/\*dangerous}. (Wechsler, 2005a, p. 256)

This chapter addresses this issue. It turns out that the observed selectional restrictions can be accounted for along the lines of the proposed force-recipient account.

### 16.1 Subcategorized object cases

#### 16.1.1 How the result state is brought about

The last chapter has shown that it is not surprising that the maximal end-point constraint should suffer from problem after problem, because the assumption on which it is based is flawed from the viewpoint of the force-recipient account. Pursuing this line of thought, it follows that a key to the correct analysis should be found in the force-recipient account as well.

Notice that our force-recipient account has already uncovered two important characteristics of resultatives. First, we have seen in Chapter 3 that the verbal force is responsible for bringing about the result state. As a matter of fact, if the post-verbal NP fails to be a force-recipient, a resultative is not well-formed. Thus (2a) is acceptable but (2b) is not, despite the fact that the field may indeed be beaten by the people's feet in both cases.

- (2) a. They trampled the field flat.  
 b. \*They crossed the field flat. (Halliday, 1994, p. 148)

Second, we have seen in Chapter 13 that adjectival result phrases and prepositional result phrases code the result differently. When the verbal force takes effect, the result state comes to obtain rather instantaneously in the case of adjectival result phrases, as shown in Figure 16.1, but in the case of prepositional result phrases the focus is on the beginning of a process that will later lead to a state, as shown in Figure 16.2.

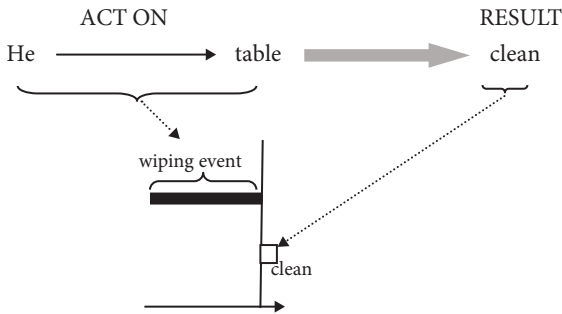


Figure 16.1 Causal chain and aspectual integration for *wipe - clean*

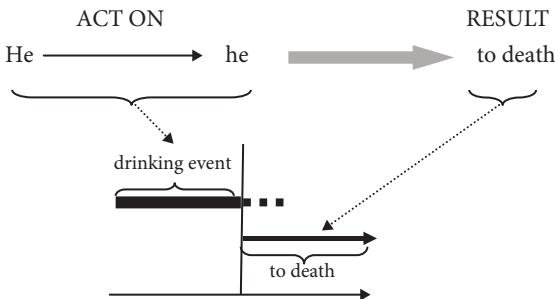


Figure 16.2 Causal chain and aspectual integration for *drink oneself to death*

Taken together, these two findings mean that the result phrase expresses an immediate result of the verbal action when the result phrase is an AP, but need not do so when the result phrase is a PP.

Indeed, we have already seen that the kind of result state is determined by the kind of force applied to the post-verbal NP. Thus, as already observed in Chapter 3, the verb *roll* may be accompanied by the result phrase *smooth* as in (3a) or *flat* as in (3b) because both the 'ROLL-AS-RUB' force and the 'ROLL-AS-PRESS' force are inherent in the verb meaning.

- (3) a. It's like a parking lot out there, *rolled smooth* by rocks and wave action.  
 b. In three hours we managed to get the contractors to build an earth ramp, *roll it flat*, cover it with gravel ... (both from BNC)

By contrast, *roll* cannot be accompanied by *bare*, because *roll* does not involve a force that is responsible for causing something to become bare.

- (4) \*During the spring thaw, the boulders rolled the hillside bare.  
(Levin & Rappaport Hovav, 1995, p. 209)

Thus the kind of result state possible is severely constrained by the verb meaning.

### 16.1.2 Not a direct result but a consequence

With this close correlation between the verb meaning and the result state in mind, let us examine the observed selectional restrictions on adjectival result phrases. Let us start with (5).

- (5) The puddle froze {solid/\*slippery/\*dangerous}. (Wechsler, 2005a, p. 256)

As already seen in Chapter 9, the verb *freeze* is a change-of-state verb. So the sentences in (5) are clearly instances of ‘change verb’ resultatives. With ‘change verb’ resultatives, the result phrase further specifies an entailed change. But ‘change verb’ resultatives are no different from non-change verb resultatives in that the verbal force is responsible for bringing about the change, and hence for a further specification of the change. So it is still true that the state named by the result phrase is a direct result of the verbal force.

The contrast between *solid*, on the one hand, and *slippery* and *dangerous*, on the other hand, indicates that the state of being solid counts as a direct result of the puddle freezing, but that of being slippery or being dangerous does not.

- (6) The puddle froze *solid*.

Notice that being a direct result of a physical force means that the change follows *physical law* as well. Notice further that physical law simply dictates that when a liquid is frozen, it turns into a solid object, not that it turns into a slippery object or a dangerous object.<sup>122</sup> Rather, the property of being slippery or dangerous involves a judgment made on the basis of the purely physical state of the frozen puddle. So the intended meanings of \**freeze – slippery/dangerous* may be paraphrased as in (7).

- (7) The puddle froze (solid), and therefore it was now {slippery/dangerous}.

Objectively speaking, the frozen puddle may be said to be solid and slippery/dangerous at the same time, but there is asymmetry between being solid and being slippery/dangerous. As evidence, while one can base the predication of the puddle

122. An anonymous reviewer observes that another result state of freezing is *freezing over*, that is, the body of water has a surface crust of ice but is still liquid under it.



as being slippery/dangerous on the state of the puddle being solid as in (8a), one cannot base the predication of the puddle as being solid on the state of the puddle being slippery or dangerous as in (8b).<sup>123</sup>

- (8) a. The puddle froze solid, and therefore it was now {slippery/dangerous}.  
 b. # The puddle became {slippery/dangerous}, and therefore it was now solid.

In order to capture this asymmetry, I will distinguish a *consequence* from a result, the latter of which has been used free of any tinge of subjective opinion or judgment throughout this book. Now being solid is a direct result of the puddle freezing, but being slippery or dangerous is a consequence of the puddle freezing.

The other cases of unacceptable result phrases can be accounted for similarly. Thus while *beautiful*, *safe*, and *tubular* cannot accompany the verb *hammer* as result phrases, all the three adjectives denote consequences of hammering the metal flat.

- (9) hammer the metal {flat/smooth/into the ground/\*beautiful/\*safe/\*tubular}  
 (Wechsler, 2005a, p. 256)

And indeed, the intended meanings of these unacceptable resultatives can be spelled out as in (10a). The asymmetry between being flat and being beautiful, safe, or tubular is clear, as confirmed by the anomaly of (10b).<sup>124</sup>

- (10) a. He hammered the metal flat, and therefore it was now {beautiful/safe/tubular}.  
 b. # He caused the metal to become {beautiful/safe/tubular}, and therefore it was now flat.

This account extends to data other than those cited by Wechsler (2005a). Thus Jackendoff (1990) cites (11) as unacceptable.

123. (8b) might be improved if it is understood along the lines of the following sentence.

- (i) The puddle is {slippery/dangerous}, so it must have frozen (solid).

But clearly this abduction reading is irrelevant to the current discussion.

124. Boas (2011) observes that while (i) is unacceptable, this sentence significantly improves when it is embedded in a particular context, as shown in (ii).

- (i) ?Ed hammered the metal *safe*. (Boas, 2011, p. 1271)  
 (ii) The door of Ed's old Dodge had a piece of metal sticking out. When getting out of the car, Ed had cut himself on the metal and had to go to the hospital to get stitches. The next day, Ed hammered the metal *safe*. (Boas, 2011, p. 1272)

However, *hammer – safe* is not attested in the corpora. Besides, as a reviewer observes, (ii) sounds rather strange.

- (11) \*The vase broke *worthless*. (Jackendoff, 1990, p. 240)

Instead, *break into pieces* is acceptable.

- (12) The vase broke *into pieces*.

Again, *into pieces* serves as a result phrase because it expresses a direct result of the verbal force. But *worthless* cannot serve as a result phrase, because it expresses a consequence of the breaking event. This difference can be confirmed by the contrast between (13a) and (13b).<sup>125</sup>

- (13) a. The vase broke into pieces, and therefore it was now worthless.  
b. #The vase became worthless, and therefore it was now in pieces.

Similarly, Boas (2003) cites the following contrast in (14).

- (14) a. \*Jonathan painted the house *expensive*.  
b. Jonathan painted the house *red*. (Boas, 2003, p. 120)

Again, *red* expresses a direct result of the verbal force, but *expensive* a consequence of painting the house red, as confirmed by the following contrast.

- (15) a. Jonathan painted the house red, and therefore it was now expensive.  
b. #The house became expensive, and therefore it was now red.

The following contrast which is noted in Fellbaum (2013) can be accounted for similarly.

- (16) a. \*Kim shredded the document *illegible*.  
b. Kim shredded the documents into small pieces. (Fellbaum, 2013, p. 375)

As Fellbaum (2013) rightly observes, *shred* denotes a transformation. So *into small pieces*, which further specifies a change in appearance, expresses a direct result of the verbal force.<sup>126</sup> But *illegible* expresses a consequence of shredding the document into pieces, as confirmed by the following contrast.

125. The unacceptability of (i) is to be accounted for in exactly the same way.

- (i) \*Kelly broke the dishes *valueless*. (Rappaport Hovav & Levin, 1998, p. 122)

Clearly, *valueless* expresses a consequence of breaking the dishes (into pieces), as indicated in the following paraphrase:

- (ii) Kelly broke the dishes into pieces, and therefore they were now valueless.

126. Note that this analysis is in line with the characterization of the *into* result phrase proposed in Chapter 12.

- (17) a. Kim shredded the document into small pieces, and therefore it was now illegible.  
 b. #The document became illegible, and therefore it was now in pieces.

In short, in the unacceptable sentences the putative result phrases *slippery*, *dangerous*, *worthless*, *expensive*, and *illegible* actually denote consequences of a change of state, not direct results of verbal forces.

## 16.2 Wipe – wet<sup>127</sup>

### 16.2.1 The wiping force once again

Now, of the sentences cited in Wechsler (2005a), the following still remain to be accounted for.

- (18) wipe the table {clean/dry/\*dirty/\*wet} (Wechsler, 2005a, p. 256)

From the viewpoint of the force-recipient account, the unacceptable result states should be those that are not direct results of the verbal force. So we should start by looking at the verbal force of *wipe*.

As has already been discussed a number of times, the verb meaning of *wipe* is something like “to move something on a surface while in continuous contact with the surface,” as depicted in Figure 16.3.



Figure 16.3 Wipe the crumbs off the table

- (19) a. He wiped the table clean.  
 b. He wiped the crumbs off the table.

Crucially, motion while in continuous contact with a surface is likely to lead to removing something from the surface. Thus the resultative caused-motion sentence involving *wipe* is accompanied by source PPs, as in (20).

- (20) a. Kay wiped the fingerprints *from the counter*.  
 b. Kay wiped the fingerprints *out of the cupboard*.  
 c. Kay wiped the fingerprints *off of the wall*.

(Levin & Rappaport Hovav, 1991, pp. 127–128)

It might be argued that a goal PP may appear as in (21b), besides a source PP as in (21a).

127. An earlier version of the analysis developed in this section appeared in Iwata (2008c).

- (21) a. Kay wiped the fingerprints from the counter.  
 b. Kay wiped the crumbs onto the floor. (Levin & Rappaport Hovav, 1991)

But the goal PP merely specifies the location of an entity subsequent to the removal. In fact, many *wipe*-class verbs behave this way, as pointed out by Nemoto (2005).

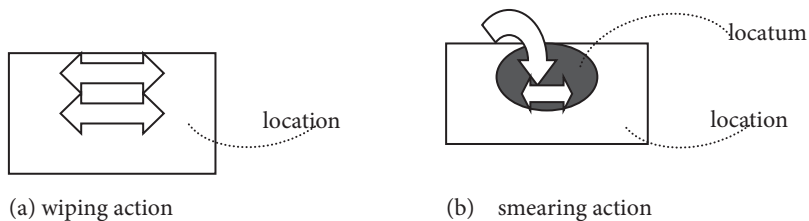
- (22) a. John brushed the crumbs off the table onto the floor.  
 b. John shoveled snow off the pavement into the gutter.  
 c. John wiped the dirt from the plate onto the table. (Nemoto, 2005, p. 132)

Thus it is a fact that wiping is an action that naturally leads to removing something from a surface.<sup>128</sup>

This characteristic of *wipe* may be better appreciated by comparing *wipe* with locative alternation verbs like *spray* or *smear* (Pinker 1989, Iwata 2005, 2008a, among others).

- (23) a. John sprayed paint onto the wall.  
 b. John sprayed the wall with paint.

Both *wipe*, on the one hand, and *spray* and *smear*, on the other, involve exerting force over a surface by moving something forward and backward on that surface, with that something being in contact with the surface. Yet these verbs significantly differ as to the effect they have on the surface. In the case of *smear*, the entity caused to move over a surface is typically a liquid or semi-liquid and is intended to stick to the surface, as shown in Figure 16.4.



**Figure 16.4** Wiping vs. smearing

128. Levin & Rappaport Hovav (1991) cite the following example, which appears to indicate that wiping may also be done to add something onto a surface.

- (i) Kay wiped the polish onto the table. (Levin & Rappaport Hovav, 1991, p. 136)

This sentence does not seem to be authentic, however. This type of *wipe* cannot be attested either in the BNC or the WB, and all of my informants find this sentence strange (or even funny). Rather, my informants unanimously observe that they would simply use (iia) or (iib).

- (ii) a. Kay rubbed the polish onto the table.  
 b. Kay polished the table.

- (24) a. He smeared paint onto the wall.  
 b. He smeared the wall with paint.

Thus locative alternation verbs like *spray* or *smear* denote an event of adding substance to a location.

It follows, then, that the lexical semantics of *wipe* is almost the exact opposite of that of *spray* or *smear*: The former is likely to lead to removing something from a location, but the latter means adding substance to a location. This is why *spray* and *wipe* cannot exchange the syntactic frames they occur in, as in (25).

- (25) a. \*John sprayed paint from the wall.  
 b. \*Kay wiped the table with the crumbs.

Let us now return to resultatives. It is quite reasonable to suppose that resultatives like (26) are constrained by the lexical semantics of *wipe*, in the same way resultative caused-motion sentences like (20) are.

- (26) Kay wiped the table {clean/dry}.

Given this reasoning, it is now clear why *wipe* allows the result phrases it does: *Clean* and *dry* may occur in the result phrase of *wipe*, because both *clean* and *dry* mean the state of being free of something. By contrast, *wet* and *dirty* are normally not allowed to occur in this position because becoming wet or dirty means that something has been added.

- (27) \*Kay wiped the table {wet/dirty}.

Thus the selectional restriction on the result phrase of *wipe* is due to the fact that wiping is categorized as an event of causing removal. The contrast between (29a) and (29b) is parallel to that between (28a) and (28b). In both cases, the prepositional result phrase or the adjectival result phrase is acceptable only when the described change of location or change of state is compatible with an event of removing something.

- (28) a. Kay wiped the fingerprints *from the counter*.  
 b. \*Kay wiped the table *with the crumbs*.

- (29) a. Kay wiped the table {clean/dry}.  
 b. \*Kay wiped the table {wet/dirty}.

## 16.2.2 When and why *wipe – wet* is possible

### 16.2.2.1 When *wipe* becomes a verb of adding substance

But there is an apparent problem to this account. While no instance of *wipe – wet* is attested in the three corpora (BNC, WB, and COCA), a sizable number of instances of *wipe – wet* are found on the web.

- (30) a. ... which is why dilute concentrations of H<sub>2</sub>O<sub>2</sub> are applied topically for not-that-long to your ears, but your bins will be *wiped wet with IPA* [(=*isopropyl alcohol*)].  
(<http://www.shroomery.org/forums/showflat.php/Cat/0/Number/1977343>)
- b. If the dirt level is high, the plastic floor covering can be *wiped wet with water* to which a suitable plastic floor cleaner or disinfectant has been added in accordance with manufacturers' instructions.  
([http://www.epsresidents.com/pages/practical.php?content\\_id=46&parent\\_id=38](http://www.epsresidents.com/pages/practical.php?content_id=46&parent_id=38))

This might appear to pose a serious challenge to the proposed account, which holds that *wipe – wet* is unacceptable because *wet* as a result phrase is incompatible with the meaning of *wipe*.

But this is not the case. The preceding section has shown that *wipe* cannot take *wet* as a result phrase because wiping is not categorized as an event of adding substance. Following this reasoning, if one can manage to interpret *wipe* as a verb of adding substance to a location, then it should be possible for *wipe* to be accompanied by *wet* as a result phrase.

Let us begin by observing that there are actually two ways of wiping something. One is as illustrated in (31), where one moves something in continuous contact with a surface, so as to remove dirt, moisture, etc. from the surface.

- (31) a. I leaned across his wife and wiped his forehead *with my handkerchief*.  
b. The embalmer looked uncomfortable, and wiped the back of his neck *with a cloth*.  
(both from BNC)

With this type of *wipe*, *wipe*<sub>1</sub>, such things as a handkerchief or a cloth appear after *with*.

But a closer scrutiny reveals that there is a second type of *wipe*, *wipe*<sub>2</sub>. With *wipe*<sub>2</sub>, a *with*-phrase introduces such things as antiseptic or a water solution, and the meaning is to apply a chemical solution over a surface, so as to disinfect the surface. Although the number is small, *wipe*<sub>2</sub> is attested in both the BNC and the WB, as shown below.

- (32) a. She shook the thermometer vigorously, then wiped the end *with antiseptic*.  
 b. Wipe around the door seal *with disinfectant* to prevent a build-up of debris and germs. (both from BNC)
- (33) a. Clean out your fridge once a week and wipe down *with soapy water* to keep bacteria under control.  
 b. When the smell has gone, wipe the inside of the oven *with a warm, mild solution* of washing-up liquid, then dry with a paper towel.  
 c. You can neutralise the smell by wiping the plaster *with a very weak bleach solution*, putting on a drop of Nilodor, a special deodorant concentrate, or spraying on Neutradol (see What to buy). (all from WB)

In both cases, the wiping activity is done with the intent of causing the surface to become “clean.”

Now corresponding to the two types of *wipe*, there are two ways of wiping something clean. Thus the sentences in (34) are those based on *wipe*<sub>1</sub>, with the meaning “to do a ‘WIPE-AS-RUB’ action on a surface, and as a result the surface is clean.”

- (34) a. Then *wipe it clean with a soft cloth* and polish in the way you usually do.  
 b. After you have finished using the measuring device, you should *wipe it clean with a tissue*. (both from WB)

Here, the force exerted over a surface is the direct cause of the surface becoming clean. Hence an event of removing something from a location.

On the other hand, the sentences in (35) are those based on *wipe*<sub>2</sub>, with the meaning “to apply a chemical solution over a surface, and as a result the surface is clean.”

- (35) a. The outside of the bottles or tubes should be *wiped clean of contaminating blood with 70% isopropyl alcohol*.  
 (http://www.childlab.com/Lab/Client/collection.cfm)  
 b. The metallic foils were *wiped clean of grease with trichloroethylene, acetone and water* before they were used in the electrolytic cell.  
 (http://www.springerlink.com/content/x4317776rv363u80/)

Here the application of a chemical solution is the direct cause of the surface becoming clean. Hence an event of adding substance to a location.

Crucially, therefore, with *wipe*<sub>2</sub>, the wiping activity as a whole is categorized as an event of adding substance. Although the state change of becoming clean involves the removal of substance as expressed by the *of*-PPs in (35), it serves only a secondary, subordinate role in the whole event.

So it is no wonder that it may be accompanied by the result phrase *wet*. In fact, all the instances of *wipe* – *wet* found on the web are of this second type.

- (36) a. ... which is why dilute concentrations of H<sub>2</sub>O<sub>2</sub> are applied topically for not-that-long to your ears, but your bins will be wiped wet *with IPA* [(=isopropyl alcohol)].  
(<http://www.shroomery.org/forums/showflat.php/Cat/0/Number/1977343>)
- b. If the dirt level is high, the plastic floor covering can be *wiped wet with water to which a suitable plastic floor cleaner or disinfectant has been added* in accordance with manufacturers' instructions.  
([http://www.epsresidents.com/pages/practical.php?content\\_id=46&&parent\\_id=38](http://www.epsresidents.com/pages/practical.php?content_id=46&&parent_id=38))

### 16.2.2.2 Rub *and* brush

Thus the reason why *wipe* can take as its result phrase either *clean/dry* or *wet* is that *wipe* can be construed either as a verb of surface contact or as a verb of adding substance. This line of reasoning leads us to make the following prediction: If there are still other verbs besides *wipe* which can be construed either as a verb of surface contact or as a verb of adding substance, then such verbs should also be able to take either *clean/dry* or *wet* as result phrases. This prediction is in fact borne out.

Levin (1993, p. 125) includes *rub* among the *wipe*-class verbs. But she also includes this verb among the locative alternation verbs (Levin, 1993, p. 53). As a matter of fact, *rub* does allow for the two variants of the locative alternation, as shown in (37).

- (37) a. Every day he *rubbed* some ointment *on* his leg.  
b. Then Aunt Margaret, moaning, would *rub* him *with* ointment in spite of his protests, or stick him with Band-Aid, if the skin was broken.  
(both from BNC)

Given that *rub* can be a locative alternation verb, besides a verb of surface contact, *rub* should be available for accompaniment by *clean/dry* and *wet* as a result phrase. This is indeed the case.

- (38) a. You kept expecting her to spit on a handkerchief and *rub* his face *clean*.  
b. Dry hair in a towel turban. Never *rub* it *dry* – it causes knotting and tangling.  
(both from WB)
- (39) Each area was *rubbed wet* with isopropyl alcohol for approximately 90 seconds and the results were evaluated.  
(<http://arcadearchive.com/pinball/magic/magic.htm>)



Similarly with *brush*. Just like *rub*, Levin (1993) simply lists *brush* both in the class of *wipe*-class verbs and that of locative alternation verbs, without saying anything about why this verb admits a dual classification. Nemoto (2005), however, observes that the *brush* in (40) and the *brush* in (41) are semantically distinct.

- (40) a. John brushed the crumbs onto the floor.  
 b. John brushed the crumbs off the table.
- (41) a. John brushed melted butter over the loaves.  
 b. John brushed the loaves with melted butter. (Nemoto 2005)

Nemoto, calling the *brush* in (40) and that in (41) ‘sweeping *brush*’ and ‘smearing *brush*’, respectively, observes that sweeping *brush* means to brush with the intention of moving some foreign substance away from the surface, whereas smearing *brush* means to distribute some liquid over a surface by brushing.

Now we can find instances of *brush* accompanied by *clean/dry* and *wet*, as in (42) and (43).

- (42) a. They are easily *brushed clean*. (BNC)  
 b. Then she *brushed* her hair *dry*, dressed in her last clean blouse and best slacks, and went for a walk around the motel ... (WB)
- (43) I had always been the family pip-squeak-rascally, pigeon-toed, with a shrill laugh like a tea kettle hitting a boil. But from this day on I would *brush* my hair back *wet*, wear a coat with tails; would fasten my boots with gleaming, oblong buckles. (COCA)

This strongly confirms that a verb’s event type categorization is responsible for the selectional restriction on an accompanying result phrase.

Thus while the existence of *wipe* – *wet* may appear to be a problem to the proposed account, it actually confirms the fundamental claim that the seeming selectional restrictions on adjectival result phrases come from the compatibility between the verb meaning and the result state.

Consequently, all the relevant facts which Wechsler (2005a, 2005b, 2012, 2015) claims can be explained by his maximal end-point constraint can now be accounted for in my force-recipient account.

## 16.3 Fake object cases

### 16.3.1 Goldberg (1995), Vanden Wyngaerd (2001)

But this is not the end of the story. Wechsler’s (2005a, 2005b, 2012, 2015) maximal end-point constraint is targeted only at his “Control” resultatives, i.e. resultatives

with subcategorized objects and their intransitive counterparts. A couple of other scholars advance what appears to be essentially a maximal end-point constraint for resultatives with fake objects. Therefore, this section examines the analyses proposed by these scholars.

First comes Goldberg (1995), who claims that the adjectives that can appear as a result phrase have to be nongradable:<sup>129</sup> “Most of the adjectives which can occur in the construction can be independently classified as having a clearly delimited lower bound and are therefore typically *nongradable* (Sapir 1944).” (Goldberg, 1995, p. 195)

As evidence, Goldberg (1995) observes that the adjectives which may appear as result phrases resist modification by *a little*.

- (44) a. ?? a little sober  
 b. ?? a little flat/smooth  
 c. ?? a little alive/dead  
 d. ?? a little asleep/awake  
 e. ?? a little full/empty  
 f. ?? a little free (Goldberg, 1995, p. 195)

Goldberg (1995) adds that “Intuitively, one cannot be a little sober, because one is either entirely sober or not sober: there is, all things being equal, no grey area.” (Goldberg, 1995, p. 195)

Now *sick* and *hoarse*, despite appearing as result phrases as in (45), may be modified by *a little*.

- (45) a. He ate himself sick.  
 b. He talked himself hoarse. (Goldberg, 1995, p. 196)
- (46) a. little sick  
 b. a little hoarse (Goldberg, 1995, p. 195)

According to Goldberg, when used in the fake object construction, *sick* and *hoarse* are interpreted as delimiting the clear boundary beyond which the activity cannot continue. In other words, *sick* and *hoarse* are coerced into their delimited interpretations. So *sick* and *hoarse* cannot be modified by *a little* when they appear as result phrases.

- (47) a. ? He ate himself a little sick.  
 b. ? He talked himself a little hoarse. (Goldberg, 1995, p. 196)

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129. To use this term in this way is problematic, as Wechsler (2005b) points out. But this point will be put aside for the moment.

Goldberg (1995) concludes as follows:

Therefore, it is fair to say that the resultative of the fake object construction codes a clearly delimited endpoint. The endpoint may be on some absolute scale (in the case of inherently nongradable adjectives) or on a scale of functionality, in which case continued functioning is impossible beyond it. (Goldberg, 1995, p. 196)

This constraint is called an End-of-Scale Constraint.

Vanden Wyngaerd (2001) advances a similar proposal. Vanden Wyngaerd (2001) distinguishes bounded scale adjectives (e.g. *full*, *loose*, *open*) from unbounded scale adjectives (e.g. *big*, *fast*, *slow*, *poor*): Bounded scale adjectives are compatible with *completely*, and unbounded scale adjectives with *very*, as shown in (48) and (49).

- (48) a. The hawsers are {\*very/completely} loose.  
 b. The bottle is {\*very/completely} empty.
- (49) a. The office is {very/\*completely} big.  
 b. That car is {very/\*completely} {fast/slow}.

Now adjectival result phrases may be modified by *completely* but not by *very*.

- (50) a. Tim danced himself {completely/almost/half/\*very} tired.  
 b. Max shouted himself {completely/almost/half/\*very} hoarse.  
 c. The joggers ran the pavement {completely/almost/half/\*very} thin.  
 d. Charley laughed himself {completely/almost/half/\*very} silly.

(Vanden Wyngaerd, 2001, p. 64)

Vanden Wyngaerd (2001) concludes as in (51):

- (51) Restriction on resultatives: Resultative predicates denote a bounded scale.

(Vanden Wyngaerd, 2001, p. 64)

### 16.3.2 Where the apparent delimited endpoint comes from

Neither Goldberg (1995) nor Vanden Wyngaerd (2001) arrives at a valid conclusion, however. Most seriously, the resultative sentences cited are clearly intended to be instances of hyperbole (Colston 1997, Colston & Keller 1998). And these hyperbolic expressions are characterized by the fact that they make claims involving the end points on scales, like *every*, *all*, *none*, *best*, *least*, *as good as it gets*, *always*, *perfectly*, *brand new*, and *absolutely* (Norrick, 2004, p. 1729).

As a matter of fact, Goldberg (1995, p. 196) explicitly states of (52) that “The agent ate to the point where he could eat no more, or talked to the point where he could talk no more.”

- (52) a. He ate himself sick.  
b. He talked himself hoarse.

But then, it is a truism that an end-of-scale degree cannot be modified by *very* or *a little*.

Thus what is meant to be captured by Goldberg's (1995) End-of-Scale Constraint and Vanden Wyngaerd's (2001) restriction in (51) is actually a characteristic of hyperbole, not one of resultatives.

Furthermore, while both Goldberg's (1995) and Vanden Wyngaerd's (2001) expositions will have us believe that fake object resultatives allow for only a hyperbolic interpretation, this is not the case. Thus, *stupid* is actually attested as result phrases in their literal interpretation. We have seen in Chapter 6 that *eat oneself stupid* is attested as an expression for low quality food eating as in (53).

- (53) Sidebar Students who fuel their studies with fast food have something serious to worry about: They may literally be *eating themselves stupid*.  
(COCA)

What is more, counter-examples to the End-of-Scale constraint are abundantly attested in the corpora. Thus in (54) *tipsy* clearly does not involve a delimited endpoint.

- (54) Men who *drank themselves tipsy* solved more problems demanding verbal resourcefulness in less time than sober guys did, a new study finds. (COCA)

Goldberg (1995, p. 197) claims that counter-examples like these are "one-shot novel extensions from a grammaticalized pattern." It is quite far-fetched to claim that all of the following attested examples can be thus handled, however. Thus *happy*, *sad*, *beautiful*, *fat*, and *dangerous* are found to appear as result phrases, despite the fact that all these adjectives do not code a delimited endpoint.

- (55) a. For years he drifted, homeless, *drinking himself happy*.  
b. You've *drunk yourself sad*, that's what you've done ...  
c. They include *Drink Yourself Beautiful*: Virtually every beauty factor – skin, hair, bones, weight, breast health and overall vitality is affected by the beverages we drink every day.  
d. Drinking 1 can of soda a day can make you 10 pounds fatter a year. Don't *drink yourself FAT*.  
e. He was a hell-raiser. He'd fight and drink a lot of white whiskey. He would *drink himself dangerous*.  
(all from COCA)

Thus just as there is no such thing as the maximal end-point constraint for resultatives with subcategorized objects, there is no such thing as the End-of-Scale Constraint or the boundedness constraint for resultatives with fake objects.

## 16.4 Conclusion

This chapter accounted for the observed selectional restrictions on adjectival result phrases. It follows from the force-recipient account that the result phrase expresses a direct result of the verbal force when the result phrase is an AP, but need not do so when the result phrase is a PP. That the adjectival result phrase must express a direct result of the verbal force, which is so simple and might appear to be merely self-evident, actually allows us to account for the observed selectional facts. Thus the selectional restrictions on adjectival result phrases should be accounted for in terms of the verbal semantics, not a scalarity of adjectives.

# Temporal dependence reconsidered

## 17.0 Introduction

In Chapter 2 our discussion started with the recognition that an ‘X acts on Y’-approach is preferable over an ‘X’s V-ing Y causes Y to become Z’-approach and an ‘X causes Y to become Z by V-ing Y’-approach. This ‘X acts on Y’-approach is due to Rappaport Hovav & Levin (2001), who in turn borrow the idea of causal chain from Croft (1990, 1991). So the present force-recipient account owes its fundamental insight to these previous studies.

Nevertheless, the present force-recipient account has developed into a theory which is rather different from Rappaport Hovav & Levin’s (2001). While the present account explores the possibilities of a force-recipient account to the full and demonstrates that a number of apparently puzzling facts or unresolved problems concerning resultatives can be accounted for along the lines of a force-recipient account, this is clearly not the case with Rappaport Hovav & Levin’s (2001) theory. Rather, Rappaport Hovav & Levin (2001) emphasize the importance of another notion, i.e. temporal dependence vs. temporal independence, in attempting a systematic account of resultatives.

As for Croft, he has recently developed a more comprehensive theory that combines a causal chain with aspectual structure (Croft 2012). It so happens that the two types of resultatives which Rappaport Hovav & Levin (2001) attempt to handle in terms of the “temporal dependence vs. temporal independence” contrast are claimed to be straightforwardly accommodated in that theory.

As temporal dependence has to do with the relationship between the result state and the causing event, this chapter seems to be a nice place to discuss these two (potentially) competing theories to the proposed force-recipient account. In this chapter, therefore, I will examine whether Rappaport Hovav & Levin’s (2001) theory of temporal dependency indeed does the job they claim it to do. Also, we will see what my theory has to say about Croft’s (2012) theory, if it is to handle a number of facts uncovered in the discussion up to this point.

## 17.1 Rappaport Hovav & Levin (2001)

### 17.1.1 Two types of resultatives

Rappaport Hovav & Levin (2001) distinguish several types of resultatives, as shown in (1)–(5).

Object-oriented transitive-based pattern

- (1) Lancelot had discovered my empty yogurt container and was working hard to *lick it clean* ...

Reflexive intransitive-based pattern

- (2) She sang herself hoarse.

Nonsubcategorized intransitive-based pattern

- (3) the dog barked him awake ...

Bare XP intransitive-based pattern

- (4) a. The pond froze solid.  
b. The garage door rumbled open.

Subject-oriented transitive-based pattern

- (5) The wise men followed the star out of Bethlehem.

(adapted from Rappaport Hovav & Levin, 2001, pp. 767–770)

Of these, Rappaport Hovav & Levin (2001) focus on two types, i.e. the reflexive intransitive-based pattern as in (2) and the bare XP intransitive-based pattern as in (4), and argue that the contrast between these types can be characterized in terms of the contrast between simple event structure vs. complex event structure, saying that “Resultatives with the mediating reflexive have a complex event structure, while those with bare XPs do not.” (Rappaport Hovav & Levin, 2001, p. 775)

The “simple event structure vs. complex event structure” contrast is claimed to reflect the contrast between temporally dependent events vs. temporally independent events: “In the bare XP pattern the progress of the event denoted by the verb and the progress towards the achievement of the result state are temporally dependent, while in the reflexive pattern they need not be.” (Rappaport Hovav & Levin, 2001, p. 775)

According to Rappaport Hovav & Levin (2001), therefore, the distinction between the “bare XP pattern vs. reflexive pattern” follows from the temporal (in) dependence of the subevents.

### 17.1.2 Temporal coextensiveness

Rappaport Hovav & Levin (2001) give substance to this claim by making the following observations. As for the temporally dependent cases, they argue as follows: “The subevents are temporally coextensive and unfold at the same rate. The event denoted by the verb begins when the progress towards the result begins, and it necessarily extends until the result is achieved.” (Rappaport Hovav & Levin, 2001, p. 775)

A clear case of temporal dependence comes from the sentences in (6).

- (6) a. The trapdoor {banged/thudded} shut.  
b. The gate {creaked/rumbled} shut.

(Rappaport Hovav & Levin, 2001, p. 776)

Rappaport Hovav & Levin (2001) observe the aspectual correlation between the banging or thudding event and the shutting.

In isolation, *bang* and *thud* denote punctual events, while *creak* and *rumble* denote durative events. When the first two verbs are found in the bare XP pattern, as in [(6a)], the shutting is interpreted as close to punctual, and so is the event as a whole. In contrast, when the other two verbs are used in this pattern, as in [(6b)], the shutting is interpreted as durative, and so is the event as a whole.

(Rappaport Hovav & Levin, 2001, p. 776)

On the other hand, such a correlation is absent from temporally independent cases. Thus Rappaport Hovav & Levin (2001) claim that in (7), “the hoarseness is achieved some time after the singing is over” (Rappaport Hovav & Levin, 2001, p. 775).

- (7) Sam sang enthusiastically during the class play. He woke up hoarse the next morning and said, “Well, I guess I’ve sung myself hoarse.”

They also observe that in (8) “it is most likely that the path to being out of a job did not start when the partying began” (Rappaport Hovav & Levin, 2001, p. 775).

- (8) Matt Leblanc has his Friends’ co-stars worried he is about to party himself out of a job.

According to Rappaport Hovav & Levin (2001), then, the choice between bare XP pattern and reflexive pattern depends on the temporal dependence/independence contrast. Thus (9a) is acceptable but (9b) is not, because the subevents involved are temporally independent.

- (9) a. Your niece sang herself hoarse.  
b. \*Your niece sang hoarse.

(adapted from Rappaport Hovav & Levin, 2001, pp. 767–768)



On the other hand, (10a) is acceptable but (10b) is not, because the subevents involved are temporally dependent.

- (10) a. Robin danced out of the room.  
 b. ??Robin danced herself out of the room.

(Rappaport Hovav & Levin, 2001, p. 782)

But the two patterns are not necessarily mutually exclusive. Sometimes both patterns are available.

- (11) a. One woman gets up to leave, but Red-Eyes grabs her roughly by the arm and pulls her into his lap. She *wiggles free*, but remains seated obediently beside him.  
 b. “Mr Duggan became alarmed about being caught in the door of a lift which was about to begin its descent and *wiggled himself free*.”
- (12) a. ... one of his race cars *wiggled loose* inside the transporter and caused damage to both of his cars.  
 b. I had it [the snake] pinned and when I lifted it up into the bag, it *wiggled itself loose* and just sank its fangs on my knuckle.
- (13) a. a man grabbed and groped her and tried to get under her clothing, but she *kicked free* and fled.  
 b. Laughing uproariously, Beckett lunged around the office with one leg of his pants on fire, trying to *kick himself free*.

(Rappaport Hovav & Levin, 2001, p. 774)

According to Rappaport Hovav & Levin (2001), this is because the subevents involved may be either temporally dependent or temporally independent: “If a particular verb – result XP combination could represent either temporally dependent or independent events, then it should be found in both patterns.” (Rappaport Hovav & Levin, 2001, p. 777)

Rappaport Hovav & Levin (2001) claim that the predicted contrast between temporally dependent and temporally independent holds of these pairs. Thus in (11a) the wiggling and the becoming free unfold together, while in (11b) the man wiggles for some time before he is no longer stuck in the door.

## 17.2 Temporal dependence is only part of the story

### 17.2.1 Problems with Rappaport Hovav & Levin (2001)

Rappaport Hovav & Levin's (2001) theory suffers from a number of problems. First, while their observation about (14) seems to be correct, their observation about (15) is not strictly correct.

- (14) a. The trapdoor {banged/thudded} shut.  
 b. The gate {creaked/rumbled} shut.

(Rappaport Hovav & Levin, 2001, p. 776)

- (15) a. Sam sang enthusiastically during the class play. He woke up hoarse the next morning and said, "Well, I guess I've sung myself hoarse."  
 b. Matt Leblanc has his Friends' co-stars worried he is about to party himself out of a job.

(Rappaport Hovav & Levin, 2001, p. 775)

Given the account of resultatives with *open/shut* in Chapter 11, it is no wonder that the subevents are temporally dependent in (14), as will be shown in 21.6.3. But as already seen in Chapter 14, the putative temporal gap in (15a) stems from the fact that Sam did not notice that he had become hoarse until he woke up the next morning; and in (15b) there is indeed a temporal gap between Matt Leblanc's partying and his getting fired, but this is because the result phrase is prepositional. Both (15a) and (15b) can be characterized in terms of the notion "temporally independent" because the verbal event and the change of state are cleanly distinguished, but not in the way Rappaport Hovav & Levin (2001) claim them to be.

Second, and more seriously, Rappaport Hovav & Levin's (2001) account of the choice between the two types is not consistent. Their proposed account would be consistent if the two patterns strictly corresponded to the temporally dependent and independent events, that is, the bare XP pattern allowed for a temporally dependent interpretation alone, and the reflexive pattern a temporally independent interpretation alone, as summarized in Table 17.1.

Table 17.1 Ideal correlation between the types of resultatives and temporal dependence

|                   | temporally dependent | temporally independent |
|-------------------|----------------------|------------------------|
| Bare XP pattern   | OK                   | Not possible           |
| Reflexive pattern | Not possible         | OK                     |

Actually, however, the contrast between the two patterns does not match the "temporally dependent and temporally independent" contrast, as a careful reading of the following passage reveals: "In the bare XP pattern the progress of the event denoted by the verb and the progress towards the achievement of the result state

are temporally dependent, while in the reflexive pattern they *need not be*.” (Rappaport Hovav & Levin, 2001, p. 775, my emphasis)

This is tantamount to admitting that while the bare XP pattern allows for a temporally dependent interpretation alone, the reflexive pattern allows for both temporally dependent and temporally independent interpretations, as summarized in Table 17.2.

**Table 17.2** Correlation as observed in RH & L (2001)

|                   | temporally dependent | temporally independent |
|-------------------|----------------------|------------------------|
| Bare XP pattern   | OK                   | Not possible           |
| Reflexive pattern | OK                   | OK                     |

In fact, in observing the difference between (16a) and (16b), Rappaport Hovav & Levin (2001) explicitly admit that this is the case.

- (16) a. One woman gets up to leave, but Red-Eyes grabs her roughly by the arm and pulls her into his lap. She *wiggles free*, but remains seated obediently beside him.
- b. “Mr Duggan became alarmed about being caught in the door of a lift which was about to begin its descent and *wriggled himself free*.”  
(Rappaport Hovav & Levin, 2001, p. 777)

They observe that the bare XP example in (16a) shows the predicted temporal dependence between subevents: “The wriggling and the becoming free unfold together; the woman’s wriggling, which bit by bit loosens Red-Eye’s grasp, is her becoming free.” (Rappaport Hovav & Levin, 2001, p. 777)

But their observation about (16b) goes as follows:

Although in [(16b)] *the wriggling and becoming free could be temporally coextensive*, this sentence also has a natural interpretation where the events are temporally independent: the man wriggles for some time before he is no longer stuck in the door.  
(Rappaport Hovav & Levin, 2001, p. 777, my emphasis)

Thus while *wriggle free* allows for a temporally dependent interpretation alone, *wriggle oneself free* allows for both interpretations, as summarized in Table 17.3.

**Table 17.3** *Wriggle free* vs. *wriggle oneself free*

|                      | temporally dependent | temporally independent |
|----------------------|----------------------|------------------------|
| wriggle free         | OK                   | Not possible           |
| wriggle oneself free | OK                   | OK                     |

But given that the reflexive pattern allows for both interpretations, Rappaport Hovav & Levin (2001) can no longer maintain that the contrast between (17) and (18) noted above can be accounted for in terms of the “temporal dependence vs. independence” contrast.

- (17) a. Your niece sang herself hoarse.  
 b. \*Your niece sang hoarse.
- (18) a. Robin danced out of the room.  
 b. ??Robin danced herself out of the room.

The reflexive resultative in (17a) should allow for both interpretations, like *wriggle oneself free*, so (17b) should be acceptable on a temporally dependent interpretation, exactly like *wriggle free*. But this is not the case.

### 17.2.2 The real difference between *wriggle free* and *wriggle oneself free*

But why can *wriggle* appear in both of the patterns as in (19), then?

- (19) a. One woman gets up to leave, but Red-Eyes grabs her roughly by the arm and pulls her into his lap. She *wriggles free*, but remains seated obediently beside him.  
 b. “Mr Duggan became alarmed about being caught in the door of a lift which was about to begin its descent and *wriggled himself free*.”  
 (Rappaport Hovav & Levin, 2001, p. 774)

A clue comes from the fact that actually, *wriggle oneself free* is not an instance of non-subcategorized object resultatives, contrary to Rappaport Hovav & Levin (2001). Note that *wriggle* may appear transitively as in (20).<sup>130</sup>

130. Rappaport Hovav & Levin (2001, p. 774, footnote 10) note the possibility that *wriggle oneself free* and *wiggle oneself loose* may not be fake reflexive resultatives, but reject it on the following grounds:

- ... *wiggle* and *wriggle* do not appear with an isolated reflexive object (\**I wiggled/wriggled myself*); they almost exclusively take body-part objects (*The child wiggled his ears*).  
 (Rappaport Hovav & Levin, 2001, p. 774)

However, it is not impossible to come across instances of an isolated reflexive object.

- (i) But the only thing about him, that could be fixed upon as remarkable, was his staff, which bore the likeness of a great black snake, so curiously wrought, that it might almost be seen to twist and *wriggle itself*, like a living serpent. (WB)

Furthermore, the post-verbal NPs are not strictly limited to body-part terms.

- (ii) She *wriggled her skirt down over her thighs* ... (BNC)

- (20) a. He slid his arms into the sleeves and *wriggled his shoulders* until the stiffened collar stood up around his ears.  
 b. All he could do was smile and *wriggle his toes* in delight.  
 (both from BNC)

This means that the following resultatives involving *wriggle* are instances of Transitive resultatives with subcategorized objects.

- (21) a. Then common sense and anger got the better of her and she firmed her mouth and concentrated on gently trying to *wriggle* the key *free*.  
 b. He *wriggled* his shoulder *free* and stepped backwards, away from the Hare-woman and closer to Jinny.  
 (both from BNC)

It follows therefore that *oneself* in *wriggle oneself free* is a reflexive version of a subcategorized object, not a non-subcategorized object. It is just that the verb *wriggle* has both transitive and intransitive variants, and the result phrase *free* accompanies those two variants. In this respect, *wriggle* is like *swing*, which may appear both intransitively and transitively as in (22), and which may appear in corresponding Intransitive and Transitive resultatives as in (23).<sup>131</sup>

- (22) a. Grace's dangling leg *swung* to and fro.  
 b. She sat up quickly, *swinging* her legs onto the soft, thick carpet.  
 (both from WB)
- (23) a. His legs *swung free* as they stampeded across the inner hallway of the maisonette block.  
 b. She twisted round, *swung a leg free*, and slid inelegantly down over the rump of the horse, who stamped and shied.  
 (both from WB)

---

(iii) Now she stood off to the side, practically in the passageway that led back to the kitchen, waiting for the father's reaction. He *wriggled a huge chunk into his mouth* and chewed for what seemed like minutes.  
 (COCA)

131. Note further that *wriggle - free* is also like *work - to exhaustion*. As will be shown in Chapter 18, *to exhaustion* may accompany verbs like *work* with or without a fake reflexive.

- (i) a. Then the plague returned. We *worked to exhaustion* and past it ...  
 b. "I can tell you for certain that Mr. Libby *worked himself to exhaustion* day after day."  
 (both from COCA)

This is because *work* has both transitive and intransitive variants, and the result phrase *to exhaustion* accompanies those two variants.

- (ii) She was deceptively demure, unrelentingly tenacious, and *worked me to exhaustion*.  
 (COCA)

Now note that both variants are available for *wriggle* because this verb denotes a body-internal motion. It is possible to regard the wriggling act either as acting upon one's body-parts (e.g. shoulders, toes) or in terms of the whole body undergoing self-contained motion (in the sense of Talmy 2000b). This is why *wriggle* may appear in both Transitive and Intransitive resultatives.

The same is true of *wiggle*, which is also observed to appear in both Transitive and Intransitive resultatives as in (24).

- (24) a. ... one of his race cars *wiggled loose* inside the transporter and caused damage to both of his cars.  
 b. 'I had it [the snake] pinned and when I lifted it up into the bag, it *wiggled itself loose* and just sank its fangs on my knuckle.  
 (Rappaport Hovav & Levin, 2001, p. 774)

This verb also appears transitively as well.

- (25) a. Then *wiggle* the finger and thumb joints.  
 b. She *wiggled* her toes and gave a sigh of relief. (both from BNC)

### 17.2.3 *Kick free*

As for *kick – free*, which is also cited by Rappaport Hovav & Levin (2001) as in (26), the situation is slightly different.

- (26) a. a man grabbed and groped her and tried to get under her clothing, but she *kicked free* and fled.  
 b. Laughing uproariously, Beckett lunged around the office with one leg of his pants on fire, trying to *kick himself free*.  
 (Rappaport Hovav & Levin, 2001, p. 774)

*Kick himself free* is indeed a resultative with a fake reflexive object, in that he is not kicking himself, as Rappaport Hovav & Levin (2001) rightly observe. Rather, in kicking his legs he is exerting a force that serves to throw a constraining entity away.

But this means that the verb *kick* is rather different from *wriggle* or *wiggle*, in that *kick* is basically a transitive verb. A question that arises is how come *kick* appears in both Transitive and Intransitive resultatives, like *wriggle* and *wiggle*?

It turns out that there is nothing surprising about the fact that *kick* is found to be used intransitively when accompanied by *free*, for this happens with other transitive verbs as well. Thus both *pull* and *wrench* are uncontroversial transitive verbs, but when accompanied by the result phrase *free*, they may be used not only transitively as in (27) but also intransitively as in (28).

- (27) a. She *pulled* her arm *free* and walked to the booth, lifting the receiver off the wall.  
 b. The waitress stepped back from him and *wrenched* her arm *free*.  
 (both from BNC)
- (28) a. Maggie was stunned and Ana gave a bitter cry and *pulled free*, hurrying to the house and out of sight.  
 b. She tried to *wrench free*, but he held her effortlessly ... (both from BNC)

This is not limited to *free*. The same is true of *loose*. Thus Talmy (2000b) proposes the semantic structure for (29a) as in (29b).

- (29) a. The bone pulled loose from its socket.  
 b. [the bone MOVED loose from its socket] WITH-THE-CAUSE-OF [(something) pulled on the bone] (Talmy, 2000b, p. 30)

These are actually part of a larger pattern. Since Fraser (1976), it has been well-known that particles may have an intransitivizing effect.

- (30) a. They *dug in* and sustained the attack without loss of life.  
 b. He *caught on* quickly.  
 c. The distraught couple *split up*. (Fraser, 1976, p. 8)

Adjectives like *free* or *loose* behave like particles, as will be pointed out in Chapter 19. It is quite conceivable that the intransitive *kick free* in (26a) results from this intransitivizing effect.

To sum up, it is no wonder that certain verbs appear in both Transitive and Intransitive resultatives. After all, these verbs allow for both intransitive and transitive variants, lexically (*wriggle*, *wiggle*) or otherwise (*kick*).

#### 17.2.4 When the subevents are temporally co-extensive

Now let us get back to the discussion of temporal dependence vs. temporal independence. While Rappaport Hovav & Levin (2001) attempt to correlate the temporal dependence vs. temporal independence distinction with the bare XP pattern vs. reflexive pattern contrast, the actual facts are more complex. On the one hand, certain Intransitive resultatives can indeed be characterized in terms of temporal dependence as in (31), but others cannot, in that two distinct events are involved as in (32).

- (31) a. The pond froze solid.  
 b. ≠ The pond became solid by freezing. (Levin & Rappaport Hovav 1999)
- (32) a. The coats steamed dry.  
 b. The coats got dry by steaming. (Rappaport Hovav & Levin, 2001, p. 781)

On the other hand, some Transitive resultatives allow for a temporally independent interpretation alone as in (33), but others allow for both interpretations as in (34).

- (33) a. Your niece sang herself hoarse.  
 b. \*Your niece sang hoarse.  
 (adapted from Rappaport Hovav & Levin, 2001, pp. 767–768)

- (34) a. One woman gets up to leave, but Red-Eyes grabs her roughly by the arm and pulls her into his lap. She *wriggles free*, but remains seated obediently beside him.  
 b. “Mr Duggan became alarmed about being caught in the door of a lift which was about to begin its descent and *wriggled himself free*.”  
 (Rappaport Hovav & Levin, 2001, p. 774)

Rappaport Hovav & Levin (2001) are certainly right in observing that when the verb entails a change and the result phrase further specifies the change as in (31a), the verbal event and the change are co-extensive. But it seems to me that they emphasize the contribution of verb meaning alone, without realizing that a co-extensiveness between the verbal event and the change may also arise because of the nature of the change brought about. Thus in the uncontroversial cases of temporal dependence (e.g. *The trapdoor banged shut*), the result phrases are *open* and *shut*. As already seen in Chapter 11, *open* and *shut* by their very nature require the co-extensiveness between the internalized translational motion and the state changes.

In order to account for when and why the verbal event and the change of state are co-extensive, therefore, not only verb meanings but also the nature of result phrases need to be taken into consideration.

### 17.3 Croft (2012)<sup>132</sup>

#### 17.3.1 Integrating force-dynamic and aspectual representations of event structure

William Croft has been developing a theory of causal chain over the years (Croft 1990, 1991, 1998). Thus *Sue broke the coconut for Greg with a hammer* receives a force-dynamic representation as follows:

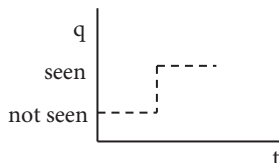
- (35) Sue broke the coconut for Greg with a hammer.  
 Sue → hammer → coconut .....→ Greg  
 SBJ            A.OBL            OBJ            S.OBL

132. Part of the material presented herein originally appeared in Iwata (2014c).



Sue acts on the hammer (she grasps it), the hammer acts on the coconut (it impacts it), and the coconut “acts on” Greg (its breaking benefits him in some way) (Croft, 1998, p. 198).

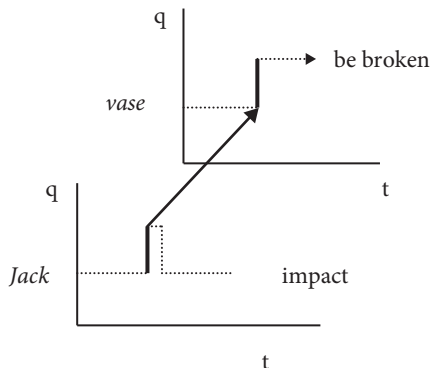
Now Croft (2012) develops a theory that combines a causal chain with aspectual structure. On the assumption that the unfolding of events is the sequence of qualitative states, Croft proposes a two-dimensional representation. Thus the aspectual structure of, for instance, a seeing event is represented as in Figure 17.1.



**Figure 17.1** The two-dimensional representation of aspect (Croft, 2012, p. 53)

The  $x$  axis is the time dimension ( $t$ ), and the  $y$  axis is the qualitative state dimension ( $q$ ). The time dimension is continuous, while the qualitative dimension may or may not be continuous, depending on what qualitative states are defined for the event. Thus seeing has only two defined states on  $q$ : not seeing something and seeing something.

A causal chain is combined with this two-dimensional aspectual structure in the following way. A complex verbal semantic structure is decomposed into subevents, which are related to each other causally. Each subevent is represented in terms of the two-dimensional model, and the causal chain linking the individual participant subevents is represented in a third dimension, as in Figure 17.2.

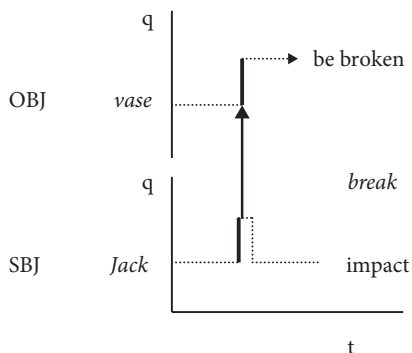


**Figure 17.2** The three-dimensional representation of causal and aspectual structure

Since the decomposed subevent is represented along with the aspectual structure, each causal subevent is the aspectual profile/contour for that participant, with its associated temporal and qualitative scales. Thus each subevent expresses what

each individual participant does or undergoes during the course of the event. At the same time, each participant's subevent stands in a causal relation to the subevent of the next participant in the causal chain.

Thus force-dynamic and aspectual representations are successfully integrated into the three-dimensional representation. But one practical problem is that it is difficult to apprehend on a two-dimensional display. So Croft adopts the representation in Figure 17.3, where both the causal and qualitative state dimensions are aligned onto the vertical dimension.



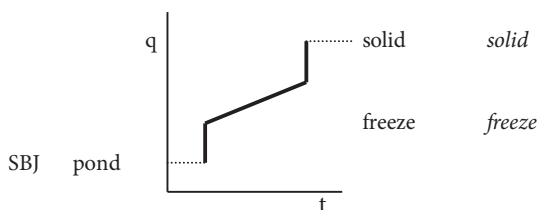
**Figure 17.3** Three-dimensional representation modified for two-dimensional display

In this modified representation, the causal chain like (35) finds its place on the vertical dimension, i.e. it proceeds from bottom to top.

Croft (2012) applies this three-dimensional model to various phenomena, including resultatives. According to Croft, Rappaport Hovav & Levin's (2001) dichotomy between temporally dependent vs. independent types, as exemplified in (36), can be accommodated as follows.

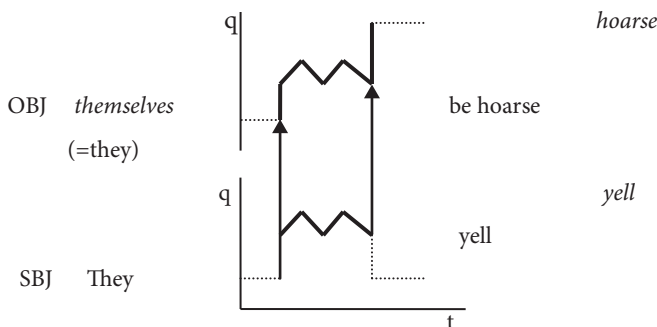
- (36) a. The river froze solid.                      Temporally dependent  
 b. The dog barked him awake.                    Temporally independent

The prototypical bare XP resultative denotes an incremental accomplishment, that is, an incremental directed change process that leads to a result state (Croft, 2012, p. 329). Thus *The pond froze solid* is analyzed as in Figure 17.4.



**Figure 17.4** *The pond froze solid* (Croft, 2012, p. 329)

In contrast, the prototypical fake NP/reflexive resultative denotes a nonincremental accomplishment, that is, an undirected activity that ends in a directed achievement to the result state (Croft, 2012, p. 329). Thus *They yelled themselves hoarse* is analyzed as in Figure 17.5



**Figure 17.5** *They yelled themselves hoarse*

Croft (2012) summarizes his analysis as follows: “The contrast between Bare XP and Fake NP/Reflexive resultatives is ... a difference in the aspectual type of the event phase between the event boundaries: directed and undirected, respectively.” (Croft, 2012, p. 330)

### 17.3.2 Modifications needed

Croft’s (2012) proposed model and my proposed account are fundamentally the same, in that the notion of force-transmission plays a crucial role. There is nothing surprising about this. After all, it is Croft who initially noted the usefulness of causal chain in order to account for various linguistic phenomena involving verbs.

But from my viewpoint, there are a number of modifications needed for Croft’s theory, at least in order to account for English resultatives. To illustrate, let us start by comparing the two theories. Note that in the representations which I have so far employed, the causal chain and aspectual structure are simply put into correspondence, not integrated, as shown in Figure 17.6.

At the moment, I am not very willing to integrate the causal chain and aspectual structure. The reason is that if the two structures are to be integrated in the manner indicated by Croft, the representations will have to be so complex that specific points being made (e.g. the post-verbal NP being a force-recipient, the AP/PP distinction of result phrases) may not be immediately obvious.

How complex will Croft’s representations become, then? Notice that when the verbal event is durative, the application of force is continuous. Thus *He wiped the table clean* should be represented as in Figure 17.7.

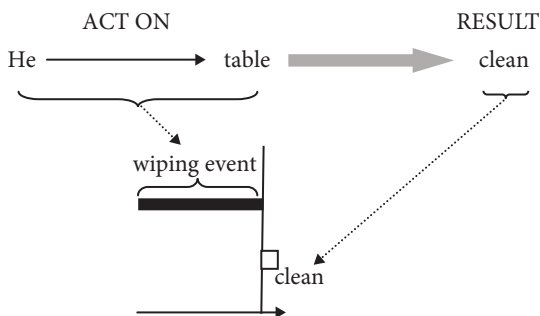


Figure 17.6 Causal chain and aspectual integration for *wipe - clean*

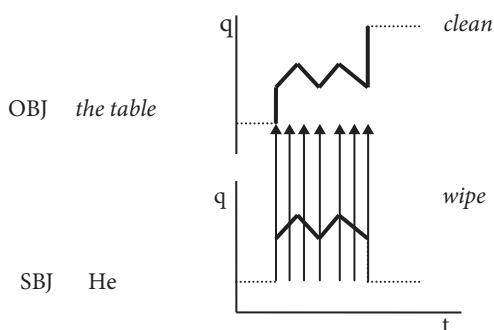


Figure 17.7 *He wiped the table clean*

This alone might be a minor problem. But there are a number of findings uncovered in the course of our analysis of resultatives up to this point, which pose challenging problems to the basic assumptions of Croft (2012). First, resultatives are not necessarily telic. Thus while *shout oneself hoarse* may get a telic reading as in (37), an atelic reading is also possible, as illustrated in (38).

(37) He could've *shouted himself hoarse* before anyone inside heard him. (COCA)

- (38) a. Scared of the dark and freezing in a T-shirt and track suit bottoms,  
Matthew *shouted himself hoarse until he was discovered*. (BNC)
- b. I lay there and *screamed myself hoarse for a while ...* (COCA)

Recall our discussion in Chapter 6. Previous analyses have tended to focus exclusively on such examples as *hammer the metal flat* or *wipe the table clean*. These resultatives are indeed telic, but this is because of the nature of the activities involved. One usually stops hammering the metal when the metal becomes flat, because it is meaningless to continue hammering it; similarly, one is likely to stop wiping the table once the table has become clean. In other words, both hammering the metal and wiping the table are goal-directed activities, which is why the result phrase serves to mark the endpoint of an activity.

But shouting is not an activity done in order to become hoarse, and one can continue to shout even after one becomes hoarse. Thus in examples like (38), the application of force may go on for some time even after the force takes effect. Accordingly, *He shouted himself hoarse* (on an atelic reading) is to be represented as in Figure 17.8.

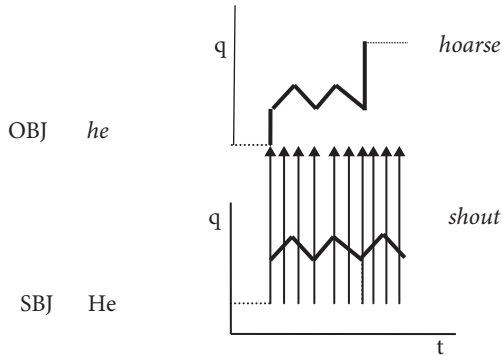


Figure 17.8 *He shouted himself hoarse* (atelic reading)

Next, adjectival result phrases and prepositional result phrases describe changes differently, as has become clear in discussing the choice of result phrases in Chapter 13.

- (39) a. He wiped his plate {*clean*/\**to cleanliness*}.  
 b. He sang the baby {\**asleep*/*to sleep*}.  
 c. Bob shot him {*dead*/*to death*}.

Thus resultatives with *to* result phrases need to be represented differentially from those with adjectival result phrases, as shown in Figure 17.9.

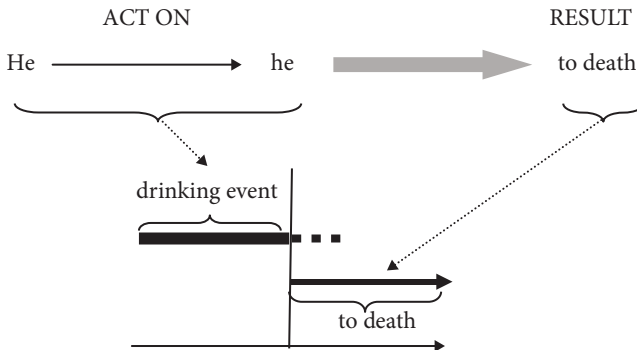


Figure 17.9 Causal chain and aspectual integration for *drink oneself to death*

Crucially, *to death* expresses a process leading up to a result state, so in Croft's theory it should be represented by a diagonal line that proceeds on both the time dimension and the qualitative state dimension, as in Figure 17.10.

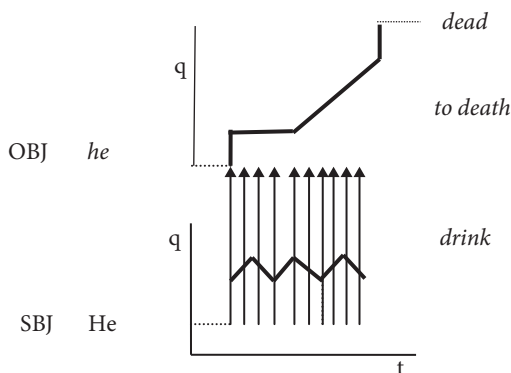


Figure 17.10 He drank himself to death

There is also a third problem to Croft's theory, although this issue has not been touched upon in my analysis of resultatives so far. That is, contrary to the widely held assumption in the literature on resultatives (e.g. Levin & Rappaport Hovav, 1995, pp. 61–62), resultatives may be stative. Notice that the sentences in (40) count as 'change verb' resultatives: The result phrases *long*, *straight and level* and *taut* further specify the changes entailed in the verb meanings.

- (40) a. A red and orange sunset spread across the sky, and the shadows *stretched long* across the path.  
 b. Behind the house, the railway embankment *stretches straight and level* in both directions as far as the eye can see, which is a long way.  
 c. The beautiful brocade coat *stretched taut* across the back, spreading to an intimidating width with his angry, indrawn breath. (all from BNC)

Significantly, these resultatives are stative.<sup>133</sup>

How are these stative resultatives to be accounted for? Quite probably, the sentences in (40) are to be analyzed as subjective motion sentences, as illustrated

133. Goldberg & Jackendoff (2004, p. 543) call the following sentences "stative path resultatives," but I do not see why these sentences deserve to be called "resultatives." These are simple extent sentences with path PPs and are no different from those like (41).

- (i) a. The road zigzagged down the hill.  
 b. The rope stretched over the pulley.  
 c. The weights stretched the rope over the pulley.

in (41) (Langacker 1986, Matsumoto 1996a, 1996b, Iwata 1998, Talmy 2000a, 2000b, among others).

(41) The road {goes into/zigzags through/enters/reaches} the forest.

These extent sentences, in contrast to motion sentences, crucially lack the notion of passage of time. To see this, let us note Jackendoff's (1983) following observation about (42a) and (42b): "In a motion sentence, the subject is asserted to have traversed the path, covering each point of the path in order over time. By contrast, in [(42b)], the subject is asserted to occupy the entire path at a single point in time." (Jackendoff, 1983, p. 173)

- (42) a. Amy went from Denver to Indianapolis.  
b. Highway 36 goes from Denver to Indianapolis.

(Jackendoff, 1983, p. 173)

Accordingly, the situations denoted by (42a) and (42b) may be described as in Figures 17.11 and 17.12, respectively.

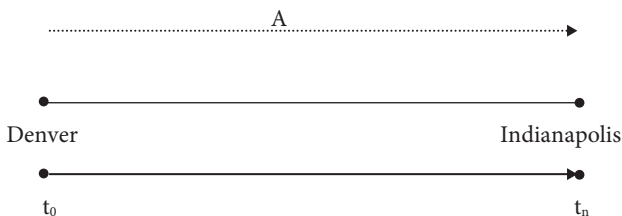


Figure 17.11 *Amy went from Denver to Indianapolis*

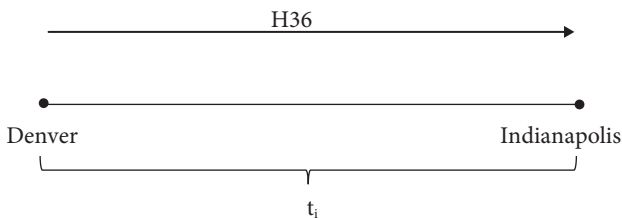


Figure 17.12 *Highway 36 goes from Denver to Indianapolis*

Figure 17.11 consists of three lines. The topmost line designates the mover, where A stands for Amy, our traveler in (42a). The middle and the bottom lines are the spatial path and the time line, respectively. Arrows are employed for the mover and the time line to express directionality. The path is depicted by a straight line because the path leading from Denver to Indianapolis has no inherent directionality. The mover line is expressed as a dotted line in order to emphasize the succession of changes of locational state from one unit of time to the next. In Figure 17.12, by

contrast, H36 stands for Highway 36. Neither the road nor the path has inherent directionality, so that both are represented by unbroken lines. The road occupies the entire path at a single point in time ( $t_i$ ).

Now Figure 17.11 can be broken down into a sequence of component states as in Figure 17.13, where A is at a given location ( $l_k$ ) at a given time ( $t_k$ ).

$$\begin{pmatrix} A \\ l_1 \\ t_1 \end{pmatrix} \begin{pmatrix} A \\ l_2 \\ t_2 \end{pmatrix} \begin{pmatrix} A \\ l_3 \\ t_3 \end{pmatrix} \quad \bullet \quad \bullet \quad \bullet \quad \begin{pmatrix} A \\ l_{n-1} \\ t_{n-1} \end{pmatrix} \begin{pmatrix} A \\ l_n \\ t_n \end{pmatrix}$$

Figure 17.13 A sequence of component states in a motion sentence

Similarly, Figure 17.12 minus the temporal location can be broken down into a sequence of component states as in Figure 17.14, where a given part of H ( $H_k$ ) is at a given location ( $l_k$ ).

$$\begin{pmatrix} H_1 \\ l_1 \end{pmatrix} \begin{pmatrix} H_2 \\ l_2 \end{pmatrix} \begin{pmatrix} H_3 \\ l_3 \end{pmatrix} \quad \bullet \quad \bullet \quad \bullet \quad \begin{pmatrix} H_{n-1} \\ l_{n-1} \end{pmatrix} \begin{pmatrix} H_n \\ l_n \end{pmatrix}$$

Figure 17.14 A sequence of component states in an extent sentence

Figure 17.14 gives us a clear idea of what is going on in extent sentences: The conceptualizer conceives of a sequence of component states in a given order. As far as I can see, this is what is meant by cognitive linguists (Langacker 1986, Matsumoto 1996a, 1996b, Talmy 2000a, 2000b) when they say that the conceptualizer mentally moves along the path.

At the same time, note that this alone does not distinguish extent sentences from sentences describing such activities as reading a text, which also involves the conceptualizer's mental movement. In fact, nothing precludes the possibility that the conceptualizer mentally moves along the path in understanding motion sentences like (42a) as well. Rather, what is crucial is that this mental movement is in tandem with the passage of time in the case of reading a text, but is independent of the passage of (objective) time in the case of extent sentences. It can be thus safely concluded that a defining characteristic of extent sentences is that the temporal dimension is lacking.<sup>134</sup>

This means that extent sentences in general, and stative resultatives as exemplified in (40) in particular, cannot be handled in Croft's theory, at least in its current version, which characterizes change by means of the time dimension besides the qualitative state dimension.

134. For further arguments supporting this characterization, see Iwata (1998, Chapter 4).



But how can we characterize a change independent of the passage of time? Evidently, what amounts to Langacker's "summary scanning" needs to be incorporated into the theory. Let me illustrate with the pair in (43).

- (43) a. The shadow stretched long. (eventive)  
 b. The shadow stretches long. (stative)

(43a) under an eventive reading receives essentially the same analysis as Intransitive 'change verb' resultatives (e.g. *The lake froze solid*): It is an incremental directed change process that leads to a result state, as in Figure 17.15.

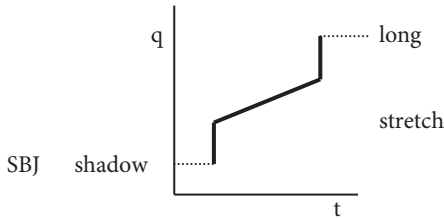


Figure 17.15 *The shadow stretched long* (eventive)

Now (43b) is an extent sentence in which the configuration obtained by construing this change by a "summary scanning" mode holds. One conceivable way to represent (43b) is, therefore, to characterize the shadow's stretching long without the temporal dimension and then embed it into a representation for acquired states (in Croft's classification), as shown in Figure 17.16.

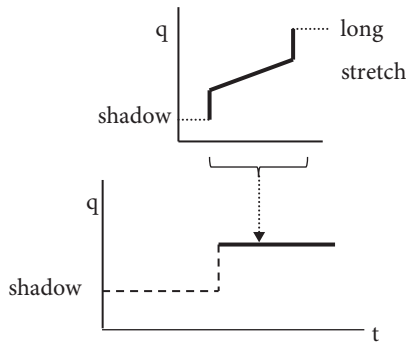


Figure 17.16 *The shadow stretches long* (stative)

Thus from my viewpoint, all these modifications are necessary for Croft's theory.<sup>135</sup>

## 17.4 Conclusion

This chapter considered two (potentially) competing theories to the proposed force-recipient account: Rappaport Hovav & Levin (2001) and Croft (2012). Rappaport Hovav & Levin's (2001) attempt to characterize the bare XP pattern vs. reflexive pattern contrast in terms of the temporally dependent vs. temporally independent contrast, which might appear to be elegant and attractive, is nevertheless problematic. While it is true that with certain Intransitive resultatives (e.g. *The lake froze solid*) the verbal event and the change are temporally co-extensive and unfold at the same rate, this is not a feature shared by all Intransitive resultatives. Nor is the temporal independence a necessary feature of all Transitive resultatives.

As for Croft's (2012) theory, certain resultatives may be handled in terms of his aspectual structure in addition to the causal chain, as he claims. Nevertheless, not all resultatives can be satisfactorily accounted for along those lines: Resultatives are not necessarily telic; adjectival result phrases and prepositional result phrases describe a change differently; and there are even stative resultatives. Croft's theory needs to be modified accordingly.

Additionally, the discussion in this chapter has served to make clear my stance towards aspect. In the literature, it has been customary to analyze resultatives by means of aspect, on the assumption that resultatives are necessarily telic (Rothstein 2004, Wechsler 2005a, 2005b, Rappaport Hovav 2008, to name just a few). Those familiar with all these previous studies may well be wondering why I make only occasional references to aspect (e.g. in the discussion of the AP/PP contrast of result phrases in Chapter 13). The reason is that while I admit that aspectual properties are important characteristics of resultatives, telicity is not as essential to resultatives as seems to be believed in the literature so far.

The type of resultative that is commonly cited in the literature and which many scholars base their analyses on consists of durative verbs and adjectival result phrases (e.g. *hammer the metal flat*, *wipe the table clean*). But resultatives may be

135. Spurious resultatives are also problematic to Croft's current theory. As amply demonstrated in Chapter 9, (ia) cannot be paraphrased with (ib), because the result phrase is not strictly predicated of the post-verbal NP entity.

- (i) a. He cut the meat thin.  
 b. \*He caused the meat to become thin by cutting it. (Washio, 1997, p. 17)

But maybe this is not a big problem, for the solution proposed in Chapter 9 can be easily incorporated into Croft's theory.

formed from punctual verbs (e.g. *shoot him dead*). Thus the view that resultatives necessarily turn atelic events into telic ones is rather simple-minded.

In fact, resultatives are not necessarily telic, and there are even stative resultatives, as demonstrated in this chapter. All this indicates that aspectual properties result from a complex interplay of various factors, and that aspect alone does not carry us very far in accounting for resultatives. And note that many findings about resultatives uncovered in the discussion so far can indeed be stated without mention of aspectual structure at all.

PART VII

## **Resultatives that are not based on force-transmission**



## *Princess Anne rides to victory*

### 18.0 Introduction to Part VII

We have so far seen that many things about resultatives can be uncovered by our force-recipient account. But there are still sentences that have been cited in the literature as resultatives, or could be cited as resultatives, but which do not conform to the characterization in terms of force-transmission. In Part VII and Part VIII we will turn to these “resultatives.”

It will be shown that these “resultatives” are either (1) different types of resultatives and are therefore not based on force-transmission, or (2) simply not resultatives at all. In Part VII we will address the first case, beginning with sentences like (1).

- (1) He rode the horse *to victory*.

Sentences like (1) will turn out to be resultatives not based on force-transmission.

### 18.1 *To victory*<sup>136</sup>

#### 18.1.1 Direct Object Restriction

It has been observed in the literature that a result phrase may be predicated of the direct object, but not of the subject. This observation is originally due to Simpson (1983), who states as follows based on the sentences in (2) and (3):

The controller of a resultative attribute must be an OBJECT, whether that OBJECT is a surface OBJECT, as in transitive verbs, or an underlying OBJECT, as in passives and intransitive verbs of the Unaccusative class, or whether the OBJECT is a fake reflexive, as in intransitive verbs of the Unergative class.

(Simpson, 1983, p. 146)

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136. An earlier version of 18.1 and 18.2 was presented at the Eighth International Conference on Construction Grammar, held at Osnabrueck University, Germany (Iwata 2014d). I'd like to thank William Croft and Hans Christian Boas for their comments.

- (2) a. I shot him dead.  
 b. The vase broke into pieces.  
 c. The car was painted red.

- (3) \*I melted the steel hot. (This cannot mean: I melted the steel until I was hot.)  
 (Simpson, 1983, p. 143–144)

This observation later came to be formulated as a Direct Object Restriction by Levin & Rappaport Hovav (1995).

... a resultative phrase may be predicated of the immediately postverbal NP, but may not be predicated of a subject or of an oblique complement. We call this generalization the *Direct Object Restriction*.

(Levin & Rappaport Hovav, 1995, p. 34)

It seems fair to say that in the literature the Direct Object Restriction is generally taken to hold true of resultatives.<sup>137</sup>

### 18.1.2 Violation of the Direct Object Restriction

However, some sentences involving *to victory* do not obey the Direct Object Restriction. Those sentences violating the Direct Object Restriction, which are attested in the corpora, divide into two types: First, the *ride*-type is exemplified in (4).

- (4) a. PHILIPPE ROZIER, who has just finished a three-month ban after Oscar Minotiere was found over the permitted limit of the painkiller, butazolidine, *rode the same horse to victory* for France in the Euro Horse Trophy in Gothenberg yesterday, writes Alan Smith.  
 b. Secondly, who *rode both those horses to victory* and thirdly, who owns both those horses? (both from BNC)

When we say that one rode a horse to victory, it is the jockey, rather than the horse, that won the race. So the result phrase *to victory* is to be regarded as being predicated of the subject, not the direct object.

It might be argued that to the extent that the horse could also be construed as winning the race as a companion to the jockey, *to victory* could be said to be predicated of the post-verbal NP as well. According to this “horse as a companion”

137. In the literature, sentences like (i) have been cited as violating the Direct Object Restriction (Wechsler 1997, Verspoor 1997, Rappaport Hovav & Levin 2001).

- (i) a. The wise men followed the star *out of Bethlehem*. (Wechsler, 1997, p. 313)  
 b. John danced mazurkas *across the room*. (Verspoor, 1997, p. 151)

Sentences like (ia) will be discussed in Chapter 20.

understanding, then, sentences like (4) would not be a complete violation of the Direct Object Restriction.

But the direct object may be omitted without a substantial change in meaning or acceptability as in (5).

(5) *Princess Anne rides to victory*

ALL eyes were on Princess Anne when she competed in the Downlands Horse Trials at Woolmer Farm, Liphook, this week twenty years ago. She delighted the crown by *riding to a victory* in her class, Princess Anne's popular win was on Columbus, owned by the Queen, in the intermediate Class A. (BNC)

Here it is unquestionable that the result phrase is predicated of the subject entity alone.

Moreover, a personification reading becomes less plausible when we turn to sentences like (6), where the post-verbal position is occupied by vehicles like cars and ships.

- (6) a. The 39-year-old Briton *drove his Renault-Williams car to victory* in the Portuguese Grand Prix to clinch his ninth victory – a record number of wins in one season. (WB)
- b. ... but when you *sailed your yacht Sayonara to victory* in Australia in that terrible hurricane that claimed, I think, six lives at the time ... (COCA)

These sentences seem no different from those in (4). Besides, the post-verbal NPs may be omitted from these sentences.

- (7) a. He won his first grand prix in his second race and *drove to victory* in two others that year. (WB)
- b. AHT *sailed to victory* once again, winning 9-0 against Fireater in another five-a-side tournament organised by Coopers & Lybrand. (BNC)

Furthermore, consider the following, where *ride – to victory* is understood in a metaphorically extended sense.

- (8) a. It was a strong anti-government message that helped Rand Paul *ride the Tea Party wave to victory* in the Kentucky Republican Senate primary.
- b. Republicans successfully mobilized their own core voters and *rode an anti-incumbent vote to victory*.
- c. Overcoming charges of carpetbagging and a Republican tilt to the district, she *rode anxiety over the California economy and disenchantment with George Bush to victory*. (all from COCA)



The wave, the vote, and the anxiety cannot possibly be said to be winners. All these facts strongly indicate that *to victory* is predicated of the subject, rather than the direct object.

Second, the *fight*-type is illustrated in (9).

- (9) a. The Germans and Japanese went on to fight their wars with only twin-engine bombers. The Luftwaffe used them in the Battle of Britain, and Hitler learned to his sorrow that such craft were good enough to start a major war but not to *fight it* (=the war) *to victory*.  
 b. We *fight our wars*, we hope, to a success, *to victory*, but we also have to be urged on, we have to be inspired. (both from COCA)

Again, *to victory* cannot be predicated of the post-verbal NP; it is the subject entity that is the winner. Besides, the post-verbal NP can be omitted as in (10).

- (10) He said Iraq would *fight to a final victory*. (COCA)

Thus there is no denying the fact that the Direct Object Restriction is violated in all these attested data.

### 18.1.3 Apparent puzzle of *to victory*

Now one possibility to make sense of the facts just seen (which is likely to occur to those who want to maintain the Direct Object Restriction) is that sentences involving *to victory* are not really resultatives. Somewhat surprisingly, however, there is evidence that sentences involving *to victory* are indeed resultatives. Recall that one crucial characteristic of resultatives is that non-subcategorized objects may appear in the post-verbal position. Thus in (11a) the post-verbal NP *the pub* is not a subcategorized object, as shown by the ill-formedness of (11b).

- (11) a. They drank the pub dry.  
 b. \*They drank the pub.

Now *to victory* may accompany non-subcategorized objects. Consider the following.

- (12) a. John Emburey did take Mahanama's wicket, but the 40-year-old off-spinner is clearly not the bowler he was back in 1982 when he *bowled England to victory* in Sri Lanka's inaugural Test in Colombo with a second innings six for 33. (BNC)  
 b. b. FLY-HALF Gareth Rees *kicked Canada to a convincing victory* in Port Elizabeth. (WB)

*England* is not the logical object of *bowl* in (12a), nor is *Canada* the logical object of *kick* in (12b), as corroborated by the ill-formedness of (13a) and (13b).

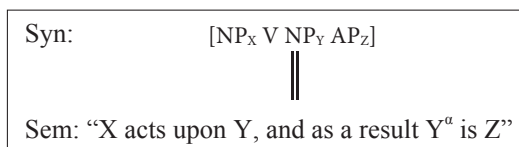
- (13) a. \*... he *bowled* England.  
 b. \* FLY-HALF Gareth Rees *kicked* Canada.

Thus *to victory* presents a puzzle: It sometimes behaves like normal result phrases, and sometimes does not, with respect to the Direct Object Restriction.

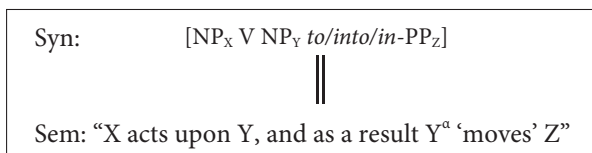
## 18.2 *To victory* as a goal-achieving path

### 18.2.1 Why the Direct Object Restriction holds

In order to solve the apparent puzzle posed by *to victory*, it is first necessary to understand why the Direct Object Restriction apparently holds of English resultatives at all. From my viewpoint, the Direct Object Restriction actually follows from the force-recipient account as stated in Figures 18.1 and 18.2.



**Figure 18.1** Transitive resultatives with adjectival result phrases (version 3)



**Figure 18.2** Transitive resultatives with prepositional result phrases (version 3)

According to this account, the result phrase is predicated of the entity as being acted upon or as having undergone a change. In a sense, this is a trivial fact: Given that some verbal force is exerted onto a force-recipient and a change is thereby brought about, it is the force-recipient that is most likely to undergo the change.

Accordingly, there is nothing surprising about the fact that the result phrase appears to be predicated of the post-verbal NP. Except for spurious resultatives like (14b) (and their caused-motion counterparts), the entity being acted upon can be called by the same name as the entity before being acted upon, as in (14a).

- (14) a. He wiped the table clean.  
 b. He sliced the meat thin.

This is why the Direct Object Restriction looks plausible, although it is not strictly correct to say that the result phrase is directly predicated of the post-verbal NP.

### 18.2.2 Goal-like characteristics

Given this understanding of the Direct Object Restriction, the apparent puzzle posed by *to victory* should be resolved along the following lines: Cases which obey the Direct Object Restriction are resultatives based on force-transmission, just like the resultatives seen so far. Cases which do not obey the Direct Object Restriction, by contrast, are to be regarded as resultatives not based on force-transmission.

This supposition seems to be on the right track. Consider once again the sentences that violate the Direct Object Restriction.

- (15) a. PHILIPPE ROZIER ... *rode the same horse to victory* for France in the Euro Horse Trophy in Gothenberg yesterday. (BNC)  
 b. We *fight our wars*, we hope, to a success, *to victory*, but we also have to be urged on, we have to be inspired. (COCA)

In these sentences, the post-verbal NP is not a recipient of the force that is responsible for bringing about the change of state. Not being a force-recipient, the post-verbal NP entity no longer undergoes a change, either. Consequently, nothing requires the result phrase to be predicated of the direct object.

In other words, what separates the sentences in (15) from ordinary Transitive resultatives is that the change of state is not brought about by the verbal force exerted onto the post-verbal NP. But this immediately raises the next question: How is the change of state brought about, then?

In order to find an answer to this question, note that sentences like (15) exhibit characteristics like motion sentences. First, when the result phrase consists of a *to*-PP, *to* cannot be readily replaced with *towards*, as seen in (16).

- (16) a. He drank himself *to death*.  
 b. \*He drank himself *towards death*.

This is probably because the original, spatial goal sense of *to* is no longer retained. But in the case of *to victory*, *towards victory* is attested in both the BNC and the WB, as in (17).

- (17) a. In fact, it was an "A" team player who *helped* them *towards a good victory* over highly placed Malshanger on Wednesday last week. (BNC)  
 b. WORLD champion Juha Kankkunen of Finland *raced confidently towards a second victory* in the Portuguese Rally yesterday while his team-mate at Toyota, Frenchman Didier Auriol, edged into second place, 44 seconds behind him. (WB)

Second, while *to result* phrases may alternate with adjectival result phrases as in (18),<sup>138</sup> this is not the case with *to victory*. (19b) is not acceptable.

- (18) a. Bob shot him *to death*.  
 b. Bob shot him *dead*.
- (19) a. And 70-year-old Florence Nagle galloped *to victory* in the courts.  
 b. \*And 70-year-old Florence Nagle galloped *victorious* in the courts.

Both of these facts suggest that *to victory* is like a goal phrase in motion sentences.

At the same time, however, *ride the horse to victory* is not a motion sentence pure and simple, for it expresses a change of state. How are we to make sense of this situation?

### 18.2.3 Change of state that is based on a metaphor

The answer is quite simple: *To victory* is a metaphorical goal phrase accompanying metaphorically-construed motion sentences. To see this, let us start with the ambiguity of the word “goal.” We often speak of achieving a goal, but when we do so, we are metaphorically using the word “goal.” Consider (20).

- (20) a. When you *reach the goal*, ask the name of the city and give flowers to the first person you meet.  
 b. CB is also most unlikely to *reach its ambitious goal* of generating half its earnings outside France by 1992. (both from BNC)

In (20a) *reach the goal* means to move to a certain place. By contrast, in (20b) the subject entity does not have to move anywhere. Rather, *goal* means “something that you hope to achieve, especially when much time and effort will be needed” (COBUILD).

Clearly, a goal to be achieved is not the same as a goal to be reached in the spatial sense. But in our daily linguistic activities, we quite often talk about achieving a goal in terms of physically reaching a goal. So a goal in this sense may be the object of *towards*, as in (21); one may be a long way from the goal or near the goal, as in (22); and this goal may be reached by following a path, as in (23).

- (21) a. As Europe moves *towards its goal* of a common internal market ...  
 b. We have already taken *the first steps towards that goal*. (both from BNC)

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138. As long as the result state can be construed as obtaining immediately after the verbal force takes effect (as demonstrated in Chapter 13), that is.

- (22) a. As a company and as individuals, we are still *a very long way from the goals* set at the outset of TOP in February 1992 and much remains to be done.  
 b. None of the Japanese firms is *anywhere near its goal*. (both from BNC)
- (23) Whatever *path you follow* to reach your goal of competence, you should make time for reading. (BNC)

Thus we have a metaphor, ACHIEVING A GOAL IS REACHING A GOAL, as characterized by the correspondences in Figure 18.3.<sup>139</sup>

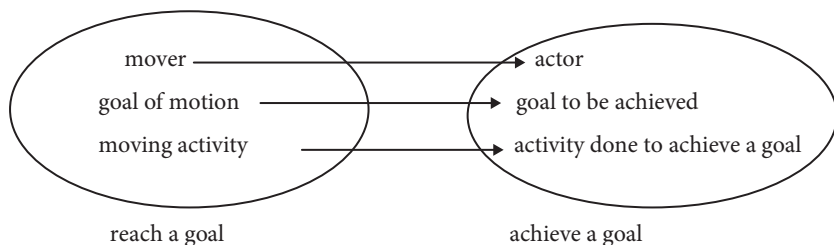


Figure 18.3 Correspondences between the two notions of goal

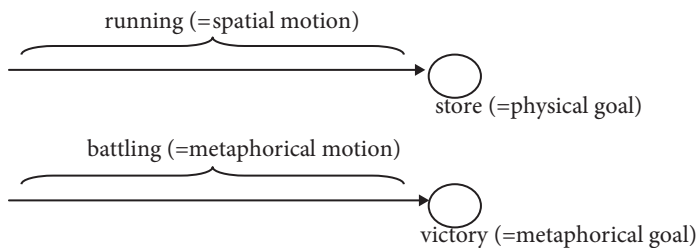
Now let us get back to our discussion of *to victory*. Note that “victory” is something one strives for, and therefore counts as a type of goal to be achieved. This means that achieving the goal of victory is metaphorically understood as reaching that goal. Accordingly, the verb accompanied by *to victory* describes the efforts being made on the way to reaching the goal (i.e. victory), which are metaphorically construed as a motion. Thus *battle* in (24) describes an activity that is metaphorically construed as a motion which ends in a metaphorical goal of victory.

- (24) Every time I watch that horse *battle to victory* it sums up what National Hunt racing is all about. (WB)

Consequently, *battle to victory* is entirely parallel to *run to the store*, as illustrated in Figure 18.4.<sup>140</sup>

139. This is essentially the same as the PURPOSES ARE DESTINATIONS metaphor in Lakoff & Johnson (1999, pp. 51–53).

140. In the case of a running race, the physical motion to a goal and the metaphorical motion to a metaphorical goal (=victory) are in a one-to-one correspondence, in that one wins the moment one reaches the goal. William Croft suggests that *to victory* as used in this sense is a prototype, from which the other instances of *to victory* are derived.



**Figure 18.4** *Run to the store vs. battle to victory*

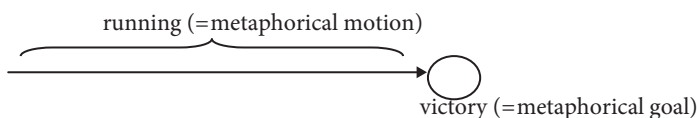
- (25) a. She ran to the store.  
 b. The horse battled to victory.

Thus non-motion verbs may be construed as expressing metaphorical motions in the presence of *to victory*.<sup>141</sup>

In fact, even motion verbs may be interpreted metaphorically when they appear with *to victory*. Thus in (26) motion verbs like *gallop* and *run* do not describe the motion events pure and simple but the activities in respective competitions.<sup>142</sup>

- (26) a. And 70-year-old Florence Nagle *galloped to victory* in the courts.  
 b. But the lines are something I have said to Linford for years, and I said the poem out loud as he *ran to victory*. (both from WB)

In other words, these motion verbs actually describe what the subject entity did on their way to victory, rather than a pure change of location. The activities in turn are metaphorically construed as abstract motions which end in the goal of victory. Thus *run to victory* describes a metaphorical motion as in Figure 18.5, unlike *run to the store*, which describes a physical motion.



**Figure 18.5** *Run to victory*

Note also that we are now in a position to resolve the apparent puzzle posed by sentences like (27).

<sup>141</sup>. Hans Christian Boas suggests that the same effect can be achieved in frame semantic terms by assuming that *to victory* evokes, say, a “victory” frame, whose frame elements correspond to subject and goal phrase entities. Quite probably, this frame will be essentially the same as the target domain in Figure 18.3.

<sup>142</sup>. So in (26) *gallop* and *run* are used as “purpose verbs” in the sense of Fellbaum (2013), rather than as manner-of-motion verbs.

- (27) a. PHILIPPE ROZIER ... *rode the same horse to victory* for France in the Euro Horse Trophy in Gothenberg yesterday. (BNC)  
 b. We *fight our wars*, we hope, to a success, *to victory*, but we also have to be urged on, we have to be inspired. (COCA)

Here the actions of riding a horse and fighting a war are metaphorically construed as motions, so the post-verbal NP entities are nothing more than part of the descriptions of metaphorically-construed motions. There is no reason why *to victory* should be predicated of these entities.

Rather, since *to victory* is a metaphorically-construed goal, it should be predicated of an entity that undergoes metaphorical motion, just as a spatial goal phrase is to be predicated of an entity that undergoes spatial motion. Obviously, the subject entity is the only possibility.

This is why some sentences involving *to victory* do not obey the Direct Object Restriction.

#### 18.2.4 Caused motion vs. simple motion

But we have resolved only half of the puzzle posed by *to victory*. Recall that what is really puzzling about sentences involving *to victory* is that they are sometimes subject to the Direct Object Restriction as in (28a) but sometimes not as in (28b).

- (28) a. He bowled England *to victory*.  
 b. He rode the horse *to victory*.

As noted above, the force-recipient account predicts that cases which obey the Direct Object Restriction are resultatives based on force-transmission, but those which do not obey the Direct Object Restriction should be resultatives not based on force-transmission. (28a) and (28b) can be differentiated along similar lines.

Specifically, the contrast between (28a) and (28b) follows from the contrast between caused-motion and simple motion. In (28a), *bowled – to victory* is interpreted as a (metaphorical) caused-motion sentence, where *England* is a recipient of the ‘bowling’ force that is responsible for the change to victory. In (28b), by contrast, *rode – to victory* is interpreted as a simple (metaphorical) motion sentence.

In simple (metaphorical) motion sentences, one attains a change of state by reaching a (metaphorical) goal. In caused-motion sentences, on the other hand, as a result of the verbal force, someone moves along the metaphorical path. Because the abstract motion to a metaphorical goal is brought about by the verbal force, the sentence accompanied by *to victory* behaves like ordinary resultatives based on force-transmission. This is why *to victory* may accompany non-subcategorized objects.

As a matter of fact, a number of verbs may occur with non-subcategorized objects, depending upon the kind of sport. Thus (29a) is about a cricket match and (29b) a rugby match, and a key player's bowling and kicking play a decisive role in the team's victory.

- (29) a. John Emburey did take Mahanama's wicket, but the 40-year-old off-spinner is clearly not the bowler he was back in 1982 when he *bowled* England *to victory* in Sri Lanka's inaugural Test in Colombo with a second innings six for 33. (BNC)
- b. FLY-HALF Gareth Rees *kicked* Canada *to a convincing victory* in Port Elizabeth. (WB)

Similarly, (30a) is about a relay race; (30b) about a baseball game; and (30c) about a rugby.

- (30) a. ... he also *anchored* the USA 4x100 and 4x400 relays *to victory*.
- b. Matsuzaka unleashed seven dazzling innings and *pitched* his team *to a 4-1 victory* over the Kansas City Royals.
- c. Montana transfixed much of a nation Sunday when he *quarterbacked* his new team, Kansas City, *to a come-from-behind victory* over Houston with three touchdown passes in the second half ... (all from COCA)

Both (31a) and (31b) are about a boat race.

- (31) a. Martin Watts, right, who *coxed* Oxford University *to victory* in 1990, tells of the currents that will be lurking above and below the surface of the Boat Race course once tomorrow's start has been called.
- b. Andrew Michelmores, the WMC Resources chief executive, knows a thing or two about exerting superhuman effort to defeat arch rivals. He did so twice in the late 1970s, when he *stroked* Oxford University Boat Club *to victory* against Cambridge. (both from WB)

In all these cases, the subject entity's performance as described by the role in the respective game or match plays a decisive role in bringing victory to the team. In this sense, the verbal force can be said to be responsible for bringing about the change of state. Thus *He bowled England to victory* may receive the following representation in Figure 18.6, like ordinary Transitive resultatives.



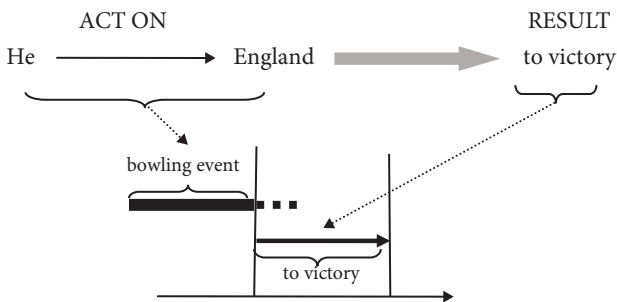


Figure 18.6 Causal chain and aspectual integration for *He bowled England to victory*

By contrast, *He rode the horse to victory* should receive the representation in Figure 18.7.

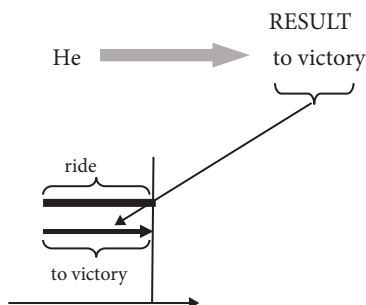


Figure 18.7 *Ride to victory*

The ACT ON component is lacking; only the RESULT component is present. This RESULT component corresponds to *to victory*, which is a metaphorical path and is therefore co-extensive with the verbal event of riding.

### 18.3 Further instances of changes of state effected by metaphorical changes of location

#### 18.3.1 *To success*

Having seen that *to victory* may constitute a resultative that is not based on force-transmission, a natural question that arises is: Are there other resultatives that are also not based on force-transmission?

It seems that *to success* fits the bill. Like *to victory*, *to success* denotes a metaphorically construed goal as in (32).

- (32) a. Doug McCarthy had bagged a hat trick ... the Wildcats ... were reeling ... the Kings were *skating to success*. (BNC)  
 b. Rowing legend Matthew Pinsent led the coxless four to Athens glory while the 4x100m men's relay team *sprinted to success*. (WB)

Here, *skate* and *sprint* describe activities that are metaphorically construed as motions which end in a metaphorical goal of success.

Just as in the case of *to victory*, resultative sentences involving *to success* may violate the Direct Object Restriction as in (33), but nevertheless may appear with non-subcategorized objects as in (34).

- (33) Smart companies will get ahead of that wave, and *ride it* (=the wave) *to success and prosperity*. (COCA)  
 (34) a. They hope trumpeter Richard Sutton, a full-blown Alex fan, can help *blast them to success* in their Coca-Cola Cup second leg clash at home. (BNC)  
 b. Bolton boss Colin Todd is looking to Holdsworth, who has scored just once since moving north, to *fire his side to success*. (WB)  
 c. Rules to *short-cut yourself to success*. (COCA)

It seems safe to conclude, therefore, that *to success* is another instance of a goal-achieving path.

Another apparent candidate is *to fame*, as exemplified in (35).

- (35) a. She was, in fact, Bessie Cohen, who later *rose to fame* as a music hall soloist.  
 b. The 55-year-old actor *shot to fame* with Butch Cassidy And The Sundance Kid in 1969. (both from BNC)

Considering that fame is something which one strives for, *to fame* seems to be still another instance of a goal-achieving path. It turns out, however, that most of the attested instances are not strictly resultatives. The results of the corpus search are summarized in Tables 18.1, 18.2 and 18.3.

**Table 18.1** BNC counts of 'V (NP) to fame'

|                                               | _____ (NP) to fame |
|-----------------------------------------------|--------------------|
| shoot                                         | 19                 |
| rise                                          | 8                  |
| come                                          | 5                  |
| go, rear                                      | 2                  |
| bring, help, lead, leap, soar, way-expression | 1                  |
| TOTAL                                         | 42                 |

Table 18.2 WB counts of 'V (NP) to fame'

|                                                       | _____ (NP) to fame |
|-------------------------------------------------------|--------------------|
| shoot                                                 | 150                |
| rise                                                  | 15                 |
| come                                                  | 12                 |
| catapult                                              | 9                  |
| spring                                                | 7                  |
| rocket, way construction                              | 6                  |
| propel                                                | 5                  |
| burst, go, lead, leap, soar                           | 2                  |
| bring, climb, dance, erupt, launch, spur, sweep, take | 1                  |
| TOTAL                                                 | 228                |

Table 18.3 COCA counts of 'V (NP) to fame'

|                                                                                         | _____ (NP) to fame |
|-----------------------------------------------------------------------------------------|--------------------|
| rise                                                                                    | 59                 |
| catapult                                                                                | 23                 |
| come, shoot                                                                             | 18                 |
| go                                                                                      | 16                 |
| skyrocket                                                                               | 11                 |
| lead, propel, rocket                                                                    | 9                  |
| ride, way-expression                                                                    | 6                  |
| vault                                                                                   | 5                  |
| bring                                                                                   | 4                  |
| spring                                                                                  | 3                  |
| burst, drive, elevate, get, move, soar, take                                            | 2                  |
| ascend, climb, fake, follow, jump, launch, leap, lift, pole-vault, proceed, push, raise | 1                  |
| TOTAL                                                                                   | 222                |

Among the verbs found to occur with *to fame*, *shoot* and *rise* are undoubtedly the two most frequent verbs. *Rise* is clearly a verb with upward orientation, and *shoot* is also used in that sense, as seen in (35b). The reason why verbs of upward orientation are so frequently found to occur with *to fame* is because becoming famous is conceptualized in terms of the HIGH STATUS IS UP metaphor (Lakoff & Johnson 1980): To become famous is conceptualized in terms of ascending to a high position on some socially-defined hierarchy.

But notice that in sentences like (35), the verbs are no longer used in the spatial sense. Thus the subject entities do not literally rise or shoot. In this respect, sentence like (35) sharply contrast with those like (36), in which the subject does engage in the activity of riding.

(36) He rode the horse to victory.

Rather, sentences like (35) are simply instances of change-of-location verbs that are used in an abstract sense, and which are followed by an abstract goal phrase. In a sense, they are like (37).

(37) He fell {silent/asleep}.

### 18.3.2 *To exhaustion*

#### 18.3.2.1 *No need for fake reflexives*

In discussing the apparent puzzle surrounding the choice between adjectival and prepositional result phrases, Boas (2003) cites the following contrast in (38).

(38) ... we basically danced ourselves {*to exhaustion*/\**exhausted*}.  
(Boas, 2003, p. 127)

Apparently, *to exhaustion* is a result phrase accompanying a fake reflexive resultative. As a matter of fact, Boas (2003) also cites the following contrast.

(39) a. Kim ran herself *to exhaustion*.  
b. \*Kim ran *to exhaustion*.  
(Boas, 2003, p. 246)

In COCA, *run to exhaustion* is actually attested, however.<sup>143</sup>

(40) Studies have found significant improvements in explosive power (jumping) and cardiovascular stamina (*running to exhaustion*) after 3 to 6 weeks of wearing approximately 10 percent of body weight.  
(COCA)

In fact, *dance*, *work*, and *eat* may be directly followed by *to exhaustion* without the intervention of a fake reflexive.

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143. A reviewer comments that this example does not count as a counter-example to Boas' (2003) claim, in that "the post-verbal NP is null-instantiated." Recall, however, that fake reflexives are selected by the construction, not by the verb (even though semantically it ultimately comes from the verb's frame semantics). So this reviewer's comment invites the following question: If the fake reflexive could be null-instantiated so readily in the case of *to exhaustion*, as shown in (40) and (41), why is this strategy not available for resultatives in general?

(i) \*I {danced/laughed/jogged/walked/worked} tired. (Simpson, 1983, p. 145)

- (41) a. I suppose that the one who *dances to exhaustion* feels a rare freedom.  
 b. Then the plague returned. We *worked to exhaustion* and past it ...  
 c. And so if he was devoted to cooking, he was also convinced that eating was a sure way of expressing one's gratitude and allegiance. Guests had to *eat to exhaustion* to satisfy him. (all from COCA)

In the corpora, there are also instances of resultatives in which reflexive pronouns precede *to exhaustion*. Thus *work oneself to exhaustion* and *drive oneself to exhaustion* are attested in COCA.

- (42) a. "I can tell you for certain that Mr. Libby *worked himself to exhaustion* day after day."  
 b. She *drove herself to exhaustion*. (both from COCA)

Note, however, that the reflexives may be replaced with non-reflexive NPs, as in (43).

- (43) a. She was deceptively demure, unrelentingly tenacious, and *worked me to exhaustion*.  
 b. They might have schedules of activities that would *drive a CEO to exhaustion*. (both from COCA)

This suggests that the reflexives in post-verbal position in (42) are actually subcategorized objects of lexical causative verbs *work* and *drive*.

The same goes for *run oneself to exhaustion* in (39a). The verb *run* has a transitive, causative use, so (39a) is a reflexive counterpart of sentences like (44).

- (44) Singly or in packs, dogs *run deer and other animals to exhaustion*, even killing or injuring them. (COCA)

The verb *dance* also has a transitive, causative use as in (45).

- (45) As soon as they came into the house a melodeon started to play and two fiddles took up in perfect tune; then bagpipes played alone. Young men *danced Rose Brady and the girls round the kitchen*. (BNC)

Again, therefore, the reflexive in (38) is to be regarded as a subcategorized object.

All these facts flatly contradict the generally held belief that verbs like *dance* or *work* can be turned into resultatives only with the help of fake reflexives, as first observed by Simpson (1983).

- (46) a. \*I {danced/laughed/jogged/walked/worked} *tired*.  
 b. I danced myself *tired*. (Simpson, 1983, p. 145)

This suggests that resultatives involving *to exhaustion* are still another instance of resultatives not based on force-transmission.

### 18.3.2.2 *Who gets exhausted?*

A reasonable possibility that suggests itself is that resultatives involving *to exhaustion* are based on a metaphorical change of location, like those involving *to victory*. And indeed, *to exhaustion* behaves similarly to *to victory*. Recall that there are two types of resultatives with *to victory* which violate the Direct Object Restriction: the *ride*-type and the *fight*-type. Thus with the *ride*-type, the result phrase *to victory* is predicated of the subject, rather than the direct object, as in (47a). In fact, the direct object may be omitted without a substantial change in meaning, as in (47b).

- (47) a. Secondly, who *rode both those horses to victory* and thirdly, who owns both those horses? (BNC)
- b. Princess Anne *rides to victory*  
 ALL eyes were on Princess Anne when she competed in the Downlands Horse Trials at Woolmer Farm, Liphook, this week twenty years ago. She delighted the crown by *riding to a victory* in her class, Princess Anne's popular win was on Columbus, owned by the Queen, in the intermediate Class A. (BNC)

The phrase *to exhaustion* behaves similarly: It is predicated of the subject, rather than the direct object, as in (48a) and (49a); and the direct object may be omitted without a substantial change in meaning or acceptability, as in (48b) and (49b).

- (48) a. Twenty-five college students *rode a stationary exercise cycle to exhaustion* or 45 rain.
- b. Another group of cyclists increased the time needed to *ride to exhaustion* by 22%. (both from COCA)
- (49) a. They had to *pedal stationary bicycles to exhaustion* to measure their heart and pulse rates under stress.
- b. Eight competitive cyclists *pedaled to exhaustion*, then were tested for muscle strength under two conditions. (both from COCA)

But *to exhaustion* is not entirely parallel with *to victory*. Recall that with the *fight*-type as well, the result phrase *to victory* is predicated of the subject, irrespective of whether there is a post-verbal NP present or not.

- (50) a. The Germans and Japanese went on to fight their wars with only twin-engine bombers. The Luftwaffe used them in the Battle of Britain, and Hitler learned to his sorrow that such craft were good enough to start a major war but not to *fight it (=the war) to victory*.
- b. He said Iraq would *fight to a final victory*. (both from COCA)

But the counterparts with *to exhaustion* behave differently. While *to exhaustion* is predicated of the subject in (51b), it is predicated of the direct object in (51a).

(51a) conveys that because armies of the Western powers (=American, British, and Canadian forces) fought so well, the German army was greatly beleaguered. That is, *to exhaustion* is predicated of different entities between (51a) and (51b).

- (51) a. IN THE LARGEST SENSE, the Normandy campaign achieved its goals: Armies of the Western powers returned to the Continent. In an enormous battle of attrition, they had *fought the Germans to exhaustion* and caused their collapse.
- b. ... while the armies in the West had *fought to exhaustion* on the Western Front ... (both from COCA)

Why is *to exhaustion* not completely parallel to *to victory*?

This is due to the difference of activity that conveys an abstract motion ending in a metaphorical goal. Recall that the verb accompanied by *to victory* describes the efforts being made on the way to reaching the goal of *victory*. Thus *battle in battle to victory* describes an activity that is metaphorically construed as a motion which ends in a metaphorical goal of victory. This is why *battle to victory* is parallel to *run to the store*, as illustrated in Figure 18.8.

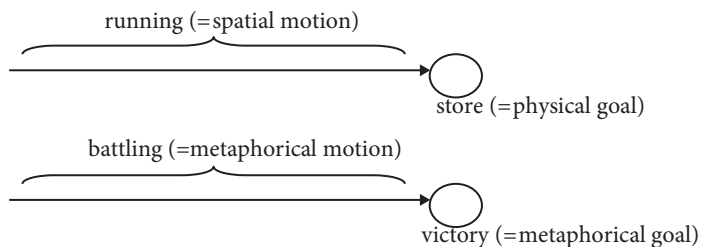


Figure 18.8 *Run to the store vs. battle to victory*

Similarly, *dance in dance to exhaustion* should describe an activity that is metaphorically construed as a motion which ends in a metaphorical goal of exhaustion, as depicted in Figure 18.9.

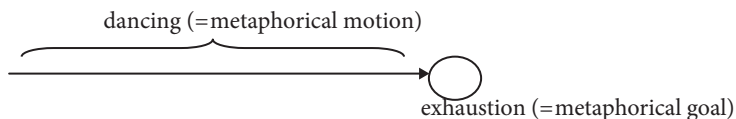


Figure 18.9 *Dance to exhaustion*

Here is a significant difference. With *to victory*, the mover of an abstract motion is engaged in a fighting activity or a competing activity. And the entity engaged in such activities appears exclusively as subject. Thus in (50a), repeated here as (52), the subject entity (=human beings), but not the direct object entity (=a war), is engaged in a fighting activity.

- (52) The Germans and Japanese went on to fight their wars with only twin-engine bombers. The Luftwaffe used them in the Battle of Britain, and Hitler learned to his sorrow that such craft were good enough to start a major war but not to *fight it* (=the war) *to victory*.

But with *to exhaustion*, the mover of an abstract motion is engaged in an energy-consuming activity. And the entity engaged in an energy-consuming activity may appear in direct object position as well as in subject position. Thus in (51a), repeated here as (53), both the American, British, and Canadian armies, on the one hand, and the German army, on the other, are engaged in an energy-consuming activity. So both may be the potential host of predication by *to exhaustion*. But the continuation “and caused their (=German army’s) collapse” disambiguates.

- (53) IN THE LARGEST SENSE, the Normandy campaign achieved its goals: Armies of the Western powers returned to the Continent. In an enormous battle of attrition, they had *fought the Germans to exhaustion* and caused their collapse.

Things are different with *ride*. Just as the subject, not the direct object, is engaged in a competing activity in (54a), hence qualifying as the host of predication by *to victory*, so the subject, not the direct object, is engaged in an energy-consuming activity in (54b), hence qualifying as the host of predication by *to exhaustion*.

- (54) a. Secondly, who *rode both those horses to victory* and thirdly, who owns both those horses? (BNC)  
 b. Twenty-five college students *rode a stationary exercise cycle to exhaustion* or 45 rain. (COCA)

Thus *to exhaustion* is not completely parallel to *to victory* precisely because the entity that may be construed as the mover in the respective metaphorical motion differs between them.

Consequently, the apparently puzzling behavior of *to exhaustion* can be safely attributed to it being still another instance of a resultative based on metaphorical motion, rather than on force-transmission.

## 18.4 Changes of state which are effected by physical changes of location

### 18.4.1 *To safety* and *to freedom*

Now sentences involving *to safety* may also violate the Direct Object Restriction, as shown in (55).

- (55) About 1 million had reportedly already *crossed the border to safety*. (COCA)



This suggests that resultatives with *to safety* are still another type of resultative that is not based on force-transmission. At the same time, however, notice that resultatives with *to safety* are not strictly another member of resultatives that are based on metaphorical motion, either, for the sentence in (55) does not express a metaphorical motion. It expresses a literal, physical motion, with *to safety* meaning “to a place where one is safe.”

In this connection, it is instructive to have a look at Sweetser’s (1999, pp. 142–144) following observation concerning the “safe” frame, as described in Figure 18.10:



E: endangered entity; S: source of danger

**Figure 18.10** The frame for *safe*

The frame includes some potential cause of harm which is the source of the danger, and the knowledge that keeping endangered entities physically separate from possible sources of physical harm may prevent harm from happening, thus keeping the entities “safe.” (Sweetser, 1999, p. 142)

Because of this frame, a *safe house* may mean either (1) a house which is not itself endangered (e.g. by an earthquake); (2) a house which is not a source of danger (to children playing in it); or (3) a house wherein potentially endangered people are not accessible to some other source of danger (e.g. discovery by the police).

Now in the case of resultatives with *to safety* as in (55), being safe is clearly understood in locational terms, i.e. a place where one is not accessible to the possible source of danger. Accordingly, a change of state in question consists in a *physical* change of location: To cause someone to become safe is to bring them (=endangered entity) to a place where they are not accessible to the possible source of danger; and to become safe is to move to a place where they are not accessible to the possible source of danger.

Since the state of being safe may be characterized in locational terms, a *towards*-PP is also possible.

- (56) a. He fired again as the wounded bull turned and began *galloping clumsily towards the safety of the trees*, but this second shot went wide.  
 b. “I can manage,” said Belinda, *darting towards the safety of shrubs* and shade that beckoned her ... (both from BNC)

Also, *to safety* may co-occur with spatial path PPs, which specify the source, route, etc. before one finally comes to the goal of safety.

- (57) a. ... the heroine pilots the wounded hero *through the desert to safety* ... (BNC)  
 b. Trapped in a burning building, he walks *across a tightrope to safety* – (WB)
- (58) a. Police were still *evacuating* hotel guests and residents, including many pensioners, *from nearby homes to safety* when the detonator went off.  
 b. FIREFIGHTERS rescued a pensioner from an upstairs bedroom after his daughter *jumped to safety from their blazing home*. (both from BNC)

These facts might tempt one to suppose that *to safety* is actually a purely spatial goal phrase. But this is not the case, as *to safety* may also co-occur with a spatial goal phrase.

- (59) a. In two hours they *ferried* 22 people *to high ground and to safety* ...  
 b. As more letters take its place, you must enter them correctly until the person *makes it all the way to the end of the belt and thus to safety*. (both from BNC)
- (60) The two men combed the moors, squelching through the soggy ground until they were satisfied that all the sheep had been rounded up and brought down *to the lower pastures to safety*. (BNC)

All this suggests that resultatives with *to safety* are still another type of resultative which is based on physical change of location.

Now *to freedom* behaves essentially the same way as *to safety*. Sentences involving *to freedom* may violate the Direct Object Restriction.

- (61) a. Well, not so long ago many Germans *crossed the borders illegally to freedom* to West Germany ...  
 b. ... each departing Cuban must pay the state \$612 before they can *escape Cuba to freedom*.  
 c. Now we were *riding a donkey cart to freedom*, one of the first families to leave the internment camp. (all from COCA)

And *to freedom* may co-occur with spatial path PPs.

- (62) a. When a hardened criminal jumps *over the wall to freedom* the last thing expected of him is to become a caring paternal figure to the child he kidnapped.  
 b. When American hostages--mostly women and children--*fly to freedom from Iraq and Kuwait*, they bring back a bleak picture of life under Iraqi occupation. (both from WB)

It seems safe to conclude, then, that *to freedom* is still another member of resultatives that is based on physical change of location.

#### 18.4.2 *Out of sight*

Up to this point, all the result phrases which have been seen to be based on motion, be it metaphorical or physical, are goal PPs (*to victory, to success, to exhaustion, to safety, and to freedom*). But this does not mean that goal PPs are the only possibility. Consider (63).

(63) Bill went *out of sight*.

In English the state change of becoming invisible is expressed by means of such PPs as *out of sight*. The conceptualization underlying such expressions is actually part of a larger system behind many linguistic expressions having to do with becoming visible and invisible. As Lakoff & Johnson (1980, p. 30) observe, we conceptualize our visual fields as containers, and our fields of vision define a boundary of what we can see: What is inside the visual field is visible, and what is outside is invisible, as illustrated in (64).

- (64) a. The ship is *coming into view*.  
 b. I *have him in sight*.  
 c. He's *out of sight* now. (Lakoff & Johnson, 1980, p. 30)

Accordingly, motion into/outside this visual field counts as becoming visible/invisible.

There are a number of phrasal expressions that serve to express this type of motion. What is most abundantly found in the BNC is the phrase *into view*, which accompanies many verbs having to do with upward movement: *rise, jump, leap, and spring*.

- (65) a. A section of floor in the middle of the room slid aside and a nice bright-red Buick aircar *rose into view*.  
 b. She is in usual house attire ... white blouse open at front, with large breasts ready to *jump into view*, no frock or dress, but long blue bloomers elasticated at waist and at knee ends.  
 c. The candles were lit and the room brightened, suddenly becoming bare as the high walls *leapt into view*.  
 d. A huge, broad-winged, red-backed hawk, mouse in beak, *soared into view*.  
 e. Not all parishes enclosed by parliamentary act immediately *sprang fully-hedged into view*. (all from BNC)

It is also found with many verbs having to do with manners of motion: *slide* or *glide* in (66), and *lurch* or *rush* in (67).

- (66) a. Ten minutes later a large green and white coach *slid into view*, coming to rest in the middle of the yard.  
 b. The red saloon *glided into view* between one glance and the next.  
 c. The lights of Lochgilphead *swung into view* ahead, just as rain started to spot the windscreen.
- (67) a. The car had *rushed into view* so unexpectedly and was moving so fast that Mary's only chance of evading it was to jump.  
 b. A second horse *sauntered into view*.  
 c. Jaci Stephen *heaves into view*.  
 d. As she watched, Victor *strode into view* and lifted the child into his arms.  
 e. The remains of the Chelonian assault force *trundled aggressively into view* across the plain.  
 f. Rosheen *crawled limply into view*.  
 g. Rosheen and Klift *staggered into view*, followed by Sheldukher.  
 h. My man could hear from his hilltop the cheering from the Orkney ships, my lord, as the twenty-five new ships *sailed into view*. (all from BNC)

The phrase *into sight* is also found, although with a smaller variety of verbs than that found with *into view*.

- (68) a. After a minute the first French skirmishers *ran into sight*.  
 b. Atrimonides *swung into sight* followed by a group of troopers.  
 c. It was a pair, in fact, doing a little late courting, and then, just to push the point home, a great skua *floated into sight*. (all from BNC)

It is not difficult to see why *into view* and *into sight* tend to collocate with verbs having to do with upward movement and manner-of-motion verbs. As Lindner (1981, 1982) observes, we know from our experience that upward paths and postures typically characterize objects which are visible: Objects which are below the line of sight are not visible, but when they move upward they enter the range of perceptual access, thereby becoming visible, as described in Figure 18.11. This is why verbs having to do with upward movement are likely to be used to express "coming into view." But it is also possible to enter the visual field other than by moving from below, in which case the manner of motion may be described.

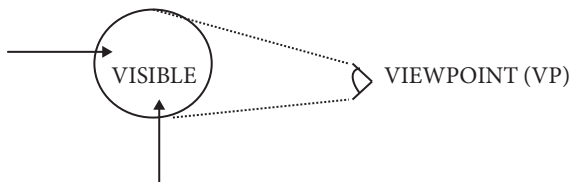


Figure 18.11 Motion into the visual field

Let us now turn to motion away from the visual field. Both *from view* and *from sight* are available as in (69).

- (69) a. After Hannele had *gone from view*, Edward turned from the window and surveyed the bed.  
 b. At once, Matthew swung away and was quickly *gone from sight*, ...  
 (both from BNC)

This time, verbs having to do with downward movement are frequently found to be used to express the notion of becoming invisible as in (70) and (71), which is quite to be expected given the general understanding that objects which are below the line of sight are not visible, as noted above.

- (70) a. In the months thereafter he *sank almost completely from view*.  
 b. His words fell like stones into a deep well, *dropping from view* without leaving a mark on her conscious mind.  
 c. “And you’d best call me Tom. Good night and God bless,” and with that he *descended from view* closing the trap door behind him.
- (71) a. Eventually, with much scrabbling, he was over, and had *dropped from sight*.  
 b. Alina kicked off her shoes and then went on, *descending from sight*.  
 (all from BNC)

Of course, verbs which have nothing to do with downward movement may serve the same purpose as in (72).

- (72) a. Forster and Lawton *passed from view*, soon to reappear in another corridor.  
 b. Behind him, as he *staggered from view*, Jimmy saw Barbara standing with the neck of a broken whisky bottle in her hand, seized from one of the Christmas party tables.  
 c. The bleak greenery of Clapham Common *slipped from sight* as they headed east towards Blackheath.  
 (all from BNC)

Thus the four expressions (*into view*, *into sight*, *from view*, and *from sight*) can be safely said to characterize a path into or out of the visual field. Furthermore,

these PPs may co-occur with spatial path PPs. Thus in (73) *into view* is followed by spatial path PPs, and in (74) *into sight* is also accompanied by spatial path PPs.

- (73) a. I joined the others on deck as the South Coast of England came *into view through the clearing mist*.  
 b. ... and at that moment a boat loomed *into view out of the misty night*.  
 c. But just at that moment a smart new van came *into view round the bend*,  
 ...  
 d. ...like a salmon leaping fleetingly *into view above the water surface*.  
 e. Nordhausen and Albert Goodenache were coming *into view over the horizon*. (all from BNC)
- (74) a. The giant nanny must have understood the tone of my voice because he strolled *into sight through the open doorway* and looked at me reproachfully.  
 b. Ralf Isambard came *into sight along the pathway*, splendid in black, riding at a gentle trot. (all from BNC)

In (75) *from view* and *from sight* are followed by spatial path PPs.

- (75) a. Lawton and Forster finally passed *from view through the doors*.  
 b. The Waste lay on a high part of the forest so that when they reached it the sun, which had already sunk *from sight in the valleys*, was still poised above the dark low edge of the distant forest. (all from BNC)

This means that these expressions are instances of resultatives that are based on physical change of location, like *to safety* and *to freedom*.

## 18.5 Conclusion

This chapter has revealed that some resultatives are not based on force-transmission, starting with a violation of the Direct Object Restriction (i.e. *He rode the horse to victory*). The reason why some resultatives involving *to victory* violate the Direct Object Restriction is because only Transitive resultatives based on force-transmission are subject to the Direct Object Restriction, and resultatives involving *to victory* need not be based on force-transmission. Rather, what is crucial is that they are based on metaphorical motion.

There are also resultatives based on physical motion, like those involving *to safety*, *to freedom*, and *out of sight*. All these resultatives behave differently from resultatives based on force-transmission.<sup>144</sup>

Strictly, the resultatives seen in this chapter are outside the scope of the force-recipient account. At the same time, however, it is pertinent that these resultatives (which behave differently from the oft-cited resultatives) can be properly distinguished by the contrast between force-transmission and motion. This very fact indicates that our force-recipient account is on the right track in that the type of resultatives normally cited in the literature are defined as being based on force-transmission.

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144. As attentive readers may have already noticed, resultatives based on motion, both physical and abstract, also violate the Unique Path Constraint (Goldberg 1995). This issue will be touched upon in Chapter 23.

## Resultatives with *free*

### 19.0 Introduction

The adjective *free* may appear as a result phrase, as shown in (1) and (2).

- (1) Willy {wiggled/squirmed/pried} {free/loose} (of the ropes).  
(Goldberg & Jackendoff, 2004, p. 559)
- (2) Sam cut himself free. (Goldberg, 1995, p. 194)

In the literature, resultatives involving *free* are claimed to behave differently from ordinary resultatives (Levin & Rappaport Hovav 1995, Goldberg 1995, Goldberg & Jackendoff 2004). Correspondingly, resultatives involving *free* raise two issues for the proposed force-recipient account as well. Since the first of those two issues has to do with the topic just discussed in the last chapter, I will examine resultatives with *free* in this chapter.

### 19.1 Does *free* denote an endpoint?

#### 19.1.1 'Free as expressing an endpoint' thesis

Levin & Rappaport Hovav (1995) claim that while both the resultatives in (3) and those in (4) involve adjectival result phrases, they are different. Specifically, while the result phrases in (4) denote the result of a change of state, those in (3) denote the result of a change in location.

- (3) a. She {danced/swam} *free of her captors*.  
b. They slowly swam *apart*.  
c. However, if fire is an immediate danger, you must jump *clear of the vehicle*.  
(Levin & Rappaport Hovav, 1995, p. 186)
- (4) a. He danced his feet *sore*.  
b. Don't expect to {swim/jog} yourself *sober!*  
(Levin & Rappaport Hovav, 1995, p. 187)



Levin & Rappaport Hovav (1995) argue as follows: “The adjective *clear* may describe a state, as in *a clear table*, but in the phrase *clear of the vehicle ...*, this same adjective is to be interpreted as a location that is defined as being away from the vehicle.” (Levin & Rappaport Hovav, 1995, p. 187)

In short, result phrases like *free*, *apart*, and *clear* are like paths, despite being adjectives.<sup>145</sup> Levin & Rappaport Hovav (1995) attribute this view to Talmy (1985): “In fact, Talmy (1985, p. 104) calls these types of adjectives and directional elements “paths,” although clearly these particular elements describe a path *by naming its endpoint*.” (Levin & Rappaport Hovav, 1995, p. 187, emphasis mine)

According to Levin & Rappaport Hovav (1995), then, the result phrase *free*, along with *clear* and *apart*, denotes a path’s endpoint. This view of *free* will be henceforth referred to as a ‘*free* as expressing an endpoint’ thesis.

This thesis is also upheld by Goldberg & Jackendoff (2004), who observe of the sentences in (5) as follows: “Willy ends up in a position in space where the ropes don’t constrain him, and Judy ends up in a position in space where the rocks can’t injure her.” (Goldberg & Jackendoff, 2004, p. 559)

- (5) a. Willy {wiggled/squirmed/pried} {free/loose} (of the ropes).  
 b. Judy {jumped/leaped/skated/slid} clear of the rocks.

As an attentive reader may have already realized, these observations have a direct bearing on the proposed force-recipient account: If the ‘*free* as expressing an endpoint’ thesis is correct, as Levin & Rappaport Hovav (1995) and Goldberg & Jackendoff (2004) claim, then resultatives involving *free* should be still another instance of resultatives that is based on motion, rather than on force-transmission.

### 19.1.2 Problems

On closer scrutiny, however, a number of problems immediately arise for the ‘*free* as expressing an endpoint’ thesis. First, this thesis cannot handle *cut – free*.

- (6) Sam cut himself free. (Goldberg, 1995, p. 194)

Notice that Sam may well remain in the same place even after he became free. That is, Sam does *not* end up being in a position in space such that the rope no longer constrains him.

<sup>145</sup> Actually, *open* and *shut* are also included in the set of these path-like adjectives both in Levin & Rappaport Hovav (1995) and Goldberg & Jackendoff (2004). But *open* and *shut* are already discussed in Chapter 11, where it is shown that with *open* and *shut*, internalized translational motion and change of state are co-extensive.

Proponents of the ‘*free* as expressing an endpoint’ thesis might respond by saying that this thesis is intended to account for resultatives like *dance free* or *wriggle free*, not *cut – free*. But here comes the second, more severe problem: This thesis does not even hold true of *wriggle free*. Consider (7).

- (7) a. With a wrench, Tug *wriggled free* of the Woman’s arm **and ran**.  
 b. He dismissed the question as so much supposition, but when he tried to give her a reassuring hug she *wriggled free* **and went out** on to the balcony to join the others. (both from BNC)

In (7a) when Tug became free, he still remained in the same position as before. It was only after he ran that he “ended up in a position in space where the Woman couldn’t hold him.” Similarly, in (7b) she did not end up in a position in space where he couldn’t hold her *until she went out on to the balcony*.

Third, of the cited examples by Levin & Rappaport Hovav (1995), *dance free* and *swim free* are rather questionable. Neither *dance free* nor *swim free* as a resultative is attested in the BNC or in the WB.

- (8) a. # She danced free (of her captor).  
 b. # She swam free (of her captor).

Rather, in all the attested instances of *swim free* in the two corpora (three in the BNC, two in the WB), *free* is used as a depictive as in (9).

- (9) a. ... in any case many of the greatest successes of the bivalves have been in life habits that the brachiopods never adopted burrowing and *swimming free* for example. (BNC)  
 b. “I couldn’t believe it but then my float went under went straight into the weed bed beside me. The fish *swam free*, and I carefully netted the 2 lb 8 oz perch,” he said. (WB)

And not a single instance of *dance free* has been found in either corpus.

All these facts seriously challenge the ‘*free* as expressing an endpoint’ thesis as held by Levin & Rappaport Hovav (1995) and Goldberg & Jackendoff (2004). But then, this invites the following question: Exactly what kind of change do resultatives with *free* denote?

## 19.2 'V - free'

## 19.2.1 How to cause something to become free

In order to answer this question, a good way to start is determining with which verbs the result phrase *free* actually occurs. By searching the BNC and the WB, I have so far found the following verbs as listed in Tables 19.1 and 19.2.

Table 19.1 BNC counts of transitive 'V (NP) free'

|                                 | _____ NP free |
|---------------------------------|---------------|
| cut                             | 63            |
| pull                            | 57            |
| wriggle                         | 33            |
| wrench                          | 26            |
| tear                            | 15            |
| rip, swing                      | 5             |
| jump, kick, pry, snatch, squirm | 2             |
| claw                            | 1             |

Table 19.2 WB counts of 'V (NP) free'

|                               | _____ (NP) free |
|-------------------------------|-----------------|
| cut                           | 66              |
| pull                          | 29              |
| wriggle                       | 12              |
| swing, tear, wrench           | 7               |
| squirm                        | 4               |
| rip, twist                    | 2               |
| claw, jump, kick, push, wring | 1               |

The representative verbs are *cut*, *pull*, *wriggle*, *wrench*, and *twist*, as exemplified below.<sup>146</sup>

146. In the corpora, *break - free* is also abundantly found. But in almost all of the instances, *break* is not used in its literal, physical sense. Thus in (ia) nothing really gets broken, and in (ib) the sense of something actually breaking is even more difficult to detect.

- (i) a. She *broke* her hands *free* of the grip of those on either side of her and pressed her palms to the table.  
 b. Very recent history suggests the world has become much more like that again, with investment in each country *breaking free* from the constraint of domestic savings.  
 (both from BNC)

- (10) a. She *pulled* her arm *free* and walked to the booth, lifting the receiver off the wall.  
 b. It took firemen nearly two hours to *cut* eight passengers *free*.  
 c. With a wrench, Tug *wriggled free* of the Woman's arm and ran.  
 d. The waitress stepped back from him and *wrenched* her arm *free*.  
 e. Caroline *twisted* her hands *free* of his. (all from BNC)

All these instances seem to fit the following dictionary definition in COBUILD: "If you get something free or if it gets free, it is no longer trapped by something or attached to something."

Now all these attested data seem to instantiate one of the three ways to cause something to become free. The first one is simply to remove something from a grip by pulling it away, as exemplified in (11), and described in Figure 19.1.



Figure 19.1 *Pull - free*

- (11) Graham grabbed her arm as she opened the door. "Help me, Sabrina. Please. I don't want anything to happen to Mobuto. But I have to go after Bernard, don't you see that? I owe it to Carrie and Mikey. I owe it to them." She *pulled* her arm *free* and walked to the booth, lifting the receiver off the wall. (BNC)

Second, one may twist something, thereby weakening the grip. Thus in (12) the statues were trapped in the ground, but after undergoing a twisting motion, they became free, as illustrated in Figure 19.2.

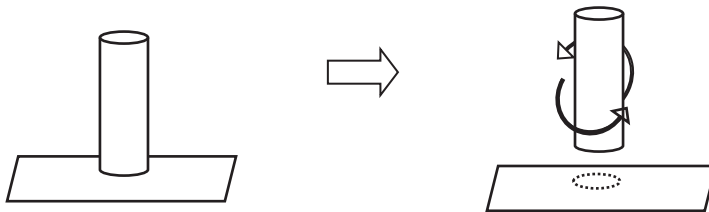


Figure 19.2 *Wrench - free*

- (12) Thieves cut their way through a garden fence and *wrenched free* statues and vases from the grounds of Tatton Park at Knutsford. (BNC)

These instances of *break - free* are not likely to give us a clue as to how the verbal force effects the result state of being free, so *break - free* is not included in the counting of Tables 19.1 and 19.2.

The third way to cause something to become free is to sever the gripping source, as in *cut him free*. This is illustrated in Figure 19.3.

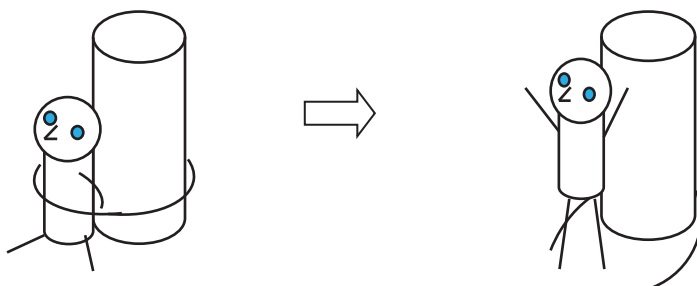


Figure 19.3 *Cut a person free*

### 19.2.2 *Free vs. to freedom*

Across the three types just seen, the result phrase *free* invariably means “being no longer constrained.” It does not describe a path by naming its endpoint. That this is so can be more clearly seen by comparing the result phrase *free* with *to freedom*, which better fits the description used by Goldberg & Jackendoff (2004): *To freedom* means to move to a place where one is free, as seen in the last chapter. Thus in (13) after jumping, the subject entity does end up being in a place where he is no longer constrained.

- (13) When a hardened criminal *jumps* over the wall *to freedom* the last thing expected of him is to become a caring paternal figure to the child he kidnapped. (WB)

But in (14), where the result phrase is *free*, the subject entities simply exit their damaged vehicles hastily rather than reaching some goal of “being in a place in space where they are no longer constrained.”

- (14) A pick-up truck on cruise automatic, and unused to any hinderance, slides into the back of the Cadillac with a satisfying biting crunch. All parties *jump free of their cars* and start blaming each other. (BNC)

Similarly, in (15) after swimming the subject entity will end up in a place where he is no longer constrained.

- (15) When I see it, I’ll plunge. Then I can *swim to freedom* over the heads of all those brainless teenagers. (COCA)

But in (16), with the result phrase *free*, the horse simply ran away from the smoke. Nothing is said about where the horse ended up.

- (16) The horse soared through the foul-smelling smoke and the General saw a bayonet reach towards the animal's belly, but he slashed down with the sword, knocking the bayonet aside, and suddenly the horse had landed safely beyond the furniture and was *running free of the smoke*. (BNC)

As a matter of fact, the majority of the verbs found to occur with *to freedom* are motion verbs. The following motion verbs in Tables 19.3 and 19.4 are attested in the BNC and the WB.

**Table 19.3** Simple motion verbs found to occur with *to freedom* in BNC

|                                                    | _____ to freedom |
|----------------------------------------------------|------------------|
| fly                                                | 4                |
| drive, flutter, hurtle, sail, snatch, swim, tunnel | 1                |

**Table 19.4** Simple motion verbs found to occur with *to freedom* in WB

|                                                                   | _____ to freedom |
|-------------------------------------------------------------------|------------------|
| escape                                                            | 5                |
| fly, walk                                                         | 4                |
| follow, return                                                    | 2                |
| bus, climb, come, dash, dive, drop, jump, leap, march, ski, speed | 1                |

By comparing the range of verbs found to occur with *to freedom*, as summarized in Tables 19.3 and 19.4, with those found to occur with *free*, as summarized in Tables 19.1 and 19.2 above, we can readily see that *to freedom* basically accompanies motion verbs, but *free* generally does not.

Still another thing to notice in this connection is that the state of being “not constrained” or “not attached” should not be confused with a pure spatial configuration. After all, other words like *out* or *off* would more likely be chosen to express a purely spatial configuration.

- (17) a. He pulled out a folded sheet of paper from his inside pocket. (BNC)  
 b. ??He pulled free a folded sheet of paper from his inside pocket.

Contrary to Levin & Rappaport Hovav (1995) and Goldberg & Jackendoff (2004), then, resultatives with *free* do not describe a change in location, at least not in the ordinary sense of the term. Consequently, resultatives with *free* are not resultatives based on motion. On the contrary, they ARE force-based. As we have seen above, there are three ways to cause something to become free: by simply removing something from a grip (e.g. *pull – free*); by twisting something, thereby weakening the grip (e.g. *wrench – free*); and by severing the grip (e.g. *cut – free*). In the first

and second types, a force is exerted to something that is trapped or attached to something else. So they receive the causal chain representations as follows.

(18) She pulled her hand *free*.  
 ACT ON RESULT  
 She → her hand → free

(19) She wrenched her arm *free*.  
 ACT ON RESULT  
 She → her arm → free

Thus these types can be accommodated by the force-recipient account on a par with ordinary resultatives.

### 19.2.3 Resultatives based on self-initiated force

On closer examination, however, it turns out that there are still some resultatives with *free* that do differ from ordinary resultatives. Let us consider *wriggle – free*, which appears both intransitively and transitively, as seen above.

- (20) a. It was now easy to *wriggle* his feet *free* of the clinging mess.  
 b. With a wrench, Tug *wriggled free* of the Woman's arm and ran.  
 (both from BNC)

*Wriggle – free* belongs to the second type, like *wrench – free*: In (20a) and (20b) it is precisely because the feet and the arm undergo twisting that they became free.

There is no problem with handling transitive *wriggle – free*. The post-verbal NP position is often occupied by body-part terms like *feet*, *shoulder*, or *hand*.

- (21) a. He *wriggled* his shoulder *free* and stepped backwards, away from the Hare-woman and closer to Jinny.  
 b. She *wriggled* one hand *free* and stretched it out, searching.  
 (both from BNC)

But the post-verbal NP is not limited to body-part entities. In (22) a key appears as a post-verbal NP.

- (22) Then common sense and anger got the better of her and she firmed her mouth and concentrated on gently trying to *wriggle* the key *free*. (BNC)

So it seems reasonable to construe the post-verbal NP entity as being distinct from the subject entity.

As noted above, when an entity being bound undergoes a strong wriggling motion, the grip will weaken. Because the post-verbal NP is thus acted upon,





In the first type, both the ACT ON component and the RESULT component are available, and the verbal activity of wiping is followed by the state of being clean, as shown in Figure 19.5.

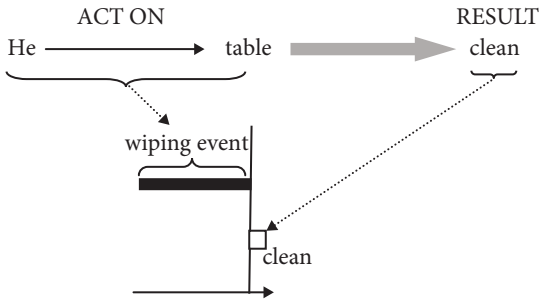


Figure 19.5 *He wiped the table clean*

But in the second type, only the RESULT component is available. The result is effected by a (metaphorical) motion, and because the path denoted by the result phrase *to victory* is progressively covered as the verbal activity is going on, the verbal activity of riding and the path of *to victory* are concurrent, as shown in Figure 19.6.

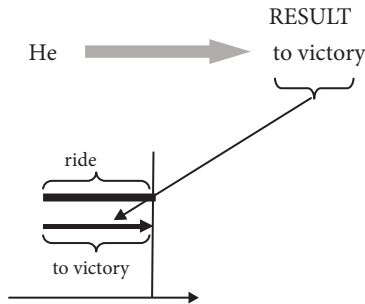


Figure 19.6 *Ride to victory*

Now in the third type, the ACT ON component is lacking. So the third type is like the second type in this respect. But the result state of being free ensues immediately after the wriggling force takes effect. The third type is like the first type in this respect (i.e. force-based). Consequently, the third type receives a representation that is something of a “blend” of the first and second types, as shown in Figure 19.7.

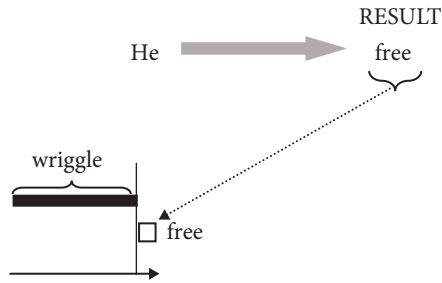


Figure 19.7 *He wriggled free*

In short, intransitive *wriggle free* is a resultative based on self-initiated force. Further instances of resultatives based on self-initiated force are the following:<sup>147</sup>

- (26) a. The man was dazed but managed to *shake loose* of Scott's grip. (BNC)  
 b. He grabbed her shoulders and held her, wanting to keep her out of the room. Eva *twisted loose* and ran to the doorway. (WB)

As should be clear by now, what is special about these resultatives is that despite being force-based, the force is not transmitted but self-initiated. This is ultimately due to a simple physics: When something that is trapped or attached to something else undergoes a strong twisting motion, the grip begins to weaken and that something will eventually become free of the grip. That strong twisting motion may come from the trapped entity itself.<sup>148</sup>

Thus while resultatives like intransitive *wriggle free* indeed behave differently from ordinary resultatives, this is due to the complex interplay of the verb meaning and the semantics of *free*, not because the result phrase *free* denotes a path's endpoint.

### 19.3 *Cut – free*

#### 19.3.1 Apparent puzzle

So far it has been shown that of the three types of resultatives involving *free*, the first type (e. g. *pull – free*) and the second type (e.g. *wrench – free*) can receive appropriate causal chain representations. As a matter of fact, (27a) and (28a) can be paraphrased as (27b) and (28b), fully in accordance with the force-recipient account.

147. This type of resultative has already been discussed in Chapter 17.

148. *Jump free* in (14) and *run free* in (16) do not involve a twisting motion, but they may also be regarded as instances of resultatives based on self-initiated force.

- (27) a. She pulled her arm free.  
 b. She did a pulling action on her arm, and as a result the entity being thus acted upon was free.
- (28) a. They wrenched the statue free.  
 b. They did a wrenching action on the statue, and as a result the entity being thus acted upon was free.

But when we turn to the third type (e.g. *cut – free*), a problem crops up: The ‘X acts upon Y’-paraphrase does not get the meaning right, as shown in (29b).

- (29) a. Sam cut Mary free.  
 b. \*Sam did a cutting action on Mary, and as a result the entity being thus acted upon (=Mary) was free.

Rather, (29a) seems to be paraphrasable with (30).

- (30) Sam cut the rope, and as a result Mary was free.

But this line of paraphrasing, in which a force-recipient and a host of predication are distinct, is not desirable. Recall that in 2.1 the ill-formedness of (31a) is attributed to the non-identity between a force-recipient and a host of predication as shown in the paraphrase in (31b).

- (31) a. \*The bears frightened the campground empty.  
 b. The bears frightened the hikers, and as a result the campground became empty.

Thus *cut – free* apparently defies our force-recipient analysis.

Of course, this problem could be solved if one could come up with a causal chain in which Mary is a force-recipient. We have already seen in Chapter 2 that a sequence of force-transmissions can be compressed into a single causal chain that originates with the subject entity and ends with the post-verbal NP entity. Thus, recall that the post-verbal NP in (32) is indeed a force-recipient on a relevant causal chain as defined by the corresponding sentence in (33).

- (32) He pushed himself to his feet.  
 (33) He pushed his hands against the arms of the chair.

In (32) he receives a lifting force that results from the pushing force applied to the arms of the chair. In this way, the post-verbal NP may turn out to be a force-recipient when a relevant causal chain is extended.

It does not seem that *cut – free* can be similarly handled, however. Thus given the causal chain for *Sam cut the rope* in (34), it is not the case that the cutting force first applied to the rope then ends up being on Mary. After all, the moment the



The contrast between the *cut* as in (37) and that as in (38) may be captured in terms of two different schemas. The *cut* as in (38) may be characterized in terms of a ‘sever’-schema in Figure 19.8, in which something is caused to develop a linear separation in it.



Figure 19.8 ‘Sever’-schema

By contrast, the *cut* as exemplified in (37) may be characterized in terms of a ‘separation’-schema in Figure 19.9, where something is separated from something else.

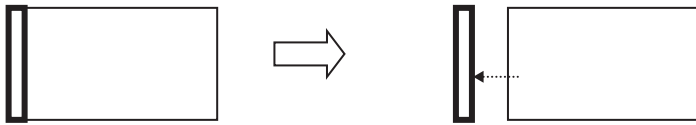


Figure 19.9 ‘Separation’ schema

The ‘separation’-schema is not something that is concocted to accommodate the *cut* in (37) alone. On the contrary, this schema is essential in accounting for the polysemy of *cut*. Thus this schema is instantiated by the sentences in (39).

- (39) a. the shepherd boy who *cut a twig* from a willow tree ...  
 b. I *cut a picture of her marriage* from a newspaper ...  
 c. ... *cut a slice* from one of the enormous cheeses stacked there ...  
 (all from BNC)

Particularly noteworthy is the *cut* in (39c), where a part is separated from the whole. This sense further develops to acquire a ‘create’ sense, which no longer requires a *from*-PP as seen in (40).

- (40) He *cut two thick slices of bread* and spread yellow, salty butter over each one.  
 (BNC)

The following instances of *cut* also seem to be instances of the ‘separation’-schema, on the understanding that what gets separated from something is now taken as something that is discarded. Hence the sense of reducing the amount.

- (41) a. Mr Livingstone would *cut £7 billion* from defence spending ...  
 b. they *cut some money* from our basic pay ... (both from BNC)

Conceivably, when this ‘reduce’ sense acquires a sufficiently independent status, *cut* comes to acquire a different syntax as in (42), where the direct object position is no longer occupied by a separated entity.

- (42) Falling donations have forced Greenpeace International to *cut its 1993 budget* from \$36 million to \$27 million. (BNC)

Thus the ‘separation’-schema is quite fundamental to the verb *cut*.

Now the *cut* in *cut someone free* seems to instantiate the ‘separation’-schema. That is, the focus is on the separation of a person from the tree, rather than the severing of the rope, as depicted in Figure 19.10.

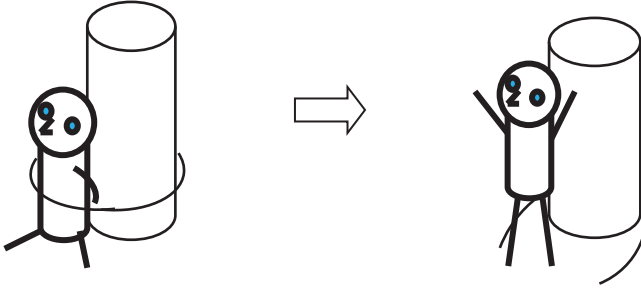
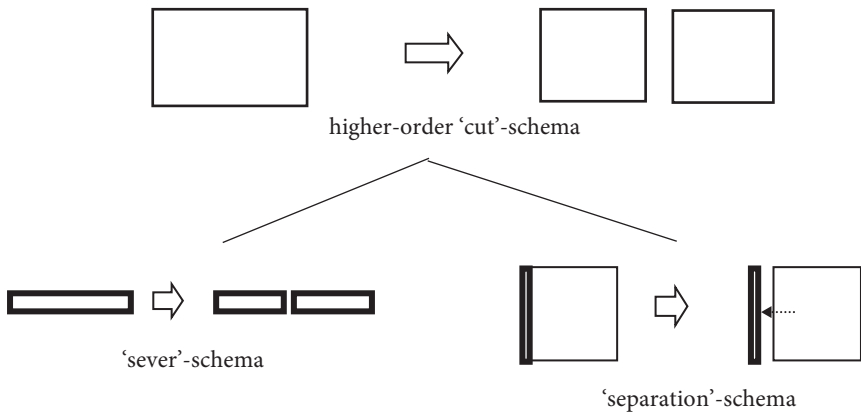


Figure 19.10 *Cut a person free*

We have now arrived at a solution of the apparent puzzle noted at the outset. *Cut – free* is to be related to ‘separation’-*cut* as exemplified in (43a), rather than to ‘sever’-*cut* as in (43b).

- (43) a. Firemen *cut victims from the wreckage*.  
 b. She *cut the ropes* with the knife he’d given her. (both from BNC)

At this point, one may well wonder how one could capture the fact that it is the rope that gets cut. This might appear to be a problem, but is actually not. Note that the ‘sever’-schema and the ‘separation’-schema can be safely regarded as instantiating a higher-order ‘cut’-schema, which is neutral as to the distinction between the two schemas, as shown in Figure 19.11.



**Figure 19.11** How the ‘sever’-schema and the ‘separation’-schema are related

That is, the two schemas differ only as to which part is profiled against the same base. With the ‘separation’-schema, the severing of the rope is simply backgrounded, i.e. still there as part of the base. So one can still infer that it is the rope, rather than she, that gets cut, despite the fact that the rope does not qualify as a force-recipient with ‘separation’-*cut*.

**19.3.3** *Cut – free* as a ‘change verb’ resultative

Now that *cut – free* is based on ‘separation’-*cut*, the post-verbal NP is a subcategorized object, and hence a force-recipient. So *cut – free* can be accommodated by the force-recipient account, after all.

Like ‘sever’-*cut*, ‘separation’-*cut* is a change-of-state verb, which entails that something becomes separated from something else. Now given that becoming free means that one is no longer constrained, *free* can be taken to further specify the state of being separated from something; this is an instance of ‘change verb’ resultative.

Accordingly, *cut – free* is to be obtained by means of a result phrase-addition analysis: (44a) results from combining the subcategorization frame with the result phrase *free*, as shown in (44b).

- (44) a. Firemen *cut* him *free from the vehicle*. (BNC)  
 b. [Firemen cut him from the vehicle] + [free].

Now one apparent problem with this analysis is that *free* may appear even without the *from*-PP.

- (45) a. Firemen *cut* him *free from the vehicle*.  
 b. Firemen *cut* him *free*.

One conceivable reason why this is possible is that while *free* further specifies the state of being separated, when *free* and the *from*-PP co-occur the *from*-PP may be taken to further specify *free* by elaborating on the source. In this respect, *free* is similar to *off*, which may occur with or without a *from*-PP.

- (46) a. They *cut* him *off* without a penny.  
 b. Another thing that *cut* me *off from the other kids* was ...  
 (both from BNC)

All this indicates that like *off*, *free* functions like a particle. This is not surprising, in that *free* indeed functions like a particle, as in (47).<sup>149</sup>

149. Bolinger (1971) observes that the adjectives *open*, *loose*, *free*, and *clear* behave like a particle consistently, and suggests that this is because all these adjectives signify “disconnected” in

- (47) The fire crew had to *cut free* the man with his legs trapped. (BNC)

Thus the apparent puzzle posed by *cut – free* is created by the complex interplay of the verb *cut* in its ‘separation’ sense and *free* as a particle.

### 19.3.4 Putative restriction

Lastly, let us have a look at Goldberg’s (1991b) analysis. Goldberg (1991b) observes that *cut*, *tear*, and *rip* may appear with *free* and its kins.

- (48) a. He cut himself loose.  
 b. He tore himself free.  
 c. He ripped himself away. (Goldberg, 1991b, p. 83)

Goldberg argues as follows: “This class of cases can be semantically characterized as involving verbs which imply the forceful breaking of constraints in order to gain freedom.” (Goldberg, 1991b, p. 83)

As evidence, Goldberg (1991b) observes that *untie* and *slice* do not occur in this type of resultative.

- (49) a. \*He untied himself free.  
 b. \*He sliced himself free. (Goldberg, 1991b, p. 83)

Actually, however, what is crucial is the separation of one thing from another, rather than the breaking of the constraint. For one thing, even with *tear* and *rip*, the severing does not seem to be essential. In (50) the person’s arm and the film are simply snatched away.

- (50) a. I have to *tear* my arm *from her hands*.  
 b. Livid with rage, he grabs their cameras and *rips* the film *from them*, tearing it to shreds and throwing it in the fire. (both from BNC)

Furthermore, neither *untie* nor *slice* involves the sense of removal in its inherent meaning.

- (51) a. \*He untied himself free.  
 b. \*He sliced himself free. (Goldberg, 1991b, p. 83)

The definition of *untie* (in the relevant sense) in the COBUILD dictionary goes as follows: “If you untie something such as string or rope you undo it so that there is no knot or so that it is no longer tying something.” Clearly, what is cru-

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some sense (p. 77). This may be taken to mean that the states expressed by all these adjectives presuppose motion in some sense (cf. Chapter 11 for *open*).



cial is that something is no longer tied, which is different from the removal of a string-like entity.

As for the verb *slice*, the COBUILD dictionary gives the following definition: “If you slice bread, meat, fruit, or other food, you cut it into thin pieces.” As this definition shows, the verb *slice* basically means to make a slice (= thin piece) of something. The focus is on the product or the manner of action (i.e. by using a knife), not on a removal of something from something else.<sup>150</sup>

Thus the putative restriction which Goldberg (1991b) proposes actually does not capture the essential characteristics of *cut – free*. This is because her analysis is based upon a mistaken view of *cut – free*, namely that *cut – free* is related to ‘sever’-*cut*.<sup>151</sup>

#### 19.4 Conclusion

This chapter has analyzed resultatives involving *free*, as these resultatives might appear to be still another instance of resultatives not based on force-transmission, if we believe what has been said of these resultatives in previous studies. It has turned out that resultatives involving *free* are *not* resultatives which are not based on force-transmission.

In the course of discussion, two things have become clear. First, the result phrase *free* denotes a state, not an endpoint, contrary to Levin & Rappaport Hovav (1995) and Goldberg & Jackendoff (2004). Second, *Sam cut Mary free* apparently defies our force-recipient account, but this is so only as long as *cut – free* is assumed to be related to ‘sever’-*cut*. Once we realize that *cut – free* is actually related to ‘separation’-*cut*, it can be straightforwardly accounted for as an instance of ‘change verb’ resultative by means of a result phrase-addition analysis.

150. Recall the discussion in 10.2.3 of why *slice – thinly/thickly* is far more frequent than *slice – thin/thick*.

151. In footnote 6 of Goldberg (1991b, p. 93), Annie Zaenen is credited with the observation that most of the relevant examples can occur without adjectival result phrases:

- (i) a. He cut himself from the tree.
- b. He tore her from his clutches.
- c. ?He ripped himself from the meeting.

The possibility that the post-verbal NPs in all these expressions may therefore be subcategorized objects, as Zaenen suggests, is simply noted and is not explored any further in Goldberg (1991b), however.

PART VIII

**Putative resultatives**



## *Follow and disappear*

### 20.0 Introduction

Following Part VII, Part VIII will address “resultatives” which are cited in the literature as such, but which do not conform to the characterization in terms of force-transmission. Specifically, the sentences in (1) and (2) have been cited in the literature as instances of resultatives that behave differently from ordinary resultatives.

- (1) a. The wise men followed the star *out of Bethlehem*.  
(Wechsler, 1997, p. 313)  
b. Bill disappeared *down the road*. (Goldberg & Jackendoff, 2004, p. 541)
- (2) a. The trolley rumbled *through the tunnel*.  
b. The wagon creaked *down the road*.  
(Goldberg & Jackendoff, 2004, p. 540)

It is shown in Part VIII that from the viewpoint of our force-recipient account, there is nothing surprising about these sentences not behaving like ordinary resultatives. After all, none of these sentences is a resultative in the first place. Chapter 20 examines sentences like (1a) and (1b), and Chapter 21 those like (2).

### 20.1 *Follow him out of the room*

#### 20.1.1 Another apparent counter-example to the Direct Object Restriction

In Chapter 18, the sentence in (3) has been cited as a violation of the Direct Object Restriction: It is the subject entity, rather than the direct object entity, that the result phrase *to victory* is predicated of.

- (3) She rode the horse *to victory*.

This is because *ride the horse to victory* is not a resultative based on force-transmission. Rather, *to victory* is a metaphorical goal phrase accompanying metaphorically-construed motion sentences.

Now in the literature sentences like (4) have been cited as a violation of the Direct Object Restriction: It is the subject entity, rather than the direct object entity,

that *out of Bethlehem* is predicated of (Wechsler 1997, Verspoor 1997, Rappaport Hovav & Levin 2001).

- (4) The wise men followed the star *out of Bethlehem*. (Wechsler, 1997, p. 313)

Sentences like (4) are not exactly the same as those like (3), however, because the PP accompanying *follow* is not a metaphorical goal phrase but a path PP. Rather, that sentences like (4) violate the Direct Object Restriction points to a more radical explanation: Sentences like (4) are simple motion sentences, not resultatives.

### 20.1.2 *Follow* as a motion verb

Most importantly, we should recognize that *follow* in itself is a motion verb. This is corroborated by a few pieces of evidence. First, the path PP can be omitted without affecting the motion semantics in any way.

- (5) Bill followed the thief.

Thus the notion of motion is lexically encoded in the verb *follow*, independent of the path PP. This is confirmed by a dictionary definition of *follow*: “to walk, drive, etc. behind someone, when you are going in the same direction as them” (Macmillan).

The second point concerns subjective motion sentences. It has been observed in the literature that certain motion verbs may be used in stative sentences, where the subject entity itself does not undergo any objective movement (Talmy 2000b, Matsumoto 1996a, 1996b, among others). Thus in (6b) the verb *go* is used to express a subjective motion, contrasting with (6a).

- (6) a. Sam went to the top of the mountain.  
b. The road went to the top of the mountain. (Lakoff 1987)

Now Binnick (1968) observes that *cross*, *enter*, and *follow* can serve either as an active, motive verb as in (7), or as a stative, locative verb as in (8).

- (7) a. Caesar crossed the English Channel.  
b. The announcer entered the studio.  
c. James Bond followed the enemy spy. (Binnick, 1968, p. 1)
- (8) a. Route 80 crosses Iowa.  
b. The railroad enters the town near the post office.  
c. ‘B’ follows ‘A’ in the alphabet. (Binnick, 1968, p. 2)

Binnick further notes that these verbs can be paraphrased by means of *go* (*come*), irrespective of the active/stative contrast.

- (9) a. Caesar went (came) across the English Channel.  
 b. The announcer went (came) into the studio.  
 c. James Bond went (came) after the enemy spy. (Binnick, 1968, p. 2)
- (10) a. Route 80 goes (comes) across Iowa.  
 b. The railroad goes (comes) into the town near the post office.  
 c. 'B' goes (comes) after 'A' in the alphabet. (Binnick, 1968, p. 3)

The fact that *follow* can be used to express a subjective motion without a path PP as in (8c), with the meaning of (10c), is a strong indication that this verb also lexically encodes the notion of motion.

Third, as already seen in Chapter 18, *to freedom* is a result phrase meaning “to a place where one is free,” and therefore accompanies motion verbs, as in (11a) and (11b). Now *follow* may be accompanied by this result phrase as in (11c).

- (11) a. There they would find the Hopi escape route in the chimney and would *climb to freedom*.  
 b. Two Swedish engineers who were kidnapped by Kashmiri separatists in northern India more than three months ago, have *escaped to freedom*.  
 c. A young slave girl saves scraps of cloth and sews a “map” that fellow slaves can *follow to freedom*. (all from WB)

Similarly, *to safety*, which means “to a place where one is safe” and therefore also accompanies motion verbs, may appear with *follow*.

- (12) Some who win the race with the fire *follow* local firefighters *to safety*. (COCA)

All these facts strongly indicate that *follow* is indeed a motion verb. The path PP simply further specifies the notion of path entailed by the verb meaning.

### 20.1.3 Further-specifying path PPs

This brings us back to sentences like (13), which have already been discussed in Chapter 9.

- (13) The lake froze *solid*.

In arguing that the result phrase *solid* in (13) further specifies a change already entailed by the verb, following a number of scholars (Pustejovsky (1991a, p. 76), Kaufmann (1995, p. 416), Levin & Rappaport Hovav (1995, p. 58), Tortora 1998, Rapoport (1999, p. 673), Horrocks and Stavrou (2003, p. 317), Randall (2010, p. 99), among others), I pointed out that the notion of further specification is not limited to cases like (13) and is actually of far more general applicability.

Thus besides APs further specifying a result state as in (13), we have adverbs further specifying the manner of motion/speaking as in (14), and adjectives further specifying a property of the head noun as in (15)

- (14) a. Arthur rushed *quickly* to the door.  
 b. Arthur ambled *slowly* across the lawn.  
 c. Arthur murmured *softly* in Bertha's ear.  
 d. Arthur was shouting *loudly*. (Cruse, 1986, p. 108)
- (15) a *bad* headache, a *terrible* catastrophe (Cruse, 1986, p.108)

But these do not exhaust the possible targets for further specification. Consider (16).

- (16) a. Bill {entered/left/exited} (the room) *through the bathroom window*.  
 b. Bill crossed (the street) *to our side*.  
 c. The cream rose *to the top*. (Goldberg & Jackendoff, 2004, p. 557)

The verbs in (16) incorporate paths: *enter* 'to go into', *cross* 'to go across', and *rise* 'to go upward' (Jackendoff 1990). Jackendoff (1990) and Goldberg & Jackendoff (2004) observe that the path PPs further delineate these inherent paths in (16).

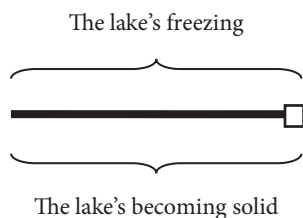
As a matter of fact, similar examples are rather easy to find in the BNC.

- (17) a. The helicopter rose six feet *into the air*, tilted forward to gain airspeed, and buried its nose-wheel in the ground.  
 b. I nod my head and a tear falls *onto my hand*. (both from BNC)
- (18) a. One can still enter *through a narrow stone gateway*, though now a new town spreads far beyond the confines of its walls.  
 b. It will soon be up-staged by the enormous 5,000 room MGM Grand, which guests will enter *along a yellow brick road* and which will contain, as the casino, a life-sized version of the Emerald City. (both from BNC)
- (19) a. To reach East Berlin they must cross *through Checkpoint Charlie*, not far from their outpost.  
 b. As the East Berliners cross *into the West*, they see some unusual sights. (both from BNC)

This strongly suggests that path PPs following path-conflating verbs (e.g. *enter*, *cross*) can be analyzed in essentially the same way as adjectival result phrases following change-of-state verbs like (13). Thus in (16a) Bill's entering and his going through the bathroom window are two facets of one and the same event.

This is in fact confirmed by examining the possible paraphrases. As already noted in Chapter 9, (20a) cannot be appropriately paraphrased by (20b). Rather, the relation between the two subevents is better captured by (20c), for the lake's

freezing and the lake's becoming solid are two facets of one and the same event, as described in Figure 20.1.



**Figure 20.1** *The lake froze solid*

- (20) a. The lake froze solid.  
 b. ≠ The lake became solid by freezing.  
 c. The lake's becoming solid constitutes the lake's freezing event.

Similarly, (21a) cannot be appropriately paraphrased by (21b). Rather, the relation between the two subevents is better captured by (21c), as Bill's entering is not a distinct event from his going through the bathroom window.

- (21) a. Bill entered through the bathroom window.  
 b. ≠ Bill went through the bathroom window by entering it.  
 c. His going through the bathroom window constitutes his entering event.

All this indicates that just as a result phrase-addition analysis is warranted for (20a), so is a path PP-addition analysis for (21a).

- (22) a. [The lake froze] + [solid] => [The lake froze solid]  
 b. [He entered] + [through the bathroom window] =>  
 [He entered through the bathroom window]

In fact, there is evidence that the PP in question is not to be treated as part of an argument structure construction. The path PP may appear irrespective of whether the verb is followed by a direct object NP or not.

- (23) a. Bill entered *through the bathroom window*.  
 b. Bill entered the room *through the bathroom window*.

Furthermore, this path PP seems to be possible whenever motion is entailed. Thus in (24), the PP, being conjoined with a direct object NP, specifies a path subsequent to crossing the street.

- (24) They *crossed the street and into the mid-city wonder known as Central Park*.  
 [Harlan Coben, *Darkest Fear*, p. 214]



Also, this path PP appears with the causative counterparts of *rise* and *fall*. Thus *raise*, *lift*, and *drop*, all of which lexically encode the notion of path, may be accompanied by the path PP further specifying the encoded paths.

- (25) a. She *raised* the glass slowly *to her lips*.  
 b. He put down his glass of tea, *lifted* the rifle *to his shoulder* and trudged off into the debris.  
 c. I *dropped* the paper *to the floor*. (all from BNC)

Here the path PPs are predicated of the direct object NPs, rather than of the subject NPs.

Consequently, we seem to be justified in concluding that there are path PPs further specifying an encoded path, parallel to the result phrase further specifying a result state like *solid* in *The lake froze solid*. And as we have seen in Chapter 9, further-specifying manner adverbs, further-specifying adjectives, and further-specifying result phrases are to be handled by means of the same mechanisms that handle ordinary manner adverbs, ordinary adjectives, and ordinary result phrases. It follows, then, that no special mechanism is called for to accommodate further-specifying path PPs accompanying motion verbs. They are to be handled exactly like ordinary path PPs.

At this point, however, note that while I am drawing a parallel between further-specifying result phrases and further-specifying path PPs, I am not claiming that motion verbs accompanied by the latter are resultatives. Whereas the former may be characterized as a type of resultative expression in that the target of further specification is a result state, there is no reason to call the latter resultatives. After all, the target of further specification is simply a path, which in itself bears no 'result' relation to the motion event.<sup>152</sup>

Now going back to our discussion of *follow*, the path PP accompanying *follow* also seems to be of this type. This is in fact corroborated by the following facts. First, (26a) cannot be appropriately paraphrased by (26b), as Bill's following event is not a distinct event from his going into the library. Rather, the relation between the two subevents is better captured by (26c).

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152. Compare with resultative caused-motion sentences like (i):

- (i) a. He hit the ball into center field.  
 b. She broke the egg into the pan.  
 c. I emptied the tank into the sink.

As already discussed in Chapter 9, all these expressions deserve to be called resultatives in that the motion ensues as a result of the verbal event.

- (26) a. Bill followed the thief into the library.  
 b. ≠ Bill went into the library by following.  
 c. Bill's going into the library constitutes his following event.

In this respect, *follow* behaves exactly like path-incorporating verbs like *enter*.

Next, the path PP may appear after *follow* even without a direct object.

- (27) a. We were *following into Camden Lock*.  
 b. She *followed into my office* and arranged herself neatly in a straight-backed chair, notebook open and sharp pencil ready poised for an attack on the clean white pages. (both from BNC)

In this respect again, *follow* behaves like path-incorporating verbs like *enter*, which may be accompanied by a path PP irrespective of whether the direct object is present or not, as shown in (23).

It seems safe to conclude, therefore, that the path PP is a further-specifying path PP, exactly like *through the window* in *enter through the window*.

- (28) Bill followed her into the library.

Thus, the sentence in (28) is not a resultative but a motion sentence in which the path PP *into the library* further specifies the entailed path.

## 20.2 Other approaches

### 20.2.1 Rappaport Hovav & Levin (2001)

Let us now see how other scholars have analyzed *follow* accompanied by a path PP. Rappaport Hovav & Levin (2001) observe that the sentences in (29) are counterexamples to the Direct Object Restriction, on the assumption that (29a) IS a resultative.

- (29) a. The wise men followed the star *out of Bethlehem*. (Wechsler 1997, p. 313)  
 b. John danced mazurkas *across the room*. (Verspoor, 1997, p. 151)  
 c. Fly American Airlines *to Hawaii* for your vacation!

The solution which Rappaport Hovav & Levin (2001) offer is to appeal to the fact that the post-verbal NP of *follow* is not a force-recipient. Sentences like (29a) do not pass the “What X did to Y” test.

- (30) \*What they did to the star is follow it. (Rappaport Hovav & Levin, 2001, p. 787)

Rappaport Hovav & Levin (2001) reason as follows: Normally the result phrase must be predicated of the post-verbal NP which is a force-recipient. But if there is

no force-recipient, then this restriction does not come into force in the first place: “with noncanonical transitive verbs, which lack an NP denoting an entity that is the force recipient, the result XP *is free to be predicated of the subject*.” (Rappaport Hovav & Levin 2001, p. 786, emphasis mine)

While Rappaport Hovav & Levin (2001) are certainly right in observing that the post-verbal NP of *follow* is not a force-recipient, their reasoning does not stand. It is simply not the case that in the absence of a force recipient the result phrase “is free to be predicated of the subject.” Consider (31).

- (31) a. He entered the room.  
b. He crossed the street.

As already noted in Chapter 3, the post-verbal NPs of these path-incorporating verbs are not force-recipients.

- (32) a. ?\* What he did to the room was enter it.  
b. ?\* What he did to the street was cross it. (Iwata, 2004b, p. 274)

Rather, in these sentences the direct object is a ‘landmark’ (Iwata, 2004b, p. 274).

According to Rappaport Hovav & Levin’s (2001) reasoning, therefore, it should be possible to form resultatives from these path-incorporating verbs in which the result phrase is “free to be predicated of the subject.” But this is not the case. Neither (33a) nor (33b) is acceptable, despite the fact that the intended meanings are perfectly comprehensible.

- (33) a. \*He entered the room sick. (sick building syndrome)  
(intended meaning: He entered the room, and as a result he was sick)  
b. \*He crossed the long street exhausted.  
(intended meaning: He crossed the long street, and as a result he was exhausted)

Thus Rappaport Hovav & Levin’s (2001) reasoning simply does not stand.

From the viewpoint of the force-recipient account, by contrast, there is good reason why the PP is predicated of the subject in the sentences in (29). It is no wonder why the sentences in (29) do not obey the Direct Object Restriction. After all, there is no reason why these motion sentences should obey the Direct Object Restriction.

With resultatives like *wipe the table clean*, the result phrase must be predicated of the entity that undergoes *a change of state*. That entity is most likely the direct object entity, because the recipient of the verbal force is practically the only possible entity that will undergo that change of state. Hence the Direct Object Restriction.

By contrast, with motion sentences like (29), the path phrase must be predicated of the entity that undergoes *a change of location*. But the change of location is not brought about by the verbal force applied to the direct object entity. So nothing

requires the path PP to be predicated of the direct object (In fact, the direct object is not even a force-recipient at all in (29)). Rather, the entity undergoing a change of location (=mover) is none other than the subject in (29a).

Thus what is most crucial in accounting for the observed facts in (29), but which Rappaport Hovav & Levin (2001) fail to see, is the distinction between causing a change of state (=Transitive resultatives like *hammer the metal flat*) and a simple change of location (= *follow her into the library*).

### 20.2.2 Goldberg & Jackendoff (2004)

Goldberg & Jackendoff (2004) extend a constructional analysis along the lines of Goldberg (1995) to examples like *Bill followed her into the library*. They observe that the *follow*-type case cannot be handled by means of ordinary resultative constructions in that the direct object is not a patient. Rather, the direct object determines the subject's path of motion, either by its own motion or by traces it leaves.

- (34) a. Bill followed the thief into the library.  
 b. Bill tracked the leak to its source.  
 c. Bill traced the clues to the haunted house.

(Goldberg & Jackendoff, 2004, pp. 552–53)

They suggest two possibilities. The first is to regard the *follow*-type as a variant of the non-causative motion construction (e.g. *Bill rolled into the room*). Thus they posit a construction as in (35).

- (35) Syntax: NP<sub>1</sub> V NP<sub>2</sub> PP<sub>3</sub>  
 Semantics: X<sub>1</sub> GO Path<sub>3</sub>  
 MEANS: [VERBAL SUBEVENT: X<sub>1</sub> GO [PATH DETERMINED BY Y<sub>2</sub>]]  
 (Goldberg & Jackendoff, 2004, p. 553)

This essentially means that the direct object argument (NP<sub>2</sub>) does not contribute to the semantics; it simply serves to determine the path. According to Goldberg & Jackendoff, the direct-object argument is an argument of the verb alone, not one of the constructional subevent.

Alternatively, it is possible to posit additional constructional subevents. Thus in (36) the semantics of the proposed construction is “X<sub>1</sub> GO-AFTER Y<sub>2</sub> Path<sub>3</sub>” rather than the simple “X<sub>1</sub> GO Path<sub>3</sub>,” indicating that the subevent of X going after Y is added to the motion subevent.

- (36) Syntax: NP<sub>1</sub> V NP<sub>2</sub> PP<sub>3</sub>  
 Semantics: X<sub>1</sub> GO-AFTER Y<sub>2</sub> Path<sub>3</sub>  
 INSTANCE: [VERBAL SUBEVENT] e.g. *follow, track, trace*

(Goldberg & Jackendoff, 2004, p. 554)

Here the semantics approximates the meaning of *follow*, and the acceptable relationship between the verbal and constructional subevents is stipulated to be the instance relation alone. Accordingly, the representation in (36) has the effect of allowing only verbs like *follow* or *track*; means and result relations are not acceptable, as exemplified in (37).

- (37) a. \*The dog sniffed the trail into the yard.  
 (=The dog followed the trail into the yard by sniffing it – MEANS)  
 b. \*The dog ran the clues into the yard.  
 (=The dog followed the trail into the yard by running –MEANS)  
 c. \*The dog found her into the yard.  
 (=The dog went after her into the yard thereby finding her – RESULT)  
 (Goldberg & Jackendoff, 2004, p. 554)

Goldberg & Jackendoff (2004) simply suggest these two possibilities without choosing between them.

There are a number of fundamental problems with Goldberg & Jackendoff's (2004) analysis. First, their analysis predicts that the designated syntactic frame must be strictly adhered to. Since the constructional meaning is strictly paired with a specified syntactic frame, failure to meet the syntactic requirement should result in ill-formedness as in (38).

- (38) a. The audience laughed the actors off the stage.  
 b. \*The audience laughed the actors.  
 c. \*The audience laughed off the stage.

If the proposed construction in (35) or (36) is on a par with resultative constructions, the same should be true of the 'follow'-type. But as noted above, the path PP may appear after *follow* even without a direct object.

- (39) a. We were *following into Camden Lock*.  
 b. She *followed into my office* and arranged herself neatly in a straight-backed chair, notebook open and sharp pencil ready poised for an attack on the clean white pages. (both from BNC)

This means that it does not matter whether the syntactic frame is  $[NP_1 V NP_2 PP_3]$  or  $[NP_1 V PP_3]$ , casting a serious doubt on Goldberg & Jackendoff's analysis.

Second, while Goldberg & Jackendoff's (2004) argument structure construction in (36) may appear to be valid for handling verbs like *pursue*, *track*, and *trail*, as exemplified in (40), besides *follow*, it cannot handle cases like (41) involving the verb *precede*.

- (40) a. ... he *chased* a ball *into the outfield* while playing for Devon against Berkshire at Reading.  
 b. The gardener, Mrs Grindewood-Gryke and I *pursued* him *down the garden and into the bluebell wood*.  
 c. Try not to *track* mud *into the house*, Ian.  
 d. Now, as she wearily *trailed behind* him *into the main living-room*, Laura's nose wrinkled at the musty, stale atmosphere of the room.  
 (all from BNC)
- (41) He pushed open the door and allowed Catherine to *precede* him *into the studio*. (BNC)

While *follow* roughly means “to go behind someone,” *precede* means “to go before someone.” So Goldberg & Jackendoff would have to posit an argument structure construction pairing the syntactic frame  $[NP_1 V NP_2 PP_3]$  with the semantics “ $X_1$  GO-BEFORE  $Y_2$  Path<sub>3</sub>,” despite the obvious fact that the further-specifying function of the path PP is no different between *follow* and *precede*.

Viewed in this way, it is quite natural that only verbs like *follow* or *chase* can occur in the supposed argument structure construction in (36), in that all these verbs lexically entail motion. This is confirmed by looking at dictionary definitions: *Chase* “to follow someone or something quickly in order to catch them.”; *pursue* “to chase someone or something in order to catch them.”; *trace* “to find someone or something that you are looking for by asking questions and getting information.”; *track* “to follow or find someone or something by looking for evidence that shows where they have gone” (Macmillan).

Now it comes as no surprise that the construction which Goldberg & Jackendoff posit admits only the instance relation, to the exclusion of means and result relations.

- (42) a. \*The dog sniffed the trail into the yard.  
 (=The dog followed the trail into the yard by sniffing it – MEANS)  
 b. \*The dog ran the clues into the yard.  
 (=The dog followed the trail into the yard by running – MEANS)  
 c. \*The dog found her into the yard.  
 (=The dog went after her into the yard thereby finding her – RESULT)  
 (Goldberg & Jackendoff, 2004, p. 554)

In the case of resultatives, the constructions may superimpose their syntax and semantics on individual verbs. But in the *follow*-type case, no comparable argument structure construction exists in the first place.<sup>153</sup>

153. Essentially the same conclusion has been arrived at by van der Leek (2000, p. 308). See also Kay (2005, p. 88).

Thus *follow him out of the room* is to be analyzed in terms of a further-specifying path PP. This is a simple motion expression and is not a resultative in any sense of the word.

### 20.3 *Disappear down the road*

#### 20.3.1 Goldberg & Jackendoff (2004)

Goldberg & Jackendoff (2004) also cite examples like (43a) and (43b) as instantiating another type of resultative which does not conform to the ordinary pattern of resultatives. They observe that an appropriate paraphrase of (43a) is (44b), rather than (44a).

- (43) a. The witch vanished into the forest.  
b. Bill disappeared down the road.

- (44) a. \*The witch went into the forest by vanishing.  
b. The witch went into the forest and thereby vanished.

(Goldberg & Jackendoff, 2004, p. 541)

In other words, the verbal subevent (The witch vanished) is not the means but the result of the constructional subevent (The witch went into the forest).

Goldberg & Jackendoff thus maintain that ‘disappearance’ resultatives pattern with sound-emission resultatives, which are exemplified in (45) and which are claimed to be handled by the construction in (46) (Goldberg & Jackendoff, 2004, p. 541).

- (45) a. The trolley rumbled through the tunnel.  
b. The wagon creaked down the road.  
c. The bullets whistled past the house.  
d. The knee-replacement candidate groaned up the stairs.

(Goldberg & Jackendoff, 2004, p. 540)

- (46) Sound-emission path resultative

Syntax: NP<sub>1</sub> V PP<sub>2</sub>

Semantics: X<sub>1</sub> GO Path<sub>2</sub>

RESULT: [VERBAL SUBEVENT: X<sub>1</sub> EMIT SOUND]

(Goldberg & Jackendoff, 2004, p. 541)

The claim that cases like (43) are handled in a way entirely parallel to those like (45) strikes one as odd, though. After all, events of disappearance and events of sound emission are so unrelated to each other. Goldberg & Jackendoff (2004)

concede that they cannot explain why such disparate events should lead to identical behaviors: “Thus we reluctantly conclude that the selectional restrictions on the choice of verbal subevent in [(46)] is a raw disjunction: *there is no explanation to be sought at this level of detail; there is only description.*” (Goldberg & Jackendoff, 2004, p. 542, emphasis mine)

### 20.3.2 *Disappear* as a motion verb

It is true that we cannot semantically unify events of disappearance with events of sound emission.<sup>154</sup> But we can explain why verbs of disappearance behave the way they do. Notice, first, that motion is implied even in the absence of path PPs.

- (47) a. Then he jumped off, grabbed Caspar who was trailing his lead, and ran off towards the gate. He climbed over it and *disappeared*.  
 b. Frowning, he *disappeared* with the throng.  
 c. Endill looked briefly around the neighbouring passages, calling for him, but he had *disappeared*. (all from BNC)

This strongly indicates that *disappear* may be a motion verb, irrespective of whether it is accompanied by a path PP or not.

This is further confirmed by the fact that *disappear* verbs may be used in subjective motion sentences.<sup>155</sup>

- (48) a. The road ran straight ahead of us until it *disappeared* in the mist, ...  
 b. Precipitation on the surrounding mountains may give rise to streams which quickly *disappear* where they reach the basin, as in the Taklamakan desert of the Tarim basin. (both from BNC)

154. Sentences like (45) will be discussed in the next chapter, where it will become clear why events of disappearance and events of sound emission behave similarly.

155. Note that the *in*-PP in (48a) is not a path PP but an event-external adverbial in the sense of Maienborn (2001) and Maienborn & Schäfer (2011). Maienborn (2001) and Maienborn & Schäfer (2011) distinguish three types of locative adverbials: frame adverbials as in (ia), event-external adverbials as in (ib), and event-internal adverbials as in (ic).

- (i) a. In Argentina, Maradona is still very popular.  
 b. Maradona signed the contract in Argentina.  
 c. Maradona signed the contract on the last page.

(Maienborn & Schäfer, 2011, p. 1410)

Of these, event-external adverbials as in (ib) serve to locate an event (in space), rather than restricting the speaker's claim as in (ia) (=frame adverbials) or expressing part of the event as in (ic) (=event-internal adverbials). Clearly, the *in*-PP in (48a) counts as an event-external adverbial in this classification, and is to be distinguished from path PPs like *into the wood*.



- (49) a. The track widened and then *vanished*.  
 b. ... streams *vanishing* and resurfacing and a array of caves second to none in Britain. (both from BNC)

Note that here *disappear* and *vanish* are not accompanied by directional PPs.

Furthermore, *disappear* is susceptible to a shift in perspective characteristic of motion verbs. In (50) the station buildings are described as moving away, despite the fact that the station buildings are not objectively moving.

- (50) Only when the station buildings *disappeared* from sight did I feel safe from further intervention. (BNC)

This is made possible because the subject entity remains conceptually stationary while the landscape travels past him. This mode of description is generally available for motion verbs (Clark 1973, Fillmore 1997, Lakoff & Johnson 1980, Langacker 1991, inter alia).

- (51) The telephone poles are rushing past at 60 miles per hour.  
 (Langacker, 1991, p. 266)

What is more, *disappear* may be followed by the result phrase *to safety* as in (52), which has already been seen in Chapter 18 to accompany motion verbs, as shown in (53).

- (52) They have to watch the enemy *disappearing to safety* across the other side of the border. (COCA)
- (53) a. As the sharks circled closer, two dolphins appeared at her side and protected her until she reached a buoy and could *climb up onto it to safety*.  
 b. While his workmates *ran to safety*, John turned back for his jacket.  
 (both from BNC)

All these facts suggest that *disappear* is a motion verb, which may be accompanied by further-specifying path PPs.

Given this view of *disappear*, it comes as no surprise that (54a) cannot be appropriately paraphrased by (54b). Rather, the relation between the two subevents is better captured by (54c).

- (54) a. Bill disappeared down the road.  
 b. ≠ Bill went down the road by disappearing.  
 c. Bill's going down the road constitutes his disappearing event.

After all, the motion and the disappearing are two facets of one and the same event.

At this point, one might still feel uneasy about characterizing *disappear* as a motion verb. A moment's reflection tells us, however, that this verb may indeed be a motion verb. Note that there are several ways in which someone or something can disappear. Someone or something may disappear not only when they no longer exist, but also when they simply become not visible. The latter in turn can be achieved either (1) when someone or something are shielded from view, or (2) when they go where they can no longer be seen. Construed in this third sense, *disappear* is indeed a motion verb.

Consequently, the path PP occurring after *disappear* further specifies an entailed path. It is no wonder, then, that the verbal event is not the means of the motion event. After all, the motion event and the disappearing event are two facets of a single event, as noted above.

### 20.3.3 How to become invisible

Thus the apparent puzzle posed by *disappear* dissolves once one realizes that becoming invisible may be conceptualized in terms of motion. What needs to be stressed at this point, however, is that this conceptualization is actually part of a larger system, as already seen in Chapter 18: We conceptualize our visual fields as containers, and our fields of vision define a boundary of what we can see, so what is inside the visual field is visible, and what is outside is invisible. This is why the PPs *from view/sight* and *out of sight* serve as result phrases to express changes of state based on physical translational motion. Thus verbs having to do with downward movement are frequently found to be used to express the notion of becoming invisible as in (55), which is quite to be expected given the general understanding that objects which are below the line of sight are not visible.

- (55) a. In the months thereafter he *sank almost completely from view*.  
 b. Eventually, with much scrabbling, he was over, and had *dropped from sight*. (both from BNC)

Of course, verbs which have nothing to do with downward movement may serve the same purpose as in (56).

- (56) a. Forster and Lawton *passed from view*, soon to reappear in another corridor.  
 b. The bleak greenery of Clapham Common *slipped from sight* as they headed east towards Blackheath. (both from BNC)

In short, *from view/sight* and *out of sight* characterize a path out of the visual field, as described in Figure 20.2.

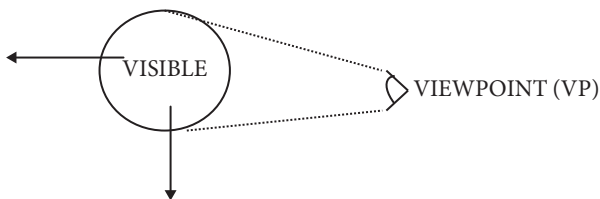


Figure 20.2 Motion from within the visual field

But since the path thus characterized is abstract, these result phrases may co-occur with spatial path PPs, as in (57).

- (57) a. Lawton and Forster finally passed *from view through the doors*.  
 b. The Waste lay on a high part of the forest so that when they reached it the sun, which had already sunk *from sight in the valleys*, was still poised above the dark low edge of the distant forest. (both from BNC)

Let us now consider how all these facts can be related to *disappear*. On the assumption that *disappear* in the relevant sense means something like “to go where one cannot be seen” as proposed above, *disappear* is roughly identical to a motion verb accompanied by *from view* or *from sight*. That is, (58a) and (58b) are essentially parallel to each other, the sole difference being that *from view* is implicit in the verb meaning in (58a) but is explicit in (58b).

- (58) a. Bill disappeared *into the crowd*.  
 b. Bill moved *from view/sight into the crowd*.

Interestingly enough, *disappear* itself may be accompanied by both kinds of path PPs simultaneously. Thus it is followed by *from view* in (59a), and by *from sight* in (59b), besides spatial path PPs.

- (59) a. She disappeared *from view round the curve*.  
 b. It disappeared *from sight behind the slope of the hill*. (both from BNC)

This is not surprising, considering that generally, a component of lexically encoded meaning may be further specified, as has been amply demonstrated in this chapter. Given that *disappear* in the relevant sense lexically encodes not only the notion of a path but also that of motion out of the visual field, they are overtly expressed by spatial path PPs and *from view/from sight*, respectively, in (59a) and (59b).

In this connection, the role played by *from view* or *from sight* may be better understood by looking at the following sentences.

- (60) a. ... the bomber’s “plot” had disappeared *from the radar screen* halfway to Sicily.  
 b. It returned, “wove about like a drunken hooie” in Benson’s words, and disappeared *from radar* south of Glasgow. (both from BNC)

Here, *from the radar screen* serves the same role as *from view* or *from sight*, as the radar screen defines a boundary of vision.

### 20.3.4 Whose visual field?

There still remains one thing that has been left unaddressed so far. Given that *disappear* can be analyzed as meaning “to go where one cannot be seen,” a question that arises is: Not seen by whom? We have seen above that becoming invisible is conceptualized in terms of motion out of a viewer’s visual field. So the question translates to: Who is this viewer?

It seems that identification of the viewer is rather flexible. It can be the speaker as in (61).

- (61) She *disappeared through a door* in the back of the office. (BNC)

But the viewer is someone other than the narrative ‘we’ of (62a), and it is the addressee in (62b).

- (62) a. We *disappear into the darkness*, where nobody can see that we’re not rolling around the floor in paroxysms of ecstasy.  
 b. So just sit back and wait while I *disappear into the studio*.  
 (both from BNC)

Likewise the viewer is universal in (63a) and again the narrative ‘we’ in (63b).<sup>156</sup>

- (63) a. ... streams which quickly *disappear* where they reach the basin, as in the Taklamakan desert of the Tarim basin.  
 b. The road ran straight ahead of us until it *disappeared* in the mist, ...  
 (both from BNC)

Normally, the viewer is implicit, but there is one environment in which the viewer is necessarily explicitly expressed. When *disappear* occurs in the perception verb complement, the subject of the perception verb serves the role of viewer in question. Thus in the following examples, the entities which disappear are invisible to the subject entities.

- (64) a. Cranston *watched* him *disappear behind a wall*.  
 b. ... he *saw* the Land-Rovers *disappear into the dip* where he’d felled the small trees.  
 (both from BNC)

156. (63b) is an instance of Type II coverage path expression in Matsumoto (1996a, 1996b), where a particular moving entity moves at a particular time.

- (i) a. The road went up the hill (as we proceeded).  
 b. This highway will enter California soon. (uttered by the driver)  
 (Matsumoto, 1996a, p. 360)

Given that the viewer is contextually determined, *disappear* can be analyzed as “to go outside of X’s view,” where X is a contextually determined variable. Such contextually determined variables are by no means rare. Certain context-dependent expressions involve an implicit variable, which may be filled in deictically or discourse-anaphorically, or may be bound by quantifiers (Partee 1989, Nunberg 1992, Condoravdi & Gawron 1996, Carlson & Storto 2006). Thus Partee (1989) observes that *local* must be anchored to some reference location, and means something like “in the vicinity of [the reference location]”. In (65a) the reference location could be the utterance location or wherever John was at the time. The same is true of (65b), where *local* is associated with a bound variable reference location.

- (65) a. John visited a *local* bar.  
 b. Every sports fan in the country was at a *local* bar watching the playoffs.

Similarly with *enemy*. In (66a) *enemy* is likely to be understood as John’s enemy or one shared with the addressee, and in (66b) a bound variable reading is possible.

- (66) a. John faced an *enemy*.  
 b. Every participant had to confront and defeat an *enemy*.

(Partee, 1989, pp. 344–345)

Partee further notes that *approaching* in (67) is also context dependent, in that the understood goal argument of *approach* can be me, us, or someone else.

- (67) An enemy is approaching.

Thus contextually determined variables are in any way necessary to explain the range of interpretations available for certain adjectives, nouns, and verbs. So there seems to be no reason not to apply this notion to *disappear* as well.<sup>157</sup> Accordingly, *disappear* in the relevant sense is similar to deictic verbs like *come* and *go*. Just as *go* defines motion away from the speaker’s or hearer’s sphere (Fillmore 1997), so *disappear* expresses motion away from the viewer’s sphere, whoever that viewer is determined to be, given the context.

To sum up, in *He disappeared down the road*, *disappear* is a motion verb, with the PP further specifying the entailed change of location. Again, this expression is in no way a resultative.

157. It follows that *from view/sight* and *out of sight* are also to be approached in terms of contextually determined variables.

## 20.4 Conclusion

This chapter has analyzed the sentences in (68), which have been cited as special types of resultatives that behave differently from ordinary resultatives.

- (68) a. The wise men followed the star *out of Bethlehem*.  
(Wechsler, 1997, p. 313)
- b. Bill disappeared *down the road*. (Goldberg & Jackendoff, 2004, p. 541)

But it is no wonder that they behave differently from ordinary resultatives, because these sentences are not resultatives. Rather, these are simple motion sentences accompanied by path PPs which further specify an entailed path.



## Verbs of sound emission followed by a path PP

### 21.0 Introduction

It is well-known in the literature that when verbs of sound emission are followed by directional PPs, those verbs behave like motion verbs.

- (1) a. The trolley rumbled through the tunnel.
- b. The wagon creaked down the road.

(Goldberg & Jackendoff, 2004, p. 540)

This phenomenon has been analyzed as a special resultative (Levin & Rappaport Hovav 1995, 1996, 1999, Rappaport Hovav & Levin 2001, Goldberg & Jackendoff 2004, *inter alia*). It will be shown that these analyses need to be reconsidered.

### 21.1 Previous analyses<sup>158</sup>

#### 21.1.1 Levin & Rappaport Hovav (1995, 96, 99)

In discussing data like (2), Levin & Rappaport Hovav (1995, 1996, 1999) argue that this is essentially a case of meaning shift: When verbs of sound emission are followed by directional PPs, they become verbs of directed motion.

- (2) a. the elevator *wheezed upward*.  
[M. Muller, *There's Nothing to Be Afraid Of*, p. 3]
- b. At that moment, a flatbed truck bearing a load of steel *rumbled through the gate*.  
[M. Muller, *There's Nothing to Be Afraid Of*, p. 39]
- c. The kettle *clashed across the metal grid*.

[S. Miller, *Family Pictures*, p. 34] (all cited in  
Levin and Rappaport Hovav, 1995, pp. 189–90)

Significantly, the works by Levin and Rappaport Hovav on verbs of sound emission followed by directional PPs are characterized by two features. First, Levin &

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<sup>158</sup> An earlier version of 21.2 and 21.3 was presented at the Fourth International Conference on Construction Grammar, held at University of Tokyo, Japan (Iwata 2006b). I'd like to thank the audience for their comments and questions.



Rappaport Hovav (1995, 1996, 1999) observe that in order for this meaning shift to occur, the sound must be emitted as a necessary concomitant of the motion (Levin & Rappaport Hovav, 1995, p. 191). Thus the sentences in (3) are unacceptable precisely because the sounds are emitted by the vocal tract by an animate entity, failing to characterize the motion itself.

- (3) a. \*He yelled down the street.  
 b. \*She shouted down the street.  
 c. \*The frogs croaked to the pond. (Levin & Rappaport Hovav, 1995, p. 190)

Second, Levin & Rappaport Hovav (1995, 1996, 1999) and Rappaport Hovav & Levin (2001) note that the causal relation is reversed between manner-of-motion verbs and verbs of sound emission accompanied by directional PPs:

In *Kim ran into the room* the running is the apparent cause of the movement into the room, so that the verb expresses the cause and the XP the result. When the verb of manner-of-motion is replaced by a verb of sound emission, as in *Terry rustled into the room*, the rustling does not cause the movement; if anything, it is the movement that causes the rustling. That is, the verb expresses the result and the XP the cause (see also Croft (1991, p. 291, n.15), Goldberg (1995, p. 62), Talmy (2000, pp. 46–47)). (Rappaport Hovav & Levin, 2001, p. 781)

### 21.1.2 Goldberg & Jackendoff (2004)

Goldberg & Jackendoff (2004) advance a constructional analysis of the phenomenon in question. They note that in (4) the meaning of the sentence contains two separable subevents, parallel to cases involving manner-of-motion verbs (e.g. *The ball rolled down the hill*). Thus in (4a) the verbal subevent is the subject performing the action expressed by the verb (The trolley is rumbling) and the constructional subevent is the subject moving along the path expressed by the PP (The trolley moves through the tunnel).

- (4) a. The trolley rumbled through the tunnel.  
 b. The wagon creaked down the road.  
 c. The bullets whistled past the house.  
 d. The knee-replacement candidate groaned up the stairs.  
 (Goldberg & Jackendoff, 2004, p. 540)

Goldberg & Jackendoff (2004) note, however, that the causal relation between the two subevents is the reversal of that involving manner-of-motion verbs:

The meaning of the sentence, however, is not that the verbal subevent is the means by which the constructional subevent takes place (e.g. the rolling is the means of moving down the hill), but rather that the motion causes the sound to be

emitted: the rumbling is a result of the trolley's motion. (Goldberg & Jackendoff, 2004, p. 540)

Consequently, Goldberg & Jackendoff (2004) posit a sound-emission path resultative construction as in (6), where the MEANS relation in (5) is replaced with the RESULT relation.

- (5) Noncausative path resultative (intransitive motion construction)  
 Syntax: NP<sub>1</sub> V PP<sub>2</sub>  
 Semantics: X<sub>1</sub> GO Path<sub>2</sub>  
 MEANS: [VERBAL SUBEVENT] (Goldberg & Jackendoff, 2004, p. 540)
- (6) Sound-emission path resultative  
 Syntax: NP<sub>1</sub> V PP<sub>2</sub>  
 Semantics: X<sub>1</sub> GO Path<sub>2</sub>  
 RESULT: [VERBAL SUBEVENT: X<sub>1</sub> EMIT SOUND]  
 (Goldberg & Jackendoff, 2004, p. 541)

As evidence for this characterization, Goldberg & Jackendoff cite the following data.

- (7) a. \*The car honked down the road.  
 b. \*The dog barked out of the room.  
 c. \*Bill whistled past the house. (Goldberg & Jackendoff, 2004, p. 540)

They argue that the sentences in (7) are out because the sound is not a result of the subject's motion: The car's honking and the dog's barking are separate actions from their motion (Goldberg & Jackendoff, 2004, p. 540).

Thus while Levin & Rappaport Hovav (1995, 1996, 1999), on the one hand, and Goldberg & Jackendoff (2004), on the other, approach the same phenomenon from different theoretical stances, the basic idea is nearly identical: First, both analyses note that the sound must be emitted as a necessary concomitant of the motion. Second, both analyses agree that the causal relation is reversed between manner-of-motion verbs and verbs of sound emission as accompanied by directional PPs. Their sole difference is that the former adopt a meaning shift approach, and the latter a constructional approach. The first question that arises is: Which approach is more promising?

### 21.1.3 Meaning shift or construction?

Let us start with Levin & Rappaport Hovav's (1995, 1996, 1999) meaning shift approach. According to Levin & Rappaport Hovav (1995, 1996, 1999), verbs of sound emission may extend from verbs of sound emission into verbs of directed

motion via a meaning shift, and the possibility of a meaning shift is determined by whether the sound is emitted as a necessary concomitant of the motion. Thus verbs like *rumble* may undergo this process but those like *yell* cannot, precisely because only the former satisfy the semantic constraint.

- (8) At that moment, a flatbed truck bearing a load of steel *rumbled through the gate*.
- (9) a. \*He yelled *down the street*.  
 b. \*She shouted *down the street*.  
 c. \*The frogs croaked *to the pond*. (Levin & Rappaport Hovav, 1995, p. 190)

Levin & Rappaport Hovav's (1995, 1996, 1999) claim can be summarized in (10).

- (10) a. *rumble*<sub>1</sub> (sound emission) – > *rumble*<sub>2</sub> (directed motion)  
 b. *yell*<sub>1</sub> (sound emission) Does not apply

A serious problem with this proposed analysis is that it is not internally coherent. This point can be appreciated by considering what is the base verb. Logically, the base verb should be a pure verb of sound emission having nothing to do with the sense of motion. Accordingly, the base verb *rumble*<sub>1</sub> should be the one as exemplified in (11).

- (11) a. His stomach *rumbled*.  
 b. Thunder *rumbled* and echoed in the stairwell.  
 c. Behind them, gunfire was already *rumbling* like thunder on the edge of the city. (all from BNC)

But then the sound's being emitted "through the actual motion of an animate entity" (p. 191) is undoubtedly a property of *rumble*<sub>2</sub>, not one of *rumble*<sub>1</sub>.

Obviously, this does not explain anything: Whether the base verb (*rumble*<sub>1</sub>) can undergo a meaning shift or not should be determined by a property of the input (*rumble*<sub>1</sub>). If a property of the output (*rumble*<sub>2</sub>) is available prior to the meaning shift, then why go to the trouble of shifting meaning at all? Thus while Levin & Rappaport Hovav (1995, 1996, 1999) are certainly right in observing that the sound must be a necessary concomitant of the motion, the observed semantic constraint cannot be reconciled with their proposed meaning shift analysis.

Rather, the fact that the semantic constraint pertains to the output strongly indicates that a constructional approach is on the right track, for Construction Grammar is output-oriented, along with many usage-based theories (Bybee 2006, Langacker 1999, Croft 2001, Taylor 2002, among many others). In other words, the observed semantic constraint is to be stated as part of the constructional meaning, not as a condition on the applicability of meaning shift.

Note, however, that all this shows is that a constructional approach is preferable over a meaning shift approach, not that Goldberg & Jackendoff (2004) are entirely correct. In what follows, I will show that Goldberg & Jackendoff's (2004) analysis is unsatisfactory. First, they fail to realize that verbs of sound emission followed by directional PPs actually divide into two types. Second, the reversal of the causal relation between cases involving manner-of-motion verbs and those involving verbs of sound emission is not so solid a fact as might appear at first sight.

## 21.2 'Motion-describing' type

### 21.2.1 Parallel between manner and sound

As I just mentioned, verbs of sound emission accompanied by directional PPs divide into two types. I will begin with the first type, the 'motion-describing' type. Most of the data discussed by Levin & Rappaport Hovav (1995, 1996, 1999) and Goldberg & Jackendoff (2004) belong to this type.

As just seen, Goldberg & Jackendoff (2004) hold that while the verbal subevent is a means of the motion subevent in cases involving manner-of-motion verbs, the motion subevent causes the verbal subevent in cases involving verbs of sound emission. A closer scrutiny reveals, however, that the manner-of-motion case and the sound-emission case are not so different from each other. To see this, let us carefully examine the first part of this thesis, namely the claim that when manner-of-motion verbs are used to describe translational motion, the verbal subevent is a means of the motion subevent.

If the verbal subevent is really a means of the motion subevent, then the sentences in (12) should be paraphrasable by those in (13).

- (12) a. The craft floated into the hangar on a cushion of air.  
 b. The ball bounced down the hall.  
 c. The ball rolled down the hall.  
 d. The canoe glided across the lake.  
 e. The book slid down the incline.
- (13) a. The craft went into the hangar by floating.  
 b. The ball went down the hall by bouncing.  
 c. The ball went down the hall by rolling.  
 d. The canoe went across the lake by gliding.  
 e. The book went down the incline by sliding.

Note, however, that the sentences in (13) become progressively less natural as we go down from (13a) to (13e). This is because the supposedly complex event cannot

necessarily be cleanly partitioned into autonomous component events, as Talmy (2000b) insightfully observes.

In analyzing the complex motion event exemplified by (12) into a motion subevent and a manner subevent, Talmy (2000b) admits that his analysis raises an issue of conceptual separability. He observes that the separation can be quite clean in (13a), but is a bit more difficult in (13b), since the pure self-contained bouncing motion would take place in a straight vertical line, whereas in the full motion complex it has blended with the forward motion to yield a parabolic resultant. Separation is still more difficult in (13c), since the rotation is not wholly independent, but rather must take place in the right direction and at the right speed so as to correlate with the forward translational motion. The separation is fully problematic in (13d) and (13e), for it is not clear what candidate for an autonomous manner subevent might be left after one has conceptually subtracted the event of translational motion from gliding or sliding:

After all, the Manner of, say, *slide* includes a component of friction, or rubbing, between contacting surfaces of the Figure and Ground objects, but *such friction can in fact exist only in the course of the Figure's translational motion*, and so could not be adduced independently of it. (Talmy, 2000b, p. 37, emphasis mine)

This is why Talmy (2000b) chooses to use WITH-THE-MANNER-OF, rather than BY-MEANS-OF, to connect the two subevents.

- (14) a. The ball rolled down the hall.  
 b. [the ball MOVED down the hall] WITH-THE-MANNER-OF [the ball rolled] (Talmy, 2000b, p. 36)

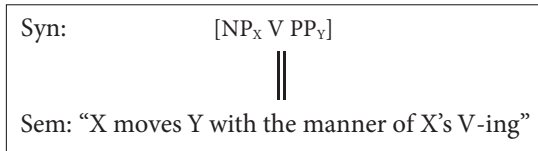
Despite the seeming plausibility of a means paraphrase, therefore, the verbal subevent cannot be neatly separated from the motion subevent. Rather, the verbal subevent (e.g. the gliding or sliding) can exist only in the course of the motion event, as Talmy observes.

Consequently, we can now draw the following conclusion: It is not that the manner (=verbal) subevent is a means of the motion subevent or that the manner subevent causes the motion subevent. Rather, it is actually the other way around: *The manner comes to exist only in the course of the motion event.*

Thus if one is to paraphrase (15a), an adequate paraphrase will be the one along the lines of (14b). Or even (15b), which is a simple juxtaposition of the two subevents without any causal connective, might be better than a means paraphrase.

- (15) a. The ball rolled down the hill.  
 b. The ball went down the hill +  
 The ball kept rolling while in motion.

Accordingly, motion sentences involving manner-of-motion verbs may be handled by positing an intransitive manner-of-motion construction as in Figure 21.1, which associates the syntactic frame  $[NP_X V PP_Y]$  with the semantics “X moves Y with the manner of X’s V-ing,” incorporating Talmy’s insight.



**Figure 21.1** Intransitive manner-of-motion construction

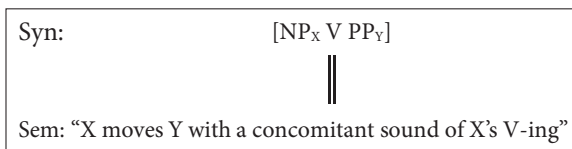
Now it is time to turn to verbs of sound emission. Apparently, the motion causes the sound to be emitted. After all, in the absence of the motion, the sound cannot possibly be emitted in (16).

- (16) The trolley rumbled through the tunnel.

Note, however, that the dependence of sound emission upon the motion event is exactly parallel to the dependence of the manner upon the motion event just seen. If the motion does not occur, the sliding or gliding cannot possibly occur, either. Similarly, if the motion does not occur, the rumbling sound cannot possibly occur. That is to say, the sound comes to exist only in the course of the motion event, exactly the same way that the manner comes to exist only in the course of the motion event. And just as the canoe’s gliding or the book’s sliding went on as they moved in (12), so the trolley’s rumbling went on as it moved in (16). Consequently, (16) is better paraphrased by (17a) than by (17b).

- (17) a. The trolley went through the tunnel. +  
           The trolley kept rumbling while in motion.  
       b. The trolley’s going through the tunnel caused the rumbling sound to be emitted.

It now seems appropriate to posit an intransitive sound-accompanying-motion construction as in Figure 21.2, where the syntactic frame  $[NP_X V PP_Y]$  is paired with the semantics “X moves Y with a concomitant sound of X’s V-ing.”



**Figure 21.2** Intransitive sound-accompanying-motion construction

Contrary to the previous analyses, then, there is no reversal of the causal relation between the manner-of-motion case and the sound emission case. On the contrary, the two cases are entirely parallel: The sound is an integral part of motion and therefore describes the type of motion, just like the manner. Hence this type of sound emission verbs deserves to be called a ‘motion-describing’ type.

### 21.2.2 Further parallels

The parallel between the manner and the sound does not end here. First comes the referential flexibility of the subject. Levin & Rappaport Hovav (1995) observe that in the following examples the sound is not strictly emitted by the subject entity: “The sounds in these particular examples are actually emitted by the clothes or accessories that the animate subject is wearing, though the sound is being attributed to the animate subject itself.” (Levin & Rappaport Hovav, 1995, pp. 190–91)

- (18) a. Sedgwick often clanked into town in saber and spurs from the cavalry camp. [E. Thane, *Yankee Stranger*, p. 133]  
 b. She rustled out of the room without waiting for a word from Lind. [M. Ostenson, *Wild Geese*, p. 30]

This is actually part of a larger phenomenon. Note that in (19a) it is not the subject entity (Julian Critchley) but the car he is riding that emits the rumbling sound. Similarly, in (19b) it is not the subject entity (she) but the coach she is riding that is emitting the rattling sound.

- (19) a. It was all so different in 1959, when Julian Critchley, the party’s resident music-hall artiste, *rumbled into Westminster* in his Ford Popular as a new MP.  
 b. Now she was *rattling along the empty streets*, the horse’s hooves sounding sharp and crisp in the silence. (both from BNC)

To denote a vehicle by naming the driver or the passenger is a well-known case of “reference transfer” (Nunberg 1979, 1995, 2004, Ward 2004, Croft & Cruse (2004, pp. 219–220), Culicover & Jackendoff (2005, p. 356), among many others).

- (20) While he was driving to the studio, a truck hit Ringo in the left front fender. (Culicover & Jackendoff, 2005, p. 356)

Thus the subject of a sound-emission verb need not strictly be an emitter of the sound.

Now the same referential flexibility is observed with manner-of-motion verbs. That is, even when the manner of motion is attributed to the subject, the subject entity does not have to undergo the manner in question. In both (21a) and

(21b) it is the boat the subject entity is on board, rather than the subject entity, which is gliding.

- (21) a. We *glide* along a glassy-smooth stretch of water, listening to the steadily increasing roar of Hance Rapid.  
 b. See the city from a different viewpoint as you *glide* past the churches and gabled houses in your comfortable custom build Holland International cruise boat ... (both from BNC)

In (21) the entity which actually undergoes a gliding motion is larger than the subject entity. But the referential flexibility may go in the other direction as well. In (22a) what actually undergoes a rolling motion is not the lorry as a whole but only part of it (=wheels). Similarly in (22b).

- (22) a. The lorry *rolled* down the lane and on to the main road.  
 b. For Sartre, the journey came to a halt in 1956 when Soviet tanks *rolled* into Budapest. (both from BNC)

In short, both verbs of sound emission and manner-of-motion verbs exhibit the referential flexibility of the subject.

Still another parallel can be found in the “transferred motion” effected via a shift in perspective. In talking about spatial movement, we can say that a person travels through a landscape that is stationary relative to his movement, as in (23a). But objectively the same scene can be described by (23b) as well, on the assumption that the person remains conceptually stationary while the landscape travels past him (Clark 1973, Fillmore 1997, Langacker 1991, Iwata 1998, Talmy 2000a, among many others).

- (23) a. We’re approaching Kyoto.  
 b. Kyoto is approaching.

Now when the second conceptualization is adopted with a manner-of-motion verb, the manner is imputed to the stationary entity.

- (24) The telephone poles are rushing past at 60 miles per hour.  
 (Langacker, 1991, p. 266)

Remarkably, this conceptualization is also available for verbs of sound emission. In the following example, it is not Paris but the train she is on board that is emitting a rattling sound.

- (25) Frederica received no answer to her question about *numéro sept*, but was given permission to stand in the corridor of the train, which was already sliding away from its platform. She watched Paris *rattle past*, foreign blocks of lit windows, knots of wire, ... (BNC)



All these parallels strongly indicate that the sound emission is essentially no different from the manner.

Those who still believe in the reversal of causal relation between the manner case and the sound case may respond by saying that the manner and the sound come from two different modalities: The manner is visual, while the sound is auditory.

At first sight this might seem plausible. A closer examination reveals, however, that linguistic facts do not conform to this sharp dichotomy. This can be seen by looking at examples which place manner-of-motion verbs and verbs of sound emission in the perception verb complement. It is quite easy to find manner-of-motion verbs in the complement of *see* as in (26), and it is no less easy to find verbs of sound emission in the complement of *hear* as in (27).

- (26) a. Through the palings of this fence the trains could be *seen rolling*.  
 b. She knew how Sisyphus must have felt, rolling that stone wearily up the hill, only to *see* it *slide* back down again as he made it to the top.  
 c. In a dream, she *saw* him *skid* to a halt ... (all from BNC)
- (27) a. Rain and Oliver *heard* Foucard and Denis *rattle* downstairs and then cobblestones rang beneath their feet.  
 b. Wycliffe *heard* her *clattering* down the stairs.  
 c. I could *hear* Sorley *thumping* around inside and then a distinctive whine and a sort of humming stutter. (all from BNC)

However, manner-of-motion verbs can also appear in the complement of *hear* as in (28), and verbs of sound emission can also be found in the complement of *see* or *watch* as in (29).

- (28) a. He *heard* it (=a stone) *rolling* faster and faster, then the noise stopped.  
 b. He *heard* Rodo *slide* to the ground defeatedly.  
 c. she *heard* him *skid* on the floor ... (all from BNC)
- (29) a. I can really *see* Cadfael *rattling* round in his black cloak, taking a short cut on his errands round the town.  
 b. She *watched* it (=a train) *rattle* down to Finchley Road.  
 c. So, if you ever *see* anyone *roaring* along the street on a motorbike wearing a suit of armour with a carpet in his mouth and being pelted with armadillos, you'll know what he's been up to. (all from BNC)

Furthermore, both manner-of-motion verbs and verbs of sound emission may appear in the complement of *feel*, which could be said to have to do with a different modality.

- (30) a. He was incensed, stunned, at her action, and stood rigid with anger as he *felt* the slime *roll* down his cheek. (BNC)
- b. He'd had lunch at the Police Academy's café some two hours ago where the special of the day was New England clam chowder, and ever since he could *feel* it *rumbling* through his intestines like the LAPD's battering ram. [Robert Crais, *L.A. Requiem*, p. 83]

What all these data indicate is that manner-of-motion verbs do not describe the named manner as a purely visual entity, and that verbs of sound emission do not describe the named sound as a purely auditory entity. Rather, the manner or sound is simply a salient aspect of the event to be described. Certainly, we identify the motion by naming the manner or sound accompanying the motion. But in so doing, we are not paying exclusive attention to information from a single modality. Thus manner-of-motion verbs and verbs of sound emission are not so distinct from each other, after all.

To recapitulate, then, manner-of-motion verbs and verbs of sound emission accompanied by directional PPs are not so different as might appear at first sight. The sound may be characterized as being caused by the motion in the sense that the sound comes to exist only in the course of the motion. But the manner can be characterized in exactly the same way. In fact, the manner and the sound are entirely parallel in a number of respects, indicating that they are to be handled in a parallel fashion.

### 21.3 'Motion-induced' type

#### 21.3.1 Two types of sound emission

Now is the time to turn to the second type. Let us begin by observing that the verb *thud* followed by directional PPs allows for two readings in (31).

- (31) a. The plane swooped above them and *thudded into the earth*.
- b. I heard Jean-Claude *thud down the stairs* and greet the man at the door. (both from BNC)

In (31a) the thudding sound was emitted only once, i.e. when the plane crashed into the earth. By contrast, in (31b) the thudding occurs repeatedly while Jean-Claude was walking down the stairs.

For expository purposes, let us refer to the first reading as *thud*<sub>1</sub> and the second one as *thud*<sub>2</sub>. The motion event described by *thud*<sub>2</sub> consists of a series of replicated sound emission events of *thud*<sub>1</sub>, as described in Figure 21.3.

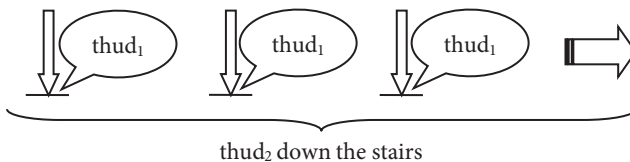


Figure 21.3 Two senses of *thud*

This ambiguity is not something that happens to be observed in (31) alone. For one thing, the second reading is observable with a wide variety of path PPs.

- (32) a. ... she really felt as if she were *thudding through the wood*.  
 b. Heavy footsteps *thudded across the front porch*.  
 c. A long way south a plump caique *thudded past* towing a line of six little lamp-boats, like a mallard with ducklings.  
 d. His bare feet would *thud along the wooden floor* and land on the springboard.  
 e. I mean I'm not saying he's alcoholic but he goes out with the lads and he you know he'll he'll sort of *thud up the stairs*. (all from BNC)

Clearly, a series of thudding events are involved here.

For another, the same ambiguity is observed with other verbs of sound emission as well. Observe the following.

- (33) a. Lee must have *banged into it* in the dark.  
 b. He was *banging non-stop around the house* all day. (both from BNC)
- (34) a. The bullets *thumped into the wet blanket* in front of me, making it jump like there was a bear inside.  
 b. The trucks *thumped heavily past*, one by one, with slow inevitable movement, ... (both from BNC)

In (33a) and (34a), each sound was emitted just once, whereas in (33b) and (34b), each sound was repeatedly emitted while the subject entity was undergoing a translational motion. Essentially the same contrast is observed between (35a) and (35b).

- (35) a. The chain *clattered noisily to the ground*.  
 b. The taxi was *clattering away* and I thought it would fall apart at any moment. (both from BNC)

Thus while the previous accounts (Levin & Rappaport Hovav 1995 and Goldberg & Jackendoff 2004) have attempted to give a unified analysis, verbs of sound emission followed by directional PPs are in fact ambiguous between two readings. How are the two types to be differentially characterized, then?

### 21.3.2 Motion-describing' type vs. 'motion-induced' type

Notice that the contrast between  $thud_1$  and  $thud_2$  as depicted in Figure 21.3 is similar to the well-known ambiguity of manner-of-motion verbs like *roll*. Thus in (36a) the ball rolled in the same location, while in (36b) the ball changed its location while repeating the rolling motion (Pinker 1989, Jackendoff 1990, inter alia).

- (36) a. The ball rolled.  
b. The ball rolled down the hill.

The relation between the two readings ( $roll_1$  and  $roll_2$ ) may be depicted as in Figure 21.4.

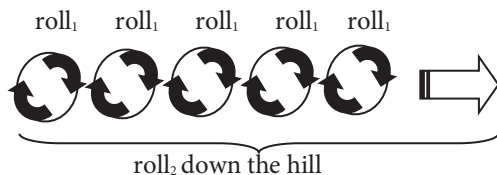


Figure 21.4 Two senses of *roll*

Clearly, the second reading,  $roll_2$ , is the one that we have been discussing in the previous sections.

Now recall that with this sense of *roll*, (37a) can be paraphrased with (37b) (21.2.1).

- (37) a. The ball  $roll_2$ -ed down the hill.  
b. The ball went down the hill +  
The ball kept  $roll_1$ -ing while in motion.

Remarkably, (38a) can be similarly paraphrased with (38b).

- (38) a. I heard Jean-Claude  $thud_2$  down the stairs and greet the man at the door.  
b. Jean-Claude went down the stairs. + J-C kept  $thud_1$ -ing while in motion.

This suggests that  $thud_2$  is of 'motion-describing' type.

But this is not the case with  $thud_1$ . Thus (39a) cannot be paraphrased with (39b). If anything, the relation between the two subevents is better captured by (39c).

- (39) a. The plane thudded into the earth.  
b. The plane went into the earth +  
The plane kept  $thud_1$ -ing while in motion.  
c. The plane's going into the earth constitutes the plane's thudding event.

Note that *thud*<sub>1</sub> behaves like path-incorporating verbs like *enter* in this respect, in that (40a) cannot be paraphrased with (40b). Rather, the relation between the two subevents is better captured by (40c).

- (40) a. He entered through the front door.  
 b. # He went through the front door. +  
     He kept entering while in motion.  
 c. His going through the front door constitutes his entering event.

This parallelism indicates that the thudding and the plane's going into the earth are not two distinct events, but two facets of a single event. Just as his going through the front door and his entering are one and the same event in (40a), so the plane's going into the earth and its thudding are one and the same event in (39a). It follows then that the path PP of this type further specifies an entailed change of location, exactly like the path PP accompanying *enter*.

Thus *thud*<sub>1</sub> in (39a) contrasts with *thud*<sub>2</sub> in (38a) in that in the former the sound is induced by the motion, whereas in the latter the sound describes the motion. For this reason, the former reading is referred to as a 'motion-induced' type, as distinct from the 'motion-describing' type.

Now the contrast between the two types is clear. In the 'motion-describing' type as exemplified in (41a) the path PP is part of an argument structure construction (i.e. intransitive sound-accompanying-motion construction), but in the 'motion-induced' type as illustrated in (41b) the path PP is a further-specifying path phrase, exactly parallel to (42a) and (42b).

- (41) a. The trolley rumbled *through the tunnel*.  
 b. The plane thudded *into the earth*.  
 (42) a. The ball rolled *down the hill*.  
 b. Bill entered *through the bathroom window*.

That is, the PP in the 'motion-induced' type is a further-specifying path PP, similar to the PPs accompanying *follow* and *disappear*, as seen in the last chapter.

#### 21.4 More on the distinction

There are still a couple of things worth mentioning here. First, the distinction between 'motion-describing' type and 'motion-induced' type is somehow correlated with how and when the sound is emitted in relation to the motion event. The sound emission may go along with the motion as in (43a). But the sound may be emitted at the end of the motion as in (43b) or at the initiation of the motion as in (43c).

- (43) a. The old car clattered down Broadway.  
 b. The old car banged against the wall.  
 c. The popcorn popped out of the pan. (Tsujiimoto, 2003, p. 19)

In (43b) and (43c) the sound emission is instantaneous, and they are clearly instances of ‘motion-induced’ type. But in (43a) a single clattering sound cannot cover the entire movement of the car along the path. Rather the clattering sound was repeatedly made, so this is an instance of ‘motion-describing’ type. Thus verbs whose sounds are made instantaneously instantiate the ‘motion-induced’ type when only a single sound emission is involved, but instantiate the ‘motion-describing’ type when the sound is made repeatedly.

What about verbs whose sound emission is continuous in nature? To answer this question, let us consider (44).

- (44) When the winter wind *whistled through the bare branches*, the fragrance of this spicy cake was comforting. (BNC)

In order for a whistling sound to be made, a continuous stream of air needs to go by. So it seems rather pointless to discuss whether (44) involves a single whistling sound or a series of whistling sounds, in order to determine which of the two types sentences like (44) should belong to. Rather, the distinction between the two readings seems to be neutralized.

Second, an interesting consequence follows from distinguishing between the two types. As seen in 21.1.1, Levin & Rappaport Hovav (1995) argue that the examples in (45) are unacceptable because the sounds are emitted by the vocal tract.

- (45) a. \*He yelled *down the street*.  
 b. \*She shouted *down the street*.  
 c. \*The frogs croaked *to the pond*. (Levin & Rappaport Hovav, 1995, p. 190)

When verbs that describe sounds that may or may not be emitted via the vocal tract are found with directional phrases, only the interpretation that does not involve the emission of the sound via the vocal tract is available.

(Levin & Rappaport Hovav, 1995, p. 191)

There are attested examples in which the sounds are emitted by the vocal tract, though.

- (46) a. On the near side the runners and straggling cyclists *groaned up the rocky path* of the corresponding incline.  
 b. Ma Bombie *wheezed up the hill* towards them. (both from BNC)

One might still say that (46a) is causal in that the motion caused the painful groaning (Goldberg & Jackendoff, 2004, p. 541), but then the meaning of “causal” will

be different from that as originally applied to the analysis of verbs of sound emission followed by directional PPs. After all, when one says that upward movement “causes” the groaning or wheezing, it is a physiological causation, in sharp contrast to the purely physical causation as in *The wagon creaked down the road*, where the creaking sound results from the friction. Thus this line of reasoning does not seem to be plausible.

Actually, there is nothing surprising about the sentences in (46). Consider (47).

- (47) a. Round midday they *panted up a particularly steep hill* ...  
 b. As they all *puffed and panted up* switch-back after switch-back, he was glad of it, too. (both from WB)

Here the subject entities breathe quickly and loudly because they engage in some energetic activities. Clearly, the verbs describe the manner of motion, and (48a) can be paraphrased with (48b).

- (48) a. They panted up a steep hill.  
 b. They went up a steep hill. + They kept panting while in motion.

But notice, then, that the sentences in (46) are essentially the same as those in (47). Thus (49a) may be paraphrased by (49b), suggesting that the apparent counter-examples above are actually instances of the ‘motion-describing’ type.

- (49) a. The runners groaned up the rocky path.  
 b. The runners went up the rocky path. +  
 The runners kept groaning while in motion.

It is no wonder, then, that the sentences in (46) are acceptable. As already shown in 21.2.2, the sound in the ‘motion-describing’ type is fundamentally the same as the manner of motion. And in (47) the sound emission characterizes the translational motion in the same way that the manner of motion characterizes the motion.

Incidentally, Goldberg & Jackendoff (2004) note in passing that the judgment of (50) is subject to individual variation: “We recognize that there are speakers who accept [(50)]. For them the semantic relation is COOCCURRENCE rather than RESULT.” (Goldberg & Jackendoff, 2004, p. 541)

- (50) a. \*The car honked down the road.  
 b. \*The dog barked out of the room.  
 c. \*Bill whistled past the house. (Goldberg & Jackendoff, 2004, p. 540)

This can be taken to indicate that even with sounds emitted via the vocal tract, the sentence may improve to the extent that the sound emission is construed as manner-like.

Thus with the ‘motion-describing’ type, it is sufficient that the sound accompanies, and thereby characterizes, the motion. In contrast, with the ‘motion-induced’ type, the sound is a direct result of the translational motion.

## 21.5 Where there is a sound, there should be a motion

Some people might still feel uneasy about the claim that the path PP of the ‘motion-induced’ type further specifies an entailed change of location. But a little reflection tells us that there is nothing strange about claiming that certain verbs of sound entail a change of location. Notice that verbs participating in the ‘motion-induced’ type name a sound whose creation necessarily involves some sort of motion. Thus some sounds are created when one thing comes into contact with another (*thud, bang*), others are created when one thing is rubbed against another (*screech, creak*), and still others are produced when one thing is detached from another (*pop, snap*). Without the respective type of motion, these sounds cannot have been emitted at all.

This is of course one of several possible ways of effecting a sound. But basically the same thing can be said of other ways of sound emission: Sounds are not created out of a vacuum. Rather, sound emission invariably involves some sort of motion.<sup>159</sup> Even with sounds emitted via the vocal tract, air is necessarily released from inside the human body. In this connection, compare the *whistle* in (51a), which expresses a vocal tract sound made by human beings, with that in (51b), which is an instance of sound-emission verb followed by a directional PP.

- (51) a. The driver *whistled through his teeth*.  
 b. In places *the wind whistled through the loose stones*, insects became more adventurous and the gas lamps flickered quietly in the emptiness.  
 (both from BNC)

Just as the wind makes a whistling sound when it goes through the stones in (51b), so the air stream breathed out of the driver’s lungs makes a whistling sound when it goes through his teeth in (51a). In a sense, the *whistle* in (51a) can be regarded as a version of that in (51b) which is internalized inside a human body.

Thus to claim that certain verbs of sound emission entail a change of location turns out to be quite plausible on ontological grounds. The behavior of the ‘motion-induced’ type is nothing more than one manifestation of the inherently close connection between sound and motion.

<sup>159</sup> It goes without saying that motion in this sense is not limited to translational motion.



Note, incidentally, that we are now in a position to solve the apparent puzzle which Goldberg & Jackendoff (2004) face in accounting for putative sound-emission resultatives and putative “disappearance” resultatives (e.g. *Bill disappeared down the road*). As mentioned in the last chapter, they note that the two types of putative resultatives behave similarly, and posit a construction in (52): “In short, sound-emission and disappearance resultatives involve a result relation between the constructional subevent and the verbal subevent instead of a means relation.” (Goldberg & Jackendoff, 2004, p. 541)

(52) Sound-emission path resultative

Syntax: NP<sub>1</sub> V PP<sub>2</sub>

Semantics: X<sub>1</sub> GO Path<sub>2</sub>

RESULT: [VERBAL SUBEVENT: X<sub>1</sub> EMIT SOUND]

(Goldberg & Jackendoff, 2004, p. 541)

But this immediately begs the question: Why is it that the verbs participating in this construction are either verbs of disappearance or verbs of sound emission, which seem to have little in common? Goldberg & Jackendoff (2004) concede that they have no answer:

... we see no way to unify semantically events of sound emission with events of disappearance. ... Thus we reluctantly conclude that the selectional restrictions on the choice of verbal subevent in [(52)] is a raw disjunction: *there is no explanation to be sought at this level of detail; there is only description.*

(Goldberg & Jackendoff, 2004, p. 542, emphasis mine)

But there IS an explanation: One way of disappearing is to move to a place where one cannot be seen, as shown in the last chapter; and sound emission necessarily involves something moving in relation to something else, as just indicated. So in both cases, the verbal events inherently entail motion. The behavioral similarity between verbs of disappearance and verbs of sound emission is thus highly motivated.

## 21.6 Verbs of sound emission followed by *open/shut*

### 21.6.1 Levin & Rappaport Hovav (1995)

Now verbs of sound may also be accompanied by *open* and *shut* as in (53), as observed by Levin & Rappaport Hovav (1995).

(53) a. ... the refrigerator door *clicked open*.

[M. E. Robertson, *Family Life*, p. 139]

- b. ... the curtains *creak open* and radiant evening light streams into the cluttered room. [S. Cheever, *Elizabeth Cole*, p. 70]
- c. The skylight *thudded open* with a shower of powdery plaster and some lopsided bricks. [M. Spark, *The Girls of Slender Means*, p. 158]
- d. The lid of the boiler *clunked shut*. [P. Lively, *The Road to Lichfield*, p. 52]  
(all cited in Levin & Rappaport Hovav, 1995, p. 191)

Since *open* and *shut* are adjectives, these result phrases seem to denote result states, like other adjectival result phrases. But Levin & Rappaport Hovav (1995) argue that this is not the case.

As seen at the outset, Levin & Rappaport Hovav (1995) argue that when verbs of sound emission are followed by a directional PP as in (54), they become verbs of directed motion.

- (54) a. ... the elevator *wheezed upward*. [M. Muller, *There's Nothing to Be Afraid Of*, p. 3]
- b. At that moment, a flatbed truck bearing a load of steel *rumbled through the gate*. [M. Muller, *There's Nothing to Be Afraid Of*, p. 39]
  - c. The kettle *clashed across the metal grid*. [S. Miller, *Family Pictures*, p. 34] (all cited in Levin and Rappaport Hovav, 1995, pp. 189–90)

Essentially, Levin & Rappaport Hovav (1995) attempt to analyze sentences like (53) on a par with those like (54). Thus they claim that the result phrases *open* and *shut* do not denote result states in (53): “Although the adjectives *open* and *shut* could denote result states, it is clear that in these examples they do not. Rather, they denote the positions associated with the states of being *open* or being *shut*.” (Levin & Rappaport Hovav, 1995, p. 192) Levin & Rappaport Hovav (1995) further note that “a change of position is probably a kind of change of location with no displacement” (Levin & Rappaport Hovav, 1995, p. 192).

Thus Levin & Rappaport Hovav’s (1995) analysis amounts to the claim that verbs of sound emission can be followed by a result phrase when (1) the verb is used as a verb of directed motion, and (2) the result phrase denotes a result *position* rather than a result *state*.

### 21.6.2 A fundamental problem

Levin & Rappaport Hovav’s (1995) analysis crucially rests upon the assumption that *open* and *shut* do not denote result states in (53). Curiously, though, Levin & Rappaport Hovav (1995) claim that *open* expresses a change of *state* in examples like (55).

- (55) a. The door rolled open.  
 b. The bottle broke open.

Levin & Rappaport Hovav (1995) say of (55a) that “The resultative phrase *open* predicates a change of state of *the door ...*” (p. 52), and of (55b) that “The resultative phrase ... can be seen as a further specification of the inherent state that is part of *break*’s meaning ...” (p. 59). That is, Levin & Rappaport Hovav (1995) make conflicting remarks: The result phrase *open* is supposed to denote a result state in (55), like other result phrases, but a result position in (53).

Of course, this problem ceases to be a problem if Levin & Rappaport Hovav (1995) are able to offer an explanation as to why *open* should denote a result position in (53) but a result state in (55), and not the other way around, for Levin & Rappaport Hovav (1995) do admit that *open* and *shut* may denote result states besides result positions, as in the above quote. But no such explanation seems forthcoming in their series of accounts (Levin & Rappaport Hovav 1995, 1996, 1999). In this sense, Levin & Rappaport Hovav (1995) are being opportunistic.

And herein lies a fundamental problem with Levin & Rappaport Hovav’s (1995) analysis. Since sentences like (53) involve both verbs of sound emission and result phrases, their analysis should be conducted by taking into consideration the properties of both verbs of sound emission and result phrases (*open* and *shut*). Levin & Rappaport Hovav’s (1995) analysis, however, virtually pays attention to the former issue alone.<sup>160</sup> In fact, their analysis assimilates sentences like (53) to those like (54) at the expense of the latter issue, in that the two sets of data (sentences like *The door swung open* and those like *The door creaked open*) are not treated coherently.

### 21.6.3 The sound-emission event as describing an internalized translational motion

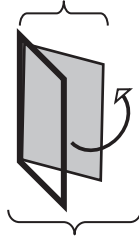
We have already analyzed sentences like (56) in Chapter 11. Naturally, an adequate account of sentences like (57) should be arrived at by combining this analysis with our account of verbs of sound emission in this chapter.

- (56) a. The door swung open.  
 b. The door slid shut.
- (57) a. The door creaked open.  
 b. The door banged shut.

160. This was already pointed out in 17.2.4.

Recall that in order to understand what it means for a door to become open or shut, we have to distinguish between a barrier part ( $\text{door}_1$ ) and a unitary structure ( $\text{door}_0$ ) comprising a barrier and an aperture. Accordingly, a  $\text{door}_0$  becomes open or shut when the  $\text{door}_1$  undergoes motion, as described in Figure 21.5.

The  $\text{door}_1$ 's swinging (=internalized translational motion)



The  $\text{door}_0$ 's becoming open (=change of state)

**Figure 21.5** *The door swung open*

The motion of a barrier part ( $\text{door}_1$ ) is referred to as internalized translational motion.

Once we realize this point, the parallelism between the manner of internalized translational motion and sound emission is actually quite easy to make sense of. Note that with the examples in (57), the sound is produced when a 'barrier' part turns on hinges or slides in grooves etc. (e.g. *creak* or *swish*) or comes into contact with the door frame or the adjoining wall (*bang*). Thus *The door creaked open* describes a scene in which the  $\text{door}_1$  moves, emitting a creaking sound and the  $\text{door}_0$  becomes open, as in Figure 21.6, which is entirely parallel to the scene described by *The door swung open*, as in Figure 21.5.

The  $\text{door}_1$ 's creaking (=internalized translational motion)



The  $\text{door}_0$ 's becoming open (=change of state)

**Figure 21.6** *The door creaked open*

In both cases, the internalized translational motion is identified by naming the manner/direction or sound accompanying the motion.<sup>161</sup>

The parallelism is not perfect, though, for how the sound is made is different from how the manner comes into existence in the course of a motion. It has been shown so far in this chapter that when verbs of sound emission followed by directional phrases express motion events, there are two types: ‘motion-induced’ type, as exemplified in (58b) and (58c), and ‘motion-describing’ type, as illustrated in (58a).

- (58) a. The old car clattered down Broadway. → ‘motion-describing’ type  
 b. The old car banged against the wall. → ‘motion-induced’ type  
 c. The popcorn popped out of the pan. → ‘motion-induced’ type

With the ‘motion-describing’ type, the sound-emission event is co-extensive with the motion event, but this is not the case with the ‘motion-induced’ type.

Now the result phrase *open* may occur with exactly the same range of sound emission events.

- (59) a. The door *clattered open* and George, barely awake, stumbled in.  
 b. The outside door *banged open* again.  
 c. The red eyes *popped open*, turned to me. (all from BNC)

When the sound emission is continuous, the sound is emitted throughout the internalized translational motion (e.g. *clatter*) of the door<sub>1</sub>. Hence the sound emission is co-extensive with the internalized translational motion, exactly like the manner. But the sound may be emitted only at the beginning (e.g. *pop*) or at the end (e.g. *bang*) of the internalized translational motion.

The distinction between ‘motion-describing’ type and ‘motion-induced’ type manifests itself with respect to adverbial modification. Levin & Rappaport Hovav (1999) and Rappaport Hovav & Levin (2001) observe that *slowly* can be added to (60a) but not to (60b), because the achievement of the result state is protracted in the former but not in the latter.

- (60) a. The gate (slowly) {creaked/rumbled} shut.  
 b. The trapdoor (\*slowly) {banged/thudded} shut.  
 (Levin & Rappaport Hovav, 1999, p. 208, Rappaport Hovav & Levin, 2001, p. 776)

Notice that (60a) is of the ‘motion-describing’ type, but (60b) is of the ‘motion-induced’ type. Thus while the manner of internalized translational motion is

161. Thus while sentences like *The trolley rumbled through the tunnel* are motion sentences, not resultatives, those like *The door creaked open*, which do involve a change of state, are resultatives.

co-extensive with the door's becoming open (or shut), the sound emission is so with the 'motion-describing' type alone.

Apart from this difference, however, the fact remains that the manner of motion and the sound emission are parallel in indicating an internalized translational motion. Thus we can safely say that the sound-emission event describes an internalized translational motion, be it of the 'motion-describing' type or the 'motion-induced' type. Accordingly, (61a) is to be handled in the same way as (61b), which in turn has already been shown (in Chapter 11) to be accommodated in the same way as (61c).

- (61) a. The door creaked open.  
 b. The door swung open.  
 c. The lake froze solid.

Consequently, resultatives like (61a) can be handled by means of the adjectival result phrase construction in Figure 21.7 (a result phrase-addition analysis).

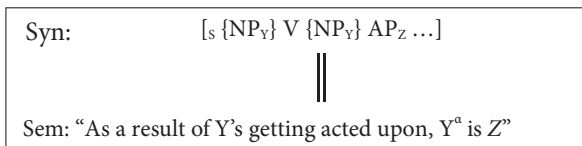


Figure 21.7 Adjectival result phrase construction

#### 21.6.4 Functional *open* once again

But this is not the end of the story. Recall from 11.4 that the state of being open may not be characterized in terms of internalized translational motion when functional *open* is concerned.

- (62) [Answering a knock on the door]  
 Come in. The door is open.

Here "The door is open" means that the door is not locked, not that the barrier part does not block an aperture.

Now this functional *open* may appear as a result phrase accompanying verbs of sound emission. Consider (63).

- (63) a. Seconds later, the red convertible nipped into the private drive to the apartment block hidden by fringed jacaranda trees. Jamie answered on her first buzz, and the door *clicked open* for her.

- b. Helplessly she watched him remove the key from her nerveless fingers and insert it into the lock where it turned easily, *clicking* the door *open*.  
(both from BNC)

The clicking sound is made when the door gets unlocked, i.e. when a key, a latch, or a lock is moved. This is confirmed by the fact that *click* may be predicated of all these entities.

- (64) a. *The latch clicked up* and the door opened.  
b. *The key clicked* and the door opened.  
c. We heard *the lock* of the front door *click* as she shut it behind her.  
(all from BNC)

In fact, *click* – *open* may be predicated of these entities as well.

- (65) Barksdale trotted up to the doors, swiping a passcard through the scanner. When the lock *clicked open*, he pushed the doors inward, then stepped back to allow Sarah in ahead of him.  
(L. Child, *Utopia*, p. 93)

So in (63a), (63b), and (65) *click* is followed by the result phrase  $OPEN_F$  (=functional *open*) rather than  $OPEN_P$  (=positional *open*).<sup>162</sup>

Now consider (66).

- (66) Then the driver hunched down with a magazine, the door *buzzed open* and Maxim went in.  
(BNC)

In one reading, the emission of the buzzing sound is not co-extensive with the door's motion. Rather, the buzzing sound is created by pushing the button of the security system so as to open the door (Ramon Escamilla, p.c.).

Two factors are involved here. On the one hand, in (66) the door becomes unlocked, i.e.  $OPEN_F$ . So the sound emission need not be co-extensive with the door's (internalized translational) motion.

On the other hand, *buzz* in (66) is of the 'motion-describing' type. As already seen in the last section, verbs of sound emission may describe a motion event even if the sound is not strictly made by the motion, provided that it is of the 'motion-describing' type, as in the following examples: The clanking or rustling sound is actually emitted by the clothes or accessories that the subject is wearing

<sup>162</sup>. Note that a clicking sound may be also made when the door gets locked. The following is a very interesting example in which the verb *closed* means that the barrier part comes to block the aperture, which is then followed by the door's being locked (i.e. functional *shut*).

- (i) Faulkner entered the room. The door slowly closed behind him and *clicked shut*.  
(E.S. Gardner, *The Case of the Fan-Dancer's Horse*, p. 163).

in (67), and the rumbling or rattling sound is made by the vehicle that the subject is riding in (68).

- (67) a. ... Sedgwick often *clanked into town* in saber and spurs from the cavalry camp. [E. Thane, *Yankee Stranger*, p. 133]  
 b. She *rustled out of the room* without waiting for a word from Lind. [M. Ostenson, *Wild Geese*, p. 30]
- (68) a. It was all so different in 1959, when Julian Critchley, the party's resident music-hall artiste, *rumbled into Westminster* in his Ford Popular as a new MP.  
 b. Now she was *rattling along the empty streets*, the horse's hooves sounding sharp and crisp in the silence. (both from BNC)

In short, the named sound is describing how the motion event develops, like the manner of motion. So a sound that is routinely associated with a motion event in our everyday experiences will do, even if the sound is not strictly made by the motion itself.

The same thing can be said of (66). The buzzing sound is made by the security system, rather than the door's motion, but since the buzzing sound is routinely associated with the door's becoming unlocked in our daily experiences, the buzzing sound characterizes the change of state. This is why the buzzing sound, which is made by the security system, can nevertheless describe how the door becomes OPEN<sub>F</sub>.

## 21.7 Conclusion

This chapter has analyzed cases involving verbs of sound emission. When verbs of sound emission followed by directional PPs express motion, there are two types. In the 'motion-describing' type (e.g. *The trolley rumbled through the tunnel*), the sound characterizes the motion, in the same way the manner characterizes the motion with manner-of-motion verbs (e.g. *The ball rolled down the hill*). In the 'motion-induced' type (e.g. *The plane thudded into the earth*), on the other hand, the directional PP further specifies an entailed motion, parallel to the path PPs accompanying path-incorporating verbs (e.g. *Bill entered through the bathroom window*).

In both cases the sound is inseparably connected with the motion. But the motion event does not strictly cause the sound emission event in either case: In the 'motion-describing' type, the sound accompanies the motion, exactly like the manner; and in the 'motion-induced' type the sound-emission event and the motion event are two facets of one and the same event. Moreover, both cases are instances of simple motion sentences, not of caused-motion sentences. Accordingly,



there is no sense in calling them resultatives, at least not in the same sense that *He hammered the metal flat* or *He hit the ball into center field* are instances of resultatives, contrary to both Levin & Rappaport Hovav (1995, 1996, 1999) and Goldberg & Jackendoff (2004).<sup>163</sup>

By contrast, when verbs of sound emission are followed by *open* or *shut* (e.g. *The door creaked open*), they are instances of resultatives: The verbs of sound emission practically describe internalized translational motions, as a direct result of which the door becomes open or shut. So they are entirely parallel to resultatives like *The door swung open*.

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163. Incidentally, Rappaport Hovav & Levin (2001, p. 773) cite the following examples as an illustration of the claim that verbs of sound emission such as *rumble*, *whistle*, and *screech* are found in both the bare XP and reflexive patterns.

- (i) a. The elevator creaked to the ground floor ...
- b. If the telephone bell rang, it could ring itself silly.

(ia) is not a resultative, as has been amply demonstrated up to this point. (ib) is indeed a resultative, but it is an extension from *He laughed himself silly*, as has already been shown in 8.1.4. So *ring itself silly* is entirely different from the “resultatives” involving verbs of sound emission like *rumble*, *whistle*, and *screech*.

## Reconsidering the parallel between change of state and change of location

### 22.0 Introduction

In the course of going through a different type of resultatives (Part VII) and a number of apparent resultatives (Part VIII), we have seen that all of them are fundamentally motion expressions. That some apparent resultatives are motion sentences, not resultatives, seems to suggest the need to reconsider the parallel between change of state and change of location, which has been taken for granted in previous accounts of resultatives.

The presumed parallel between change of state and change of location is clearly seen in the terminology employed. Consider (1a) and (1b).

- (1) a. He wiped the table clean.
- b. He hit the ball into center field.

Both sentences like (1a), which involve change of state, and those like (1b), which involve change of location, have been cited as instances of resultatives. They have been referred to by various labels: ‘resultatives vs. spatial resultatives’ (Jackendoff 1990), ‘property resultatives vs. path resultatives’ (Goldberg & Jackendoff 2004), or simply ‘resultatives’ by disregarding the contrast between change of state and change of location (Boas 2003). Clearly, these accounts assume that change of state and change of location are parallel.

But is the parallel really as thorough as assumed in these previous studies? This is the issue to be addressed in this short chapter. In the course of doing so, it will become clear (once again) what should be called ‘resultatives,’ and why the term ‘resultative caused-motion’ is adopted in this book.

## 22.1 Putative parallel between change of state and change of location

### 22.1.1 Transitive cases

To examine whether such a parallel treatment is warranted, let us start with clear cases. Sentences like (2) are unquestionably resultatives.

- (2) He wiped the table clean.

In Chapter 1, resultatives are informally defined as follows: The verb in itself does not entail a change of state, but when this verb occurs in a particular syntactic frame, the expression means that as a result of the verbal event, a change of state ensues. In other words, (i) the base verb not entailing a change of state, (ii) a particular syntactic frame, and (iii) a change of state, are the three essential features of resultatives, according to this definition.

Furthermore, resultatives may take not only subcategorized objects but also non-subcategorized objects, as illustrated in (3).

- (3) a. He drank himself silly.  
 b. He drank himself to death.  
 c. He drank himself into a stupor.

Now sentences like (4) are ‘change of location’ counterparts of resultatives like (2) and (3).

- (4) He hit the ball into center field.

Sentences like (4) differ from those like (2) only with regard to the third feature: The verb in itself does not entail *a change of location*, but when this verb occurs in a particular syntactic frame, the expression means that as a result of the verbal event, *a change of location* ensues. Furthermore, non-subcategorized objects are allowed.

- (5) He wiped the crumbs off the table.

So sentences like (4), which express change of location, seem to be completely parallel to those like (2), which express change of state. Accordingly, the terms ‘spatial resultatives,’ ‘path resultatives,’ and even ‘resultatives’ seem to be appropriate as long as we are looking at sentences like (4) and (5).

### 22.1.2 Intransitive cases

When it comes to intransitive counterparts, however, the parallel fails. Intransitive counterparts for sentences like (2) are those like (6).

- (6) The kettle boiled dry.

Sentences like (6) exhibit all the three features noted above: The verb in itself does not entail a change of state, but when this verb occurs in a particular syntactic frame, the expression means that as a result of the verbal event, a change of state ensues.

Sentences like (7) are slightly different, in that the verb in itself does entail a change of state.

(7) The lake froze solid.

But apart from that, they are like those in (2): When this verb occurs in a particular syntactic frame, the expression means that as a result of the verbal event, a result state ensues. So these sentences count as intransitive counterparts of resultatives like (2).

Now, the intransitive counterpart of (4) or the ‘change of location’ counterpart of (6) would be cases in which intransitive verbs, which do not entail a change of location, may express a change of location when they occur in a particular syntactic frame. Apparently, sentences like (8) seem to fit this description. In fact, they are cited as instances of ‘path resultatives’ in Goldberg & Jackendoff (2004).

(8) The ball rolled down the hill.

Actually, however, the change of location does not result from the verbal event of rolling. Rather, the manner of rolling comes to exist only in the course of the (translational) motion event, as amply demonstrated in Chapter 21. So sentences like (8) are not parallel to those like (6) or (7). Furthermore, as far as I can see, there seems to be no other candidate which fits the above description. The discussion so far may be summarized in Table 22.1.

**Table 22.1** Four possibilities for ‘resultatives’

|          | change of state                                                                                                                                      | change of location                                                                                                                                                              |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| trans.   | I. Transitive resultative<br>Subcategorized objects<br>(e.g. He wiped the table clean.)<br>Non-subcategorized objects<br>(e.g. He ate himself sick.) | II. Resultative caused-motion<br>Subcategorized objects<br>(e.g. He hit the ball into center field.)<br>Non-subcategorized objects<br>(e.g. He wiped the crumbs off the table.) |
| intrans. | III. Intransitive resultative<br>(e.g. The kettle boiled dry)                                                                                        | IV. Resultative simple motion<br>*                                                                                                                                              |

The two parameters, i.e. change of state vs. change of location, and transitive vs. intransitive, together yield four possibilities, as shown in Table 22.1. When we look only at cells I and II, the difference between I and II can be taken to be that of the result phrase alone (property vs. path). In that case, the term ‘spatial resultatives’ or ‘path resultatives’ might appear to be appropriate for cell II so as to underscore its parallelism with cell I. But the parallel does not extend to cells III and IV.

Besides, notice that sentences like (9) are instances of caused-motion sentences, exactly like those in (10).

- (9) a. He hit the ball into center field.  
 b. He wiped the crumbs off the table.
- (10) a. He threw the ball over the fence.  
 b. He brought the book to Mary.

That is, sentences like (9) are a subtype of caused-motion expressions. After all, sentences like (9) describe change of location.

Taking into account all these considerations, then, it follows that the term ‘resultative caused-motion’ is to be adopted. Notice that this term follows the ordinary pattern of an adjectival modification of a head noun: Caused-motion expressions that are resultatives, i.e. caused-motion expressions where the verb does not lexically entail a change of state.

But if we use the label ‘spatial resultatives’ or ‘path resultatives,’ this would likely invite an unintended interpretation: Taken literally, these terms would mean a subtype of resultatives that are spatial or take a path phrase, i.e. expressions describing change of state and which are at the same time spatial or take a path phrase. Clearly, these descriptions are not suitable for the phenomena in cell II above.

## 22.2 Motion expressions

Thus adopting the term “resultative caused-motion” is a consequence of giving equal status to expressions for change of state and those for change of location, rather than subjecting one to the other. This is a legitimate approach, in that motion expressions form a system on their own, quite apart from the system of resultatives.

The system of motion expressions consists of that of caused-motion sentences and that of simple motion sentences. As noted above, resultative caused-motion sentences, together with (plain) caused-motion sentences, form the system of caused-motion sentences in English. On the other hand, the system of simple motion sentences comprises (at least) the following expressions. First, sentences like (11) are instances of the intransitive manner-of-motion construction, as noted in Chapter 21.

- (11) The ball rolled *down the hill*.

Next, in sentences like (12), path-of-motion verbs are followed by a further-specifying path PP.

- (12) He entered *through the bathroom window*.

As seen in Chapter 20, several putative “resultatives” are actually to be assimilated to one of these two types. Thus sentences like (13a) and (13b) are like the case of *enter* in that the verb, which entails a change of location, is accompanied by a further-specifying path PP.

- (13) a. Bill followed her *into the library*.  
b. Bill disappeared *down the road*.

On the other hand, sentences like (14a) are like *roll down the hill*, in that the sound describes the type of (translational) motion. But sentences like (14b) are like *enter through the bathroom window*, in that the change of location entailed in the verb meaning is further specified by the path PP.

- (14) a. The trolley rumbled through the tunnel.      (‘motion-describing’ type)  
b. The plane thudded into the earth.                      (‘motion-induced’ type)

Accordingly, the systems of caused-motion and simple motion sentences are now summarized in Table 22.2.

**Table 22.2** Types of caused-motion and simple motion sentences

|               |                                                                                                                      |
|---------------|----------------------------------------------------------------------------------------------------------------------|
| caused-motion | lexical caused-motion<br>(e.g. He threw the ball over the fence.)                                                    |
|               | resultative caused-motion<br>(e.g. He hit the ball into center field.)                                               |
| simple motion | ‘manner/sound-of-motion’ verbs                                                                                       |
|               | <i>roll</i> -type                                                                                                    |
|               | ‘motion-describing’ type of sound-emission verbs                                                                     |
|               | ‘change-of-location’ entailing verbs                                                                                 |
|               | <i>enter</i> -type<br><i>follow</i> -type<br><i>disappear</i> -type<br>‘motion-induced’ type of sound-emission verbs |

### 22.3 Resultatives that are based on motion

We have also seen that sentences like (15) qualify as resultatives.

- (15) a. They carried England to victory.  
b. He rode (the horse) to victory.

Notice that the term ‘spatial resultative’ or ‘path resultative’ may be better suited for this type of resultatives, which “describe change of state and which are at the same time spatial or take a path phrase.” This is particularly so when we look at resultatives like (16).

- (16) a. They crossed the border *to safety*.  
b. They escaped Cuba *to freedom*.

But given that the terms ‘spatial resultative’ and ‘path resultative’ are already used in a different sense in the literature, to refer to this type of resultatives as ‘spatial resultative,’ ‘path resultative,’ or even ‘caused-motion resultative’ would likely be confusing. So the term “motion-based resultative” has been used up to this point. Now considering the caused-motion vs. simple motion contrast, maybe sentences like (17a) are to be called ‘(metaphorical) caused-motion based resultatives,’ and those like (17b) ‘(metaphorical) simple motion based resultatives.’

- (17) a. They carried England to victory.  
b. He rode (the horse) to victory.

## 22.4 Overall picture

Now the system of force-based resultatives, that of motion-based resultatives, and that of motion expressions, can be combined as in Figure 22.1.

| change of state                                                            | change of location                                                     |
|----------------------------------------------------------------------------|------------------------------------------------------------------------|
|                                                                            | lexical caused-motion<br>(e.g. He threw the ball over the fence.)      |
| Transitive resultative<br>(e.g. He wiped the table clean.)                 | resultative caused-motion<br>(e.g. He hit the ball into center field)  |
| Intransitive resultative<br>(e.g. The kettle boiled dry)                   | resultative simple motion<br>*                                         |
|                                                                            | ‘manner/sound-of-motion’ verbs<br>‘change-of-location’ entailing verbs |
| caused-motion based resultative<br>(e.g. They carried England to victory.) |                                                                        |
| simple motion based resultative<br>(e.g. He rode the horse to victory.)    |                                                                        |



 : force-based resultatives    
  : motion-based resultatives

Figure 22.1 Resultatives and change of state/change of location distinction

This overall picture demonstrates that a clear parallel exists only between Transitive resultatives and resultative caused-motion sentences, indicating that motion and change of state are not as parallel as previous accounts will have us believe.

Notice further that “motion” is not limited to translational motion alone. There is also a type called ‘self-contained motion,’ as Talmy (2000b) points out by citing the contrast between (18a), on the one hand, and (18b) and (18c), on the other.

- (18) a. The ball bounced/rolled down the hall.  
 b. The ball bounced up and down on the same floor tile.  
 c. The log rolled over and over in the water. (Talmy, 2000b, p. 36)

Also, there is still another type called ‘internalized translational motion,’ as shown in Chapter 21 (and Chapter 2 for that matter).

- (19) a. He jumped to his feet.  
 b. The door swung open.

It seems safe to conclude, then, that the parallel between change of state and change of location has been overemphasized in previous accounts of resultatives.

## 22.5 Conclusion

This short chapter has summarized the findings in Part VIII and situated them in an overall picture. The parallel between change of state and change of location may be observed between sentences like *He hammered the metal flat* and those like *He hit the ball into center field*, but goes no further than that. So in order to refer to the latter, the term ‘resultative caused-motion’ is preferable over those like ‘spatial resultative’ or ‘path resultative,’ which overemphasize the parallel between change of state and change of location.





PART IX

## **Still another putative constraint**



# Unique path constraint reconsidered

## 23.0 Introduction

Part VIII ended by showing that the parallel between change of state and change of location has been overemphasized in previous accounts of resultatives in English. Part IX discusses a constraint which is also based on the presumed parallel between change of state and change of location, i.e. the Unique Path Constraint, as proposed in Goldberg (1991a, 1995).<sup>164</sup>

Attentive readers may have been wondering why this constraint, which apparently accounts for the ill-formedness of certain resultative sentences and should therefore be addressed in this book, has nevertheless been left unaddressed in the discussion up to this point. The discussion of the Unique Path Constraint being deferred to this late stage is, however, deliberate, not accidental. It should come after two things have been established: The distinction between adjectival result phrases and prepositional result phrases (Chapter 13) and the existence of resultatives which are not based on force-transmission (Chapter 18). A full discussion of the Unique Path Constraint needs to be informed by these two findings, as will become clear in what follows.

## 23.1 Unique path constraint

### 23.1.1 Goldberg (1991a, 1995)

In the literature it has been observed that a result phrase cannot be added to verbs of inherently directed motion (Simpson 1983, Goldberg 1991a, 1995, Levin & Rapaport Hovav 1995). Thus Simpson (1983) argues that change-of-location verbs do not allow result phrases. She observes that (1a) means that he is bedraggled

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<sup>164</sup>. Note that the presumed parallel is seen from the opposite directions between the terminological issue addressed in Chapter 22 and that of the Unique Path Constraint. In the former case, expressions for change of location (i.e. 'spatial resultatives' or 'path resultatives') are assimilated to those for change of state (i.e. resultatives), while in the latter, expressions for change of state (e.g. adjectival result phrases) are assimilated to those for change of location (e.g. prepositional path phrases).

WHEN he emerges, not as a result of emerging, and that in (1b) the fall does not cause his death; he is dead WHEN he falls.

- (1) a. He emerged *bedraggled*.  
 b. He fell (down) *dead*. (Simpson, 1983, p. 147)

Such is also the case with transitive verbs. Thus according to Simpson (1983), (2a) cannot mean that the vase was broken by the act of sending it, and (2b) cannot mean that John became giddy as a result of being carried.

- (2) a. I sent John the vase *broken*.  
 b. \*She carried John *giddy*. (Simpson, 1983, p. 147)

Based on these observations, Simpson (1983) concludes as follows: “If a verb attributes a change of location of some argument, it is not possible to have a secondary predicate attributing a change of state involving the same argument.” (Simpson, 1983, p. 147)

Goldberg (1991a, 1995) attempts to account for this restriction in terms of a general constraint on the occurrence of path expressions, on the assumption that the result phrase is a metaphorical type of goal. Goldberg (1991a, 1995) thus proposes the following constraint:

*Unique Path (UP) Constraint:* If an argument X refers to a physical object, then more than one distinct path cannot be predicated of X within a single clause. The notion of a single path entails two things:

- (1) X cannot be predicated to move to two distinct locations at any given time *t*.  
 (2) the motion must trace a path within a single landscape.

(Goldberg, 1991a, p. 368)

The proposed constraint supposedly allows one to capture the fact that in (4) *black and blue* and *out of the room* cannot occur simultaneously, although either phrase alone may acceptably appear as in (3).

- (3) a. Sam kicked Bill *black and blue*.  
 b. Sam kicked Bill *out of the room*.  
 (4) a. \*Sam kicked Bill *black and blue out of the room*.  
 b. \*Sam kicked Bill *out of the room black and blue*. (Goldberg, 1995, p. 81)

### 23.1.2 Adjectival result phrases do not denote paths

Notice that there is a slight difference between Simpson (1983) and Goldberg (1991a, 1995) as to the range of facts to be handled. While Simpson (1983) simply observes that change-of-location verbs cannot take a result phrase as in

(5), Goldberg (1991a, 1995) attempts to reformulate the restriction in terms of a general constraint on paths (both physical and abstract). Accordingly, not only cases like (6), where change-of-location verbs are followed by result phrases, but also those like (7), where more than one result phrase appears, are claimed to be ruled out by Goldberg's Unique Path Constraint.

- (5) a. He emerged *bedraggled*. (This means: He is bedraggled WHEN he emerges, not as a result of emerging.)  
 b. He fell (down) dead. (The fall does not cause his death; he is dead WHEN he falls.) (Simpson, 1983, p. 147)
- (6) a. \*The box arrived *open*.  
 b. \*Jill took the child *ill*.  
 c. \*She ascended *sick*. (Goldberg, 1991a, p. 371)
- (7) a. \*Sam kicked Bill *black and blue out of the room*.  
 b. \*Sam kicked Bill *out of the room black and blue*. (Goldberg, 1995, p. 81)

Thus Goldberg (1991a, 1995) apparently succeeds in handling a wider range of data by reformulating the constraint in terms of a general constraint on paths.

It turns out that that is exactly where a fundamental problem with Goldberg's account lies, however. The Unique Path Constraint is built on the assumption that adjectival result phrases denote a metaphorical goal, on a par with prepositional result phrases, in that the process leading up to a new state could be construed as a "path." This view may be described as in Figure 23.1.

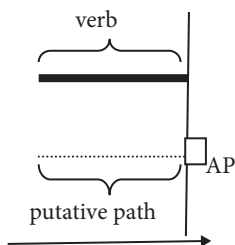


Figure 23.1 Goldberg's view of resultatives with adjectival result phrases

Note that this is a version of the 'result state as endpoint of path' thesis, already discussed in Chapter 15.

But the 'result state as endpoint of path' thesis is not correct. As seen in Chapter 13, adjectival result phrases denote states, not paths, and are fundamentally different from prepositional result phrases, as summarized in Figure 23.2.

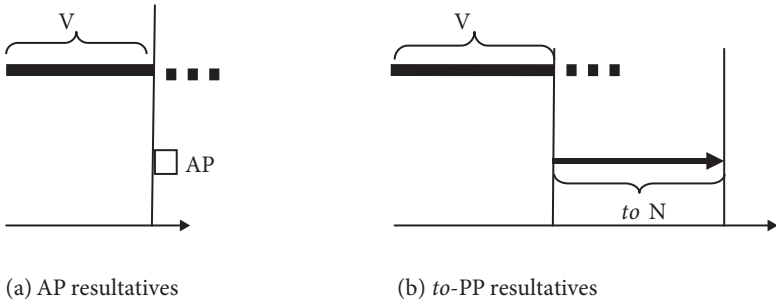


Figure 23.2 AP resultatives vs. *to*-PP resultatives

Note that the process leading up to a new state is part of a verbal process, and is not part of the meaning of the adjectival result phrase.

Accordingly, what the unacceptable sentences in (4) would mean is to be described as in Figure 23.3.

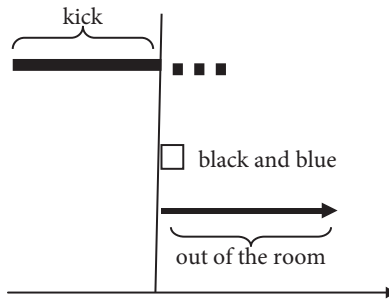


Figure 23.3 \*kick Bill black and blue out of the room

It is clearly not the case that two distinct paths are simultaneously traversed.

In fact, if one insists on regarding the process leading up to a new state as a path, it will become even clearer that the Unique Path Constraint is of no relevance here. After all, the putative path is clearly distinct from the path denoted by the PP, as depicted in Figure 23.4.

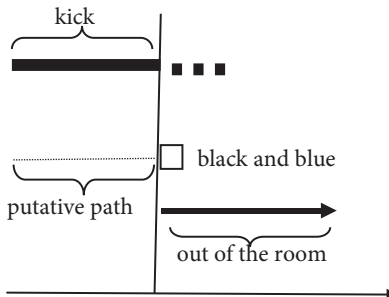


Figure 23.4 \*kick Bill black and blue out of the room

So there will be no reason to rule out the unacceptable sentences on the basis of traversing more than one path simultaneously.

Rather, it is prepositional result phrases like *to death* which should be subject to the Unique Path Constraint. Thus *to death* may appear as a result phrase in (8a), parallel to the spatial result phrase *down the stairs* in (8a). But when the two result phrases co-occur, the resulting sentences do not sound good, as in (9).<sup>165</sup>

- (8) a. They kicked him *to death*.  
 b. They kicked him *down the stairs*.
- (9) a. \*They kicked him *to death down the stairs*.  
 b. \*They kicked him *down the stairs to death*.

The two result phrases indeed denote paths (both abstract and physical), and it is precisely because one and the same entity is asserted to traverse the two paths simultaneously that (9a) and (9b) sound strange. So the ill-formedness of (9a) and (9b) can be rightly attributed to the Unique Path Constraint.

Nevertheless, the fact still remains that since adjectival result phrases do not denote paths, they are in no way subject to the Unique *Path* Constraint.

## 23.2 Why adjectival result phrases do not co-occur with path PPs

### 23.2.1 Co-occurrence of more than one result phrase

But almost all of the examples cited by Goldberg (1991a, 1995) involve adjectival result phrases. How is the unacceptability of these cited examples to be accounted for, then?

- (10) a. \*Sam kicked Bill *black and blue out of the room*.  
 b. \*Sam kicked Bill *out of the room black and blue*. (Goldberg, 1995, p. 81)

One possibility is to suppose that this is because more than one result phrase appears simultaneously.

In fact, adjectival result phrases may appear with path PPs which are not result phrases. Thus Iwata (2006a, 2008b) observes that ‘change verb’ resultatives do not obey the Unique Path Constraint, citing data like the following.

---

165. The following sentence is judged acceptable.

- (i) They kicked him down the stairs to his death.

But *to one's death* is not a result phrase, as will be demonstrated in the next chapter.



- (11) a. Amelia rolled up Nina's torn sleeve and tied the tourniquet *tight around her upper arm*.  
 b. Out in the corral, tied so *tight to the big stake* in the centre that the Argentines call a palemque that she couldn't even move her head, was the little grey pony.  
 c. I should be bound even *tighter to my mother*.

(all from BNC, cited in Iwata, 2006a, p. 464)

This is not strictly correct, however. Even apart from 'change verb' resultatives, a result phrase and a path PP may co-occur. Thus the resultative sentences in (12) are not 'change verb' resultatives, since *fall* does not entail the state of being open or shut.

- (12) a. Her robe *fell open to the waist*, her small jutting breasts exposed, heaving with indignation.  
 b. Kicked the radiator and screamed as the bonnet *fell shut on his fingers*.

(both from BNC, cited in Iwata, 2006a, p. 474)

Similarly, *pull* is not a change-of-state verb, but the result phrase *tight* is accompanied by the PP *against him* in (13).

- (13) He *pulled her tight against him*, squashing her against his chest. (BNC)

Furthermore, in (14) *clean* and *dry* are accompanied by PPs, despite the fact that *wipe* is not a change-of-state verb.

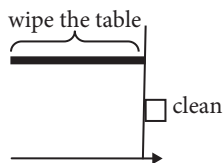
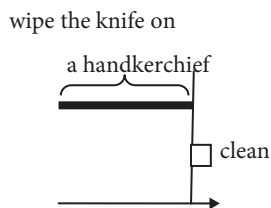
- (14) a. He *wiped the blade clean on his skin coat* and walked out.  
 b. Afterwards he washed the tin out in the stream, splashed water over his face and hands and *wiped them dry on a handkerchief*. (both from BNC)

Crucially, in all these examples the PP in question is not a result phrase. Let me illustrate with (15).

- (15) a. He wiped the table clean.  
 b. He wiped the knife clean on a handkerchief.

Irrespective of whether the table is wiped or whether the knife is wiped on a handkerchief, the result state of being clean follows when the wiping force takes effect in both (15a) and (15b). That is, in (15b) the PP *on a handkerchief* is part of the description of the wiping event. Accordingly, (15a) and (15b) are represented in essentially the same way as in Figure 23.5.

What is ruled out, therefore, appears to be the co-occurrence of more than one result phrase, not more than one path. In fact, in many of the unacceptable sentences which Goldberg (1995) cites as being ruled out by the Unique Path Constraint, the PP is intended as a result phrase as in (16), parallel to (17).

(a) *wipe the table clean*(b) *wipe the knife clean on a handkerchief***Figure 23.5** Two types of *wipe – clean*

- (16) a. \*Sam tickled Chris silly off her chair.  
 b. \*Sam tickled Chris off her chair silly. (Goldberg, 1995, p. 81)
- (17) a. \*She kicked him bloody dead.  
 b. \*He wiped the table dry clean. (Goldberg, 1995, p. 81)

A correct generalization to be made from these cases, then, would be one that rules out multiple occurrences of result phrases, to be formulated as something like (18).

- (18) *Unique Result Phrase Constraint:*  
 More than one distinct result phase cannot be predicated of an argument X within a single clause.

### 23.2.2 No special constraint is necessary

Actually, even the Unique Result Phrase Constraint in (18) is not strictly correct, however. Matsumoto (2006) observes that (19) is better than (10).

- (19) (?)John kicked Bill *black and blue* and (ultimately/eventually) *into a hospital room*. (Matsumoto 2006)

Here a result phrase and a path result phrase are combined into a single, plausible scenario. This seems to suggest that the co-occurrence of more than one result phrase may not be ruled out, after all.

It might be argued that (19) is somewhat different from cases like (10) in that the conjunction *and* helps to construe the two result phrases as describing a single sequence, rather than two distinct result phrases.

But a result phrase and a path result phrase may co-occur without the intervention of *and* if the state denoted by the (adjectival) result phrase is plausibly related to the path or abstract path denoted by the PP. First, consider the following.

- (20) a. He races after him and and with the butt of his revolver *knocks* him  
*unconscious to the ground*. (WB)
- b. Especially that of marcher Amelia Boynton, tear-gassed and *clubbed*  
*unconscious to the ground* during the first charge, then left to lie on the  
highway median ... (COCA)

This is a genuine counter-example to the Unique Result Phrase Constraint in (18): Both *unconscious* and *to the ground* are result phrases, because neither the result state of being unconscious nor the path *to the ground* is entailed in the meaning of *knock* or *club*. And *to the ground* is not part of the description of the knocking event or the clubbing event, unlike the PP *on a handkerchief* in (15b) above.

Crucially, note that *unconscious* in (20a) and (20b) also serves the same function as that in (21).

- (21) The second guard caught Ruiz across the back of the head with the butt of his rifle, and Ruiz *crumpled unconscious to the ground*. (WB)

Here *unconscious* functions as a depictive, meaning that Ruiz became unconscious and then/therefore he crumpled to the ground.

Thus, the meaning of (22a) can be analyzed in terms of a combination of (22b) and (22c).

- (22) a. John knocked him unconscious to the ground.  
b. John knocked him unconscious.  
c. He fell unconscious to the ground.

In a sense, *unconscious* serves a dual role: as a result phrase to the knocking event, and as a depictive phrase to the subsequent falling event. This is why the combination of *unconscious* and *to the ground* can be straightforwardly made sense of.

Furthermore, this type also seems to be possible when the result phrase is *loose*. Thus (23a) and (23b) are further instances of this type.

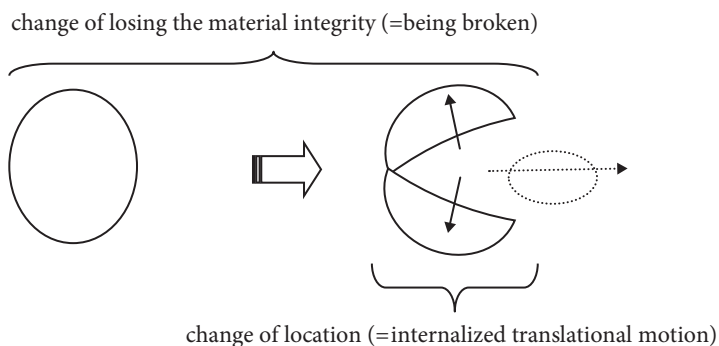
- (23) a. A man, passing her, took one startled look and reflected anew what a very unwise policy was the current one of closing nineteenth-century asylums and *turning* the inmates *loose into an alarmed and inadequate society*. (BNC)
- b. Coyne should have passed straight away to the unmarked Dallas but he went himself and was tackled by McCracken. The ball *rolled loose to Smith* who perfectly timed his pass to Dallas who raced over close to the posts after beating Ridge. (WB)

(23a) means that the inmate became loose and then/therefore they went into a society; (23b) means that the ball became loose and then went to Smith.

Second, in the following example the result phrase *open* is followed by a path result phrase *into a bowl*.

- (24) Her father ... takes a carton of eggs out of the fridge, *breaks open* two of them, one-handed, *into a bowl*. [L. Barclay, *No Time for Goodbye*, p. 55]

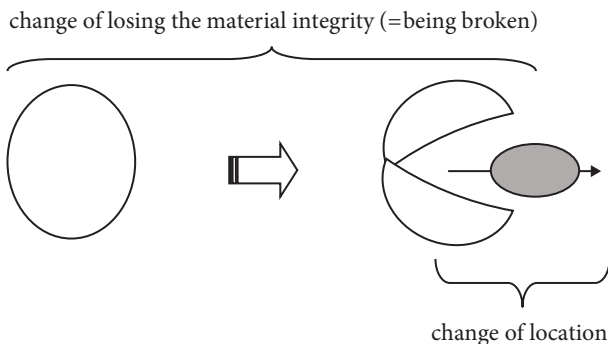
This is quite understandable, considering how the state of being open is related to the subsequent motion. Recall that *break the egg* may be followed by the result phrase *open* as in (25): As already seen in Chapter 11, as an egg loses its material integrity, parts of the shell come apart, effecting the state change of becoming open as described in Figure 23.6.



**Figure 23.6** *Break the egg open*

- (25) He broke the egg open.

But *break the egg* may also be followed by the path result phrase *into the pan* as in (26), as seen in 9.3.1: The eggshell's breaking apart effects the release of the egg content from inside the eggshell, as described in Figure 23.7.



**Figure 23.7** *Break the egg into the pan*

- (26) She broke the egg into the pan.

Thus (24) is a combination of the resultative in (25) and the resultative caused-motion sentence in (26).

Unlike (22a), in (24) the result phrase *open* does not strictly serve as a depictive to the subsequent motion. After all, what is open is not strictly identical with what goes into the pan. Nevertheless, the state of being open is related to the subsequent motion in essentially the same way as in (22a). This suggests that a result phrase may appear with a path result PP as long as the state can be plausibly related to the subsequent motion.<sup>166</sup>

Third, in the following examples the result phrase *open* is followed by *into*-PPs.

- (27) a. You ran through the gates, impatient to be grown, as the sky *split open into a thunderstorm*. (BNC)  
 b. As the castle burns, the bud on the roof *bursts open into a giant chrysanthemum*. (WB)

These *into*-PPs describe a change in the Identificational field in the sense of Jackendoff (1983), or a change in appearance, like the *into*-PPs in (28).

- (28) a. Her lips curved *into a small smile*.  
 b. His mouth twisted *into a devastating smile*. (both from BNC)

As already discussed in 12.5.2, here a smile is intended to be a certain configuration of one's mouth or lips, and therefore the forming of a smile consists in the movements of one's mouth or lips. Accordingly, the verbal event (the lip's curving or the mouth's twisting) entails a change of state (forming a smile). In other words, these *into*-PPs further specify a change entailed by the verbal events.

Now exactly the same can be said of (27a) and (27b): The sky's splitting open and the bud's bursting open entail configurational changes, which are further specified by the *into*-PPs.

Thus in all the three cases just seen, the state denoted by the adjectival result phrase is plausibly related to the path or abstract path denoted by the PP. But a similar interpretation is not possible with (10). Citing (29), Goldberg (1991a) observes that "It is quite conceivable that a person be kicked down the stairs *and become black and blue simultaneously*" (Goldberg, 1991a, p. 369, emphasis mine).

- (29) \* Ann kicked her black and blue down the stairs. (Goldberg, 1991a, p. 369)

Notice that in this interpretation, a change of location and a change of state are not strictly simultaneous; there is asymmetry between a change of location and a change of state. This can be appreciated by reversing the order: If a person becomes

166. Sentences like these can be accommodated either by adding the AP *open* to *break the egg into the pan* or by adding the PP *into the pan* to *break the egg open*.

black and blue and then falls down, it will be an entirely different course of events than that in which a person falls down and then becomes black and blue. In other words, in the intended interpretation of (29) the motion along the path *down the stairs* is followed by a state change of becoming *black and blue*. This is in sharp contrast to (22a), (23a) and (24), where the states of being unconscious, being loose, and being open are followed by the motions along the paths *to the ground*, *into a society*, and *into a bowl*, respectively.

In English there is available a way of relating a state and a subsequent change of location, i.e. depictives. Accordingly, in (22a) the combination of *unconscious* and *to the ground* can be plausibly made sense of. But there is no way of relating a change of location and a subsequent change of state. In other words, in English there is no secondary predicate by means of which (30a) is interpreted to mean (30b).

- (30) a. \*She fell *black and blue* *down the stairs*.  
 b. She fell down the stairs and became black and blue.

This is why in (29) the combination *black and blue* and *down the stairs* cannot be made sense of.

All this indicates that the co-occurrence of result phrases and path result phrases *per se* is not ruled out. Rather, what is wrong about the sentences in (10a) and (10b) is that the combination of the result phrase *black and blue* and the path result phrase *out of the room* cannot be plausibly made sense of, because no way to make sense of that combination is available in English.

Consequently, no special constraint is necessary to rule out the sentences that are putative violations of the Unique Path Constraint, at least as far as adjectival result phrases are concerned. The Unique Path Constraint is seriously flawed in that the distinction between result phrases and path result phrases is overlooked.

### 23.3 Still another distinction that has been overlooked

#### 23.3.1 Why motion verbs do not co-occur with result phrases

It turns out that there is still another distinction that has been overlooked in the previous analyses, however. As noted above, the putative Unique Path Constraint is intended to rule out not only cases in which more than one result phrase appears, but also those in which change-of-location verbs cannot take a result phrase, as originally observed by Simpson (1983).

- (31) a. He emerged *bedraggled*. (This means: He is bedraggled WHEN he emerges, not as a result of emerging.)  
 b. He fell (down) *dead*. (The fall does not cause his death; he is dead WHEN he falls.) (Simpson, 1983, p. 147)
- (32) a. I sent John the vase *broken*. (This cannot mean that the vase was broken by the act of sending it.)  
 b. \*She carried John *giddy*. (This cannot mean that John became giddy as a result of being carried.) (Simpson, 1983, p. 147)

From our viewpoint, the unavailability of a resultative interpretation for these sentences receives an entirely different explanation: These sentences are not acceptable as resultatives simply because no force is involved that is responsible for bringing about the change in question. Thus the state of being bedraggled, dead, broken, or giddy may be brought about by some force that happens to be at work during a change of location, but not by a simple change of location *per se*.

If the motion itself can be interpreted to serve as a force that is responsible for bringing about a change of state, then an interpretation as a resultative becomes possible. Thus in (33) *fall* is followed by the result phrase *dead*.

- (33) The dog, which had followed its master onto the roof, jumped down towards the lifeless body, missed, and *fell dead on the stones below*. (BNC)

Here *fall – on the stones below* suggests a strong impact impinged upon the dog, which is responsible for killing the dog. Thus the fall does cause the dog's death.

### 23.3.2 Resultatives based on motion once again

But the fact that the sentences in (31) and (32) are bad precisely because they cannot be interpreted as resultatives based on force-transmission reminds us of one important thing: There are also resultatives that are not based on force-transmission. Thus, as already seen in Chapter 18, result phrases like *to safety*, *to freedom*, and *from sight* describe changes of state brought about by a change of location.

- (34) a. He ran *to safety*.  
 b. He walked *to freedom*.  
 c. She passed *from sight*.

Now all the four verbs which Simpson (1983) cites (i.e. *emerge*, *fall*, *send*, and *carry*) can take a result phrase of this type.

- (35) a. Melocco has created a startling image of a fragile, beautiful creature  
*emerging to freedom* but crushing, or perhaps trying to consume ... (COCA)
- b. The patient jumps over the fence, using Lyle's body to avoid the barb  
wire, *falling to safety* on the other side. (COCA)
- c. Many of them were children being *sent to safety* in Canada ... (BNC)
- d. Salimat reluctantly chose to *carry* her baby *to freedom*. (WB)

The same goes for the following examples cited by Goldberg (1991a).

- (36) a. \*The box arrived open.  
b. \*Jill took the child ill.  
c. \*She ascended sick. (Goldberg, 1991a, p. 371)

According to Goldberg (1991a), (36a) cannot mean that the box's arrival caused the box to open; (36b) cannot mean that the child became ill because of the traveling; and (36c) cannot mean that the ascension made her sick.

Note that none of these examples can be made sense of as force-transmission-based resultatives. But if we replace these result phrases with those based on motion, the resulting sentences are fully acceptable.

- (37) a. But instead of *arriving to safety* in Croatia, the two children became  
separated when Mirsad, 14 at the time, was captured by Serb forces.  
b. Small vans turned up to try to *take* the refugees *to safety*.  
(both from WB)

(37a) means that the children's arrival caused them to become safe; and (37b) means that the refugees become safe because of the traveling. This strongly indicates that there is nothing in the inherent nature of resultatives that prohibits the co-occurrence of result phrases with motion verbs.

Thus, change-of-location verbs (=motion verbs) do take a result phrase, as long as the result phrase describes a change of state that is brought about by a change of location. Moreover, with this type of resultative, prepositional result phrases (*to safety, to freedom, from view, from sight*) may co-occur with path PPs, in violation of the putative Unique Path Constraint.

- (38) a. The two men combed the moors, squelching through the soggy ground  
until they were satisfied that all the sheep had been rounded up and  
brought down *to the lower pastures to safety*. (BNC)
- b. When American hostages--mostly women and children--*fly to freedom*  
*from Iraq and Kuwait*, they bring back a bleak picture of life under Iraqi  
occupation. (WB)



- (39) a. Lawton and Forster finally passed *from view through the doors*.  
b. The Waste lay on a high part of the forest so that when they reached it the sun, which had already sunk *from sight in the valleys*, was still poised above the dark low edge of the distant forest. (both from BNC)

Thus Simpson (1983) and Goldberg (1991a, 1995) make a generalization or propose a constraint by looking at only a specific type of resultative. Things will look entirely different if resultatives based on motion are also taken into consideration.

## 23.4 Conclusion

The Unique Path Constraint is based upon a mistaken view of resultatives, i.e. the 'result state as endpoint of path' thesis. Since adjectival result phrases denote states, not paths, they cannot possibly be subject to the Unique *Path* Constraint. Rather, the observed prohibition against the co-occurrence of more than one result phrase is simply due to the fact that the multiple result phrases under consideration cannot be plausibly made sense of. Also, the prohibition against change-of-location verbs taking a result phrase comes from the fact that no verbal force responsible for bringing about the change in question is involved in change-of-location verbs. If we turn our eyes to resultatives based on change of location, e.g. those followed by *to safety* or *to freedom*, things will look entirely different.

## *To one's death*

### 24.1 Another instance of resultative based on motion?<sup>167</sup>

In the last chapter, we have seen that resultatives involving *to freedom* and *to safety* do not obey the putative constraint against the co-occurrence of motion and change of state. In this connection, there is an expression that apparently behaves similarly to *to freedom* and *to safety*, i.e. *to one's death*. *To one's death* may occur with motion verbs as in (1), and it may also co-occur with path PPs as in (2).

- (1) a. A patient has *fallen to his death* from a window of the Princess Margaret Hospital in Swindon.
- b. TERRIFIED Ivan Kolov, 27, *jumped to his death* from a plane at Tobolsk, Russia, after four friends took him up – to cure his fear of flying.
- c. Could any man believe he had the right to *send* another *to his death* simply because he had once been *to gaol*? (all from BNC)
  
- (2) a. As the sun shrank the ledge, he waited to plunge *to his death into a crevasse*. (BNC)
- b. ... she lured them for a night, only to push them each morning *to their death into the swirling cataract beneath*. (WB)

As a matter of fact, *to one's death* may occur with a wide range of simple motion verbs and caused-motion verbs, as can be easily seen in Tables 24.1, 24.2 and 24.3, where the range of verbs found to be followed by *to one's death* in the BNC, the WB and COCA, respectively, are summarized.

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167. This chapter is a revised version of an analysis that first appeared in Iwata (2014a). See also Iwata (2014e).

**Table 24.1** BNC counts of 'V (NP) to one's death'

|                                                                                                                              | _____ to one's death |
|------------------------------------------------------------------------------------------------------------------------------|----------------------|
| fall                                                                                                                         | 51                   |
| plunge                                                                                                                       | 22                   |
| send                                                                                                                         | 16                   |
| go                                                                                                                           | 13                   |
| lure                                                                                                                         | 12                   |
| drive                                                                                                                        | 7                    |
| leap                                                                                                                         | 6                    |
| jump                                                                                                                         | 5                    |
| bring, sweep                                                                                                                 | 3                    |
| dance, drag, hand, hunt, sink, swim, throw, walk                                                                             | 2                    |
| advance, carry, crash, dash, deliver, dive, draw, hound, leave,<br>repatriate, ride, push, skip, suck, thump, topple, tumble | 1                    |
| TOTAL                                                                                                                        | 171                  |

**Table 24.2** WB counts of 'V (NP) to one's death'

|                                                                                                                | _____ (NP) to one's death |
|----------------------------------------------------------------------------------------------------------------|---------------------------|
| fall                                                                                                           | 62                        |
| plunge                                                                                                         | 57                        |
| sweep                                                                                                          | 45                        |
| jump                                                                                                           | 28                        |
| send                                                                                                           | 20                        |
| throw                                                                                                          | 14                        |
| lure                                                                                                           | 12                        |
| drive, hurl                                                                                                    | 11                        |
| leap                                                                                                           | 10                        |
| drag                                                                                                           | 9                         |
| go                                                                                                             | 7                         |
| carry, chase, transport                                                                                        | 3                         |
| blow, crash, drop, hound, plummet, suck, walk, wash                                                            | 2                         |
| back-flip, bring, ferry, haunt, head, push, sail, ship, slide, slip,<br>steam, stumble, take, transfer, wander | 1                         |
| TOTAL                                                                                                          | 326                       |

Table 24.3 COCA counts of 'V (NP) to one's death'

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | _____ (NP) to one's death |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| fall                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 175                       |
| lead                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 137                       |
| send                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 101                       |
| go                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 85                        |
| jump                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 53                        |
| plunge                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 47                        |
| drag                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 35                        |
| leap                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 33                        |
| lure                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 24                        |
| drive                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 18                        |
| sweep                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 17                        |
| take                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 16                        |
| throw                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 14                        |
| plummet                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 13                        |
| push                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 11                        |
| walk                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10                        |
| hurl; tumble                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 8                         |
| carry; drop; fling                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 7                         |
| come; march; pull                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 6                         |
| stumble                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5                         |
| accompany; cart; follow; hound; rush                                                                                                                                                                                                                                                                                                                                                                                                                                | 4                         |
| bring; crash; fly; hurtle; order                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3                         |
| call; cast; charge; deliver; deport; entice; flutter; guide; pitch; put;<br>ride; run; sail; ski; slide; stagger; topple; toss; transport; wander                                                                                                                                                                                                                                                                                                                   | 2                         |
| abandon; battle and bleed; bear; blow; break; cartwheel; chase;<br>cheerlead; circle; collide; convey; crumple; crush; dance; dash;<br>dragoon; drift; flame; flush; gore; hasten; hike; hoist; hunt; hurry;<br>limp; manipulate; neglect; parade; pass; return; rocket; roll;<br>scream; seduce; ship; shove; sink; slip; smash; splash; stab; stalk;<br>start; step; strangle; suck; summon; surrender; swim; torture; trick;<br>usher; waddle; wave; weigh; yank | 1                         |
| TOTAL                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 981                       |

This might seem to suggest that *to one's death* is still another instance of resultative based on motion, on a par with *freedom* and *to safety*.

But *to one's death* is not a result phrase. Significantly, when *to freedom* and *to safety* accompany motion verbs, the result state comes to obtain the moment one moves to a certain place. Thus in (3a) he becomes free the moment he crossed the bridge, and in (3b) the people become safe the moment they get to the mainland.

- (3) a. ANATOLY SHARANSKY, the dissident human rights campaigner, has all but forgotten the euphoria he felt at the height of the cold war when he *walked to freedom* across the snow-swept Glienicke bridge in Berlin. (WB)
- b. Nine out of 10 people here have chosen to *go to safety* on the mainland. (COCA)

A change of state is thus brought about by a change of location.

But such a close correlation with a change of location is not observable with *to one's death*. Consider (4).

- (4) a. He walked *to his death* at Reading on 7 July 1896, the famous hangman Billington in charge of operations.
- b. Or did he go *to his death* in the anguished conviction that he was responsible for his master's? (both from BNC)

Neither walking nor going results in his death. Rather, he walked or went to a place where his capital punishment was to be executed.

Also, in (5a) Yugoslavs and Cossacks were sent to the battlefield; and in (5b) the Russian prisoners were handed to the concentration camp where death awaited them.

- (5) a. ... over a pamphlet accusing him of deliberately sending 70,000 Yugoslavs and Cossacks *to their death* in 1945.
- b. If we hand the Russian prisoners back *to their death*, it will be the military authorities who do so, on my instructions ... (both from BNC)

Again, therefore, the physical motion in itself does not cause the death.

Similar examples abound. Consider (6).

- (6) a. ... do we, or do we not approve of killing animals for fun do we approve of allowing a pack of dogs to hunt an animal *to its death*.
- b. As Gloucester's knight he earned an ignominious name at Bannockburn in 1314 by leaving his lord *to his death* in the mêlée.
- c. A WOMAN is believed to have lured British computer boss Howard Bates *to his death* and then helped bury his body in a swampland grave. Police in Florida believe Magaly Carr, 29, telephoned father-of-three Mr Bates and set up the fateful meeting where her boyfriend carried out the killing. The body of Mr Bates, 44, was found shot through the head at a derelict factory site in Miami at the weekend. (all from BNC)

In (6a) the animal is hunted to a place where it will be finally killed by the dogs; in (6b) his lord was left at a place where he was then killed by the enemy soldiers; and in (6c) Howard Bates was lured to a place where he was then shot to death by the woman's boyfriend.

The following sentences in (7) further illustrate that the physical motion expressed by the verb does not cause the death.

- (7) a. It is even harder on women: an inquest last year heard how divorcee Diana Humphreys drove *to her death* over a 60 ft cliff at Weymouth after complaining she looked like a monster because of an extracted tooth which left her with a “less than perfect” smile. (WB)
- b. In Taunton, Somerset, as many as 200 sheep were swept *to their deaths* when the River Tone burst its banks after rising eight feet overnight. (BNC)
- c. ... but to great sights such as the Loreley rock, from which a rogue mermaid was said to have lured sailors *to their death*. (BNC)

In (7a) Diana Humphreys committed suicide by jumping off the cliff in a car; in (7b) the sheep were killed by the flood; and (7c) is about the famous Lorelei rock. So Diana Humphreys in (7a), the sheep in (7b), and the sailors in (7c) all drowned to death, not “drove to death,” “be swept to death,” or “be lured to death.”

Remarkably, the death is even not strictly entailed. Consider (8).

- (8) ... because unless it is cleared up then history will say that we were sent *to our deaths* by Britain. (BNC)

The subject of this sentence is first person plural *we*, which includes the speaker. So the very fact that this sentence is uttered indicates that the subject entity did not die.

All this strongly indicates that *to one's death* is not a result phrase. Rather, all these sentences can be made sense of by understanding that *to one's death* means “to a place where one's death is presumed to take place.”

## 24.2 Why *to one's death* means what it does

This is actually in accord with Goldberg's (1991a) view of *to one's death*. In discussing a number of apparent counter-examples to her Unique Path Constraint, Goldberg (1991a) observes that (9) is not a true counter-example, saying that “*to her death* is an idiom which metonymically stands for ‘the place where she died’” (Goldberg, 1991a, p. 372).

- (9) He pushed her through the window to her death. (Goldberg, 1991a, p. 372)

But Goldberg (1991a) is not clear in what sense *to one's death* is a metonymy. It is generally held that metonymy is a figure of speech whereby the name of one entity ( $e_1$ ) is used to refer to another entity ( $e_2$ ), which is contiguous to, or is associated with  $e_1$  (Taylor, 2003, pp. 124–125). In the case of *to one's death*,  $e_2$  is clearly “the place where one dies,” but what is  $e_1$ ? In other words, exactly what entity stands in a “metonymy” relation to the place? Without answering this question, Goldberg (1991a) does not explain why *to one's death* means what it does.

So let us address this question. First consider (10), in which *to one's death* receives a different interpretation.

- (10) From 1960 *to his death* he was an editor of the Journal of Symbolic Logic.  
(BNC)

Here, *his death* (rather than *to his death*) metonymically stands for “the time when he died.”

This is made possible by the fact that *death* is a deverbal nominal of *die*. Accordingly, in *death* a process (die) is reified. Being a reified process, *death* includes in its conception its temporal location. By highlighting this temporal location, we can understand *one's death* to mean the time of one's death. This is why in (10) *his death* comes to mean “the time when he died.”

Note that essentially the same is applicable to *his death* in *He fell to his death*: The spatial location of a reified process is highlighted, yielding the interpretation “to a place where he is presumed to die.” In this sense, *one's death* indeed metonymically stands for the place of his presumed death.

Interestingly enough, there is a further parallel between *to one's death* as temporally interpreted as in (10) and *to one's death* as spatially interpreted. While *his death* is construed as standing for the time of his death in (10), the exact year of death may be further specified by an *in*-PP as in (11) and (12).

- (11) J Edgar Hoover ran the Federal Bureau of Investigation for nearly 50 years,  
from 1924 *to his death in 1972*. (BNC)
- (12) He was a celebrated folk hero in his adopted Darlington from his arrival in  
1919 *to his death in 1946*. (BNC)

Clearly *in 1972* and *in 1946* are modifiers of *his death*, expressing its temporal locations.

Note that the spatial counterparts of (11) and (12) are sentences like (13), in which location PPs like *on the rocks* or *in the river* accompany *to one's death*.

- (13) a. In the dark, panic-stricken by what she'd done, she ran down the wrong passage, towards the sea instead of towards the land, slipped and fell *to her death on the rocks below*.

- b. ... by leaping *to their deaths in the river*.
- c. And of those scenes my hero, for that is what Kong had quickly become, tumbling head-over-heels from the roof of the skyscraper *to his death on the street* was the one to dominate my mind. (all from BNC)

Just as *in 1972* and *in 1946* are modifiers of his death in (11) and (12), so *on the rocks*, *in the river* and *on the street* are modifiers of one's death in (13).

Consequently, the statement that *to one's death* metonymically stands for the place where one dies can be made sense of by understanding a dying process to be  $e_1$ .

### 24.3 Contextual modulation

Thus, just as *one's death* is construed as expressing a temporal location when appearing in the temporal PP as in (10), so *one's death* is construed as expressing a spatial location when appearing in the spatial path PP, like *fall to one's death*. This means that *to one's death* means what it means precisely because the deverbal nominal *one's death* appears in a context that requires a path interpretation. This is further supported by the fact that *one's death* may be coordinated with another process-denoting nominal as in (14).

- (14) To stop his mates *going to his rescue and certain death* he blew himself up with a hand grenade. (WB)

Moreover, *to one's death* may become temporal even when it directly follows the verb, provided that *one's death* appears after temporal *to*, as in the following.

- (15) In that battle, as the legend goes, Prithviraj chose *to fight to his death* rather than accept defeat. (COCA)

Here *fight to one's death* means to fight until one dies, rather than to fight to a place where one's death is presumed. All this suggests that *to one's death* is far from being a fixed, idiomatic expression, and its interpretation is determined by its context. So while I agree with Goldberg (1991a) that *to one's death* metonymically stands for the place where one dies, I do not see why she says that it is an idiom.<sup>168</sup>

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168. Still another argument for the non-frozen nature of *to one's death* comes from the existence of *to one's doom*, which expresses a very similar meaning with an identical syntax:

- (i) Some tales say men who have seen the Lorelei lose their minds or their sight, or both. Others say she avenges herself of the insult offered by her erstwhile lover by *luring* fishermen and other sailors *to their doom*. (BNC)



But how is the (relevant) interpretation of *to one's death* arrived at, then? What seems to be relevant in this connection is what Cruse (1986, p. 52) calls "contextual modulation": a single sense can be modified by different contexts, each context emphasizing certain semantic traits, and obscuring or suppressing others. Contextual modulation is to be contrasted with contextual selection, by which different senses are activated by different contexts.

Taylor (2003) illustrates contextual modulation by citing a number of examples, one of which is *car*.

When we 'wash a car' we have in mind the car's exterior, not all the parts of the car; when we 'vacuum-clean the car' we highlight its upholstered interior; to 'fill up a car' is to fill up only the petrol tank; while to 'service a car' involves its mechanical parts. (Taylor, 2003, p. 126)

These different uses can be coordinated without any hint of zeugma.

(16) They washed, vacuum-cleaned, and serviced the car. (Taylor, 2003, p. 126)

As can be easily seen, with contextual modulation, different aspects are simply highlighted, not that one sense is selected to the exclusion of all the others.

Now back to *to one's death*. The fact that *one's death* may receive either a temporal interpretation or a spatial interpretation depending on contexts points to contextual modulation, rather than contextual selection. After all, the notion of a process is still latent. Both the temporal location and the spatial location are inseparable parts of this process.

As a matter of fact, there is evidence that *one's death* does not express a location pure and simple. First, *death* may be pluralized as in the following:

- (17) a. The two German tourists who fell *to their deaths* while on holiday on Skye have been cremated at a ceremony in Perth.  
 b. The Valley Bridge, which links the South Cliff with the town centre, became notorious for people jumping *to their deaths* and, since 1970, 47 have died there.  
 c. ... the incorporation of wrought-iron latticework in the unglazed windows to prevent the lovelorn emulating their Latin counterparts by leaping *to their deaths* in the river. (all from BNC)

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(ii) Icarus flew too close to the sun, his wings melted, and he *fell to his doom* in the Icarian sea. (WB)

(iii) Since Beagle *plunged to its doom* on Christmas Day 2003, Mars Express, its mother ship, has been orbiting the red planet and mapping surface features including one which is thought to be a deep-frozen ocean lying just under the surface dust. (WB)

Clearly, *their deaths* do not express simple locations, as separated from the dying process. Rather, when different people reach a place where their death is presumed to take place, those people end up dying. This is why *their deaths* comes to mean “multiple occasions” of death.

Second, *one's death* may be accompanied by modifiers of a reified process, rather than those of a pure location. Consider (18).

- (18) Criminals will be seen going *to their deaths* in the gas chamber, electric chair and by firing squad in a two-hour documentary called *The Executioners*.

(WB)

Note that *in the gas chamber* and *electric chair* are coordinated with *by firing squad*. The first two modify *their deaths* by specifying *where* the capital punishment is to be executed, while the third modifier *by firing squad* modifies *their deaths* by specifying *how* the capital punishment is to be executed. This latitude in interpretation confirms that *to one's death* means what it does via contextual modulation.

#### 24.4 Conclusion

*To one's death* apparently behaves similarly to *to safety* and *to freedom* in not obeying the putative Unique Path Constraint. A closer scrutiny reveals, however, that *to one's death* is quite different from those result phrases based on change of location.



## Summary and conclusion

### 25.1 Resultative constructions under a force-recipient account

Let me summarize the main findings uncovered in the course of discussion. In so doing, I will also mention additional points that have been left unsaid so far. In Part I, the discussion started with the finding that in (1a) the non-subcategorized object *the crumbs* is a force-recipient, parallel to the subcategorized object *the table* in (1b).

- (1) a. He wiped the crumbs off the table.
- b. He wiped the table clean.

Accordingly, the constructional meanings of Transitive resultatives and resultative caused-motion sentences are posited as “X acts on Y, and as a result Y becomes Z” and “X acts on Y, and as a result Y moves Z,” respectively. It is further shown via case studies of the resultatives in (2) that the non-subcategorized object comes to qualify as a force-recipient because of a profile shift in a conceptual scene.

- (2) a. The audience laughed the actor off the stage. (Rivière, 1982, p. 686)
- b. Navin *sneezed* blue pollen *onto his shirt*. (COCA)

In Part II, the force-recipient account is extended to resultatives like those in (3).

- (3) a. He laughed his head off.
- b. He beat the hell out of me.

In Part III, it is shown that the force-recipient account can also cope with the variety of result phrases as shown in (4) and (5), if it is combined with a detailed frame-semantic analysis of verb meanings.

- (4) a. I can just sit there and *eat* myself *full* until I can't take another bite.
- b. ... this predator has been *eating* the lake *clean* ... (both from COCA)
- (5) I *ate* myself *sick*. (Simpson, 1983, p. 145)

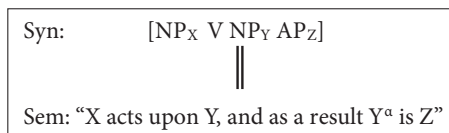
However, the initially proposed constructional meanings are not adequate for ‘change verb’ resultatives as illustrated in (6) (Part IV).

- (6) a. He froze the ice cream solid.
- b. He cut the meat thin.

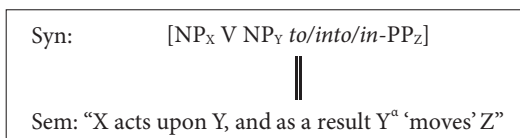
Also, in order to do justice to the RESULT component, the distinction between adjectival and prepositional result phrases needs to be incorporated (Part V).

- (7) a. He wiped his plate {*clean/\*to cleanliness*}.  
 b. He sang the baby {*\*asleep/to sleep*}.  
 c. Bob shot him {*dead/to death*}.

Consequently, we end up with the construction in Figure 25.1 to handle Transitive resultatives with adjectival result phrases, and that in Figure 25.2 to accommodate Transitive resultatives with prepositional result phrases.

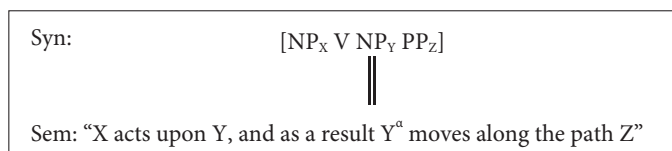


**Figure 25.1** Transitive resultative construction with adjectival result phrases (version 3)



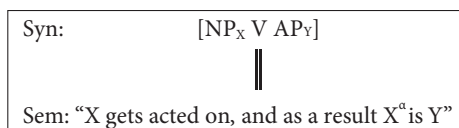
**Figure 25.2** Transitive resultative construction with prepositional result phrases (version 3)

Also we need the construction in Figure 25.3 to accommodate resultative caused-motion sentences.



**Figure 25.3** Resultative caused-motion construction (version 2)

Intransitive resultatives can be approached similarly. Thus the resultative in (8a), which is an intransitive counterpart of (8b), is to be handled by the construction in Figure 25.4.



**Figure 25.4** Detransitized resultative construction (revised)

- (8) a. The kettle boiled dry.  
b. I boiled the kettle dry.

Besides these argument structure constructions, a result phrase construction (Figure 25.5) is needed, in order to accommodate the result phrase-addition analysis of (9a) as shown in (9b).

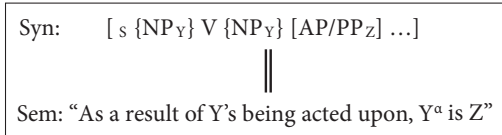


Figure 25.5 A result phrase construction

- (9) a. He wiped the blade clean on a kerchief.  
b. [wipe the blade on a kerchief] + [clean] = [wipe the blade clean on a kerchief].

Thus, the defining characteristic of English resultatives is that basically, as a result of the force being exerted onto the post-verbal NP entity (or the subject entity), a change of state or a change of location ensues.

The qualification “basically” is needed, because there are extensions. Thus in (10) the post-verbal NP is not strictly a recipient of a force responsible for a head’s coming off.

- (10) a. I bet that Terry Waite was *praying his head off*. (BNC)  
b. I can *wonder my head off*. (COCA)  
c. The gale *shouts its head off*. (COCA)

These are extensions from *He laughed his head off*, as summarized in Figure 25.6.

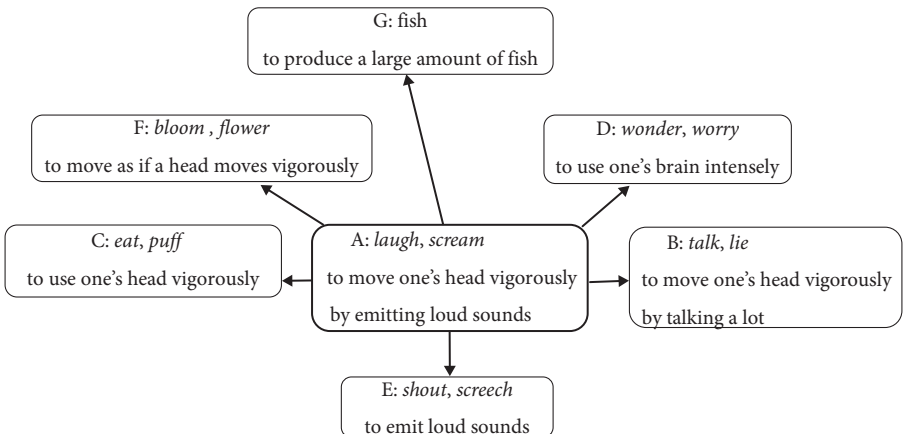


Figure 25.6 Network of ‘V one’s head off’

Relatedly, the ‘V one’s head off’ construction, together with other similar constructions like ‘V one’s eyes out’ and ‘V one’s heart out,’ can be regarded as instantiating a higher-level construction whose semantics goes something like “X acts on a body-part, and the entity being thus acted on moves off/out.” Taking into account both the network structure and levels of schematicity, then, the relatedness among all these constructions can be expressed as in Figure 25.7.

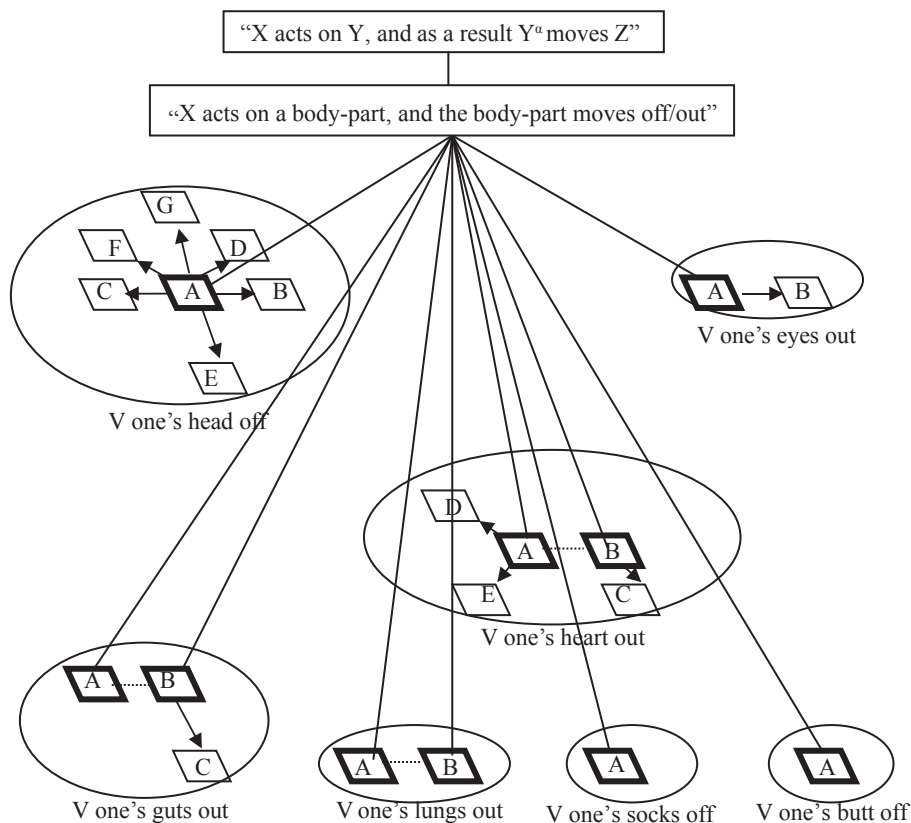


Figure 25.7 'V one's body-part out/off' constructions

At the most concrete level, only the central member of each family needs to instantiate a higher-level construction with the semantics "X acts on a body-part, and as a result the entity being thus acted on moves off/out." This construction in turn instantiates the semantics of the resultative caused-motion construction "X acts on Y, and as a result the entity being thus acted on moves Z."<sup>169</sup>

169. There are other resultatives organized along similar lines, but to lay out all those organizations would be too tedious to attempt here.

Notice that this organization of constructions is fully in accord with a usage-based view of constructions. In a usage-based view, constructions are nothing more than schematic form-meaning pairings abstracted over usage events. And in a usage-based theory, newly encountered expressions are acceptable, and meaningful, to the extent that they can be associated with linguistic structures that already have unit status, either by being an instance of a schema, or by being assimilated, via similarity, to an already established unit (Langacker 1987, 1991, Taylor (2002, p. 27), among others). It follows, therefore, that English resultative sentences should either be an instance of one of the constructions in Figures 25.1 to 25.4, or be an extension from a resultative sentence that already has unit status and which likely instantiates one of these constructions.

## 25.2 Answers to the two questions

### 25.2.1 Answer to the first question

We are now in a position to answer the two questions raised at the outset. The first question is “Why can non-subcategorized objects appear in resultatives?” As already mentioned in Chapter 1, I basically agree with Boas (2003), who essentially says that the non-subcategorized object and its accompanying result phrase are ultimately due to the backgrounded part of the verb meaning coming to the fore. What I have done in this book is to give substance to this idea via a number of case studies.

Let us illustrate with the resultatives involving *wipe*. The verb meaning of *wipe* goes something like “to move something on a surface while in continuous contact with the surface,” and there are four participants in a wiping scene: (1) the person who does the wiping action; (2) a surface; (3) something which is moved over the surface (e.g. a towel); and (4) something which is already on the surface (e.g. dirt, moisture). The four participants are syntactically realized as in (11), and a wiping scene can be depicted as in Figure 25.8.

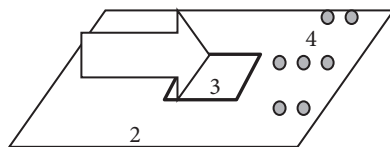


Figure 25.8 Wiping scene

- (11) a. NP<sub>1</sub> wipe NP<sub>2</sub>. (variant 1)  
 b. NP<sub>1</sub> wipe NP<sub>2</sub> with NP<sub>3</sub>. (variant 2)  
 c. NP<sub>1</sub> wipe NP<sub>3</sub> over NP<sub>2</sub>. (variant 3)  
 d. NP<sub>1</sub> wipe NP<sub>4</sub> off NP<sub>2</sub>. (variant 4)



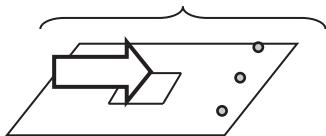
The activity of wiping consists in exerting force onto a surface. Crucially, the force exerted onto the surface may alternatively be construed as a force exerted onto the entity already on the surface prior to wiping (e.g. crumbs), as described in Figure 25.9.



Figure 25.9 Force being exerted onto the entity already on the surface

Consequently, there are two entities which may qualify as a force-recipient and hence undergo a change in the conceptual scene. If the force is construed as being exerted onto the surface, the state of the surface changes, as described in Figure 25.10 (*He wiped the table clean*).

He does a 'WIPE-AS-RUB' action on the table



The table is clean

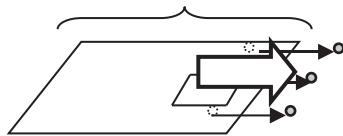
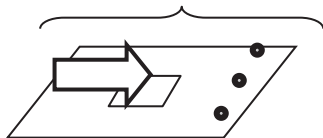


Figure 25.10 *He wiped the table clean*

If, on the other hand, the force is construed as being exerted onto the entity already on the surface prior to wiping, the location of that entity changes, as described in Figure 25.11 (*He wiped the crumbs off the table*).

He does a 'WIPE-AS-PUSH' action on the crumbs



The crumbs move off the table

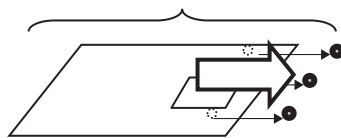


Figure 25.11 *He wiped the crumbs off the table*

Thus, the relation between the subcategorized object resultative (*wipe the table clean*) and the non-subcategorized object resultative (*wipe the crumbs off the table*) can be characterized as a profile shift.

The same goes for non-subcategorized object resultatives which are based on intransitive verbs. Verbs which are normally intransitive may contain in its conceptual scene what potentially counts as a force and its recipient. Quite often, there is more than one candidate for such a potential force. *Laugh* is a case in point. The laughing activity involves a vigorous movement of the head, emission of laughing sounds, and a vigorous movement of the whole body, as depicted in Figure 25.12.

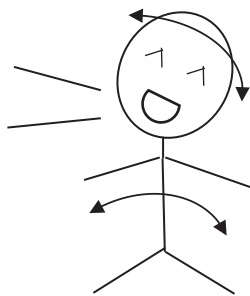
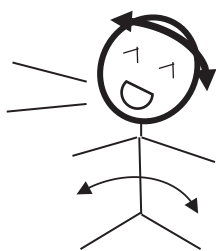
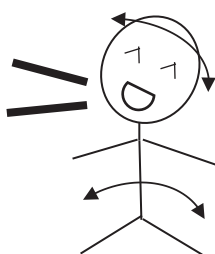


Figure 25.12 Laughing

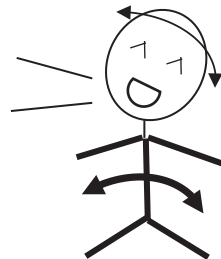
If the vigorous movement of the head is profiled as in Figure 25.13 (a), the resultative in (12a) is obtained; if the laughing sounds directed at somebody else are profiled as in Figure 25.13 (b), the resultative in (12b) results; and if the vigorous movement of the whole body is profiled as in Figure 25.13 (c), we get the resultative in (12c).



(a) *laugh one's head off*



(b) *laugh – off the stage*



(c) *laugh oneself sick*

Figure 25.13 Different profilings of laughing

- (12) a. He laughed his head off.  
 b. The audience laughed the actor off the stage.  
 c. He laughed himself sick.

All this confirms once again that reference to rich frame-semantic knowledge, rather than to the mere list of role labels (e.g. <wiper wiped>, <laugher>), is essential. In this sense, my theory is fully in agreement with Boas (2003).

There is one potential problem with Boas' (2003) account, however. Specifically, not every aspect of "off-stage information" is available for being recruited for overt expression. Let me illustrate with the contrast in (13), which has already been discussed in Chapter 3.

- (13) a. They trampled the field flat.  
 b. \*They crossed the field flat.

(Halliday, 1994, p. 148)

Note that according to Boas' (2003) account, the aspect of ground being beaten with one's feet should be among the off-stage information of the verb *cross*, and could therefore be recruited for overt linguistic expression. But (13b) is not allowed.

Boas (2003) is aware of this problem, and states (p. 253) that in such cases, the verbs "block overt realization of the knowledge," saying that this is a matter of conventionalization and is to be specified as such in the mini-construction.

It is more realistic to suppose, however, that this is a matter of lexicalization. While *trample* lexically encodes a force exerted onto the direct object entity, this is not the case with *cross*. This is confirmed by dictionary definitions of *trample* and *cross*:

*trample*: If someone tramples something or tramples on it, they tread heavily and carelessly on it and damage it.

*cross*: If you cross something such as a room, a road, or an area of land or water, you move or travel to the other side of it. (COBUILD)

While the amount of information one can have access to upon hearing a verb used is open-ended, each verb has only a specific part of that information lexicalized. Only the off-stage information that directly follows from the lexically encoded verb meaning is available for being overtly expressed.

### 25.2.2 Answer to the second question

Let us next turn to the second question: "Which resultatives are possible and which are not?" Our discussion has revealed that in order for a resultative sentence to be well-formed, there are a number of requirements to be met. First and foremost, the post-verbal NP must be a force-recipient. This accounts for the contrast between (14a), on the one hand, and (14b) and (14c), on the other.

- (14) a. Jack ate his plate clean.  
 b. \*Claire opened the key to pieces.  
 c. \*Brigid loaded the table's legs bent.

In (14b) and (14c), the post-verbal NP is not a force-recipient, as is evident in the paraphrases in (15a) and (15b), respectively.

- (15) a. Claire opened the door, and as a result the key broke.  
 b. Brigid loaded the table with food, and as a result the table's legs became bent.

By contrast, (14a) can be paraphrased as in (16), which shows *the plate* to be a force-recipient (Chapter 6).



This is because *eat* and *drink* may refer to the intake phase in the physical domain, but *chew* and *swallow* profile the processing phase and the ingestion phase, respectively, and therefore cannot refer to the intake phase. Accordingly, neither chewing nor swallowing can be naturally construed as virtual removing. Hence the unacceptability in (22a) and (22b) (Chapter 6).

Similarly, (23) is not allowed because *dine* and *lunch* are verbs understood primarily against the social activity domain (Chapter 6).

(23) \*Stefan {dined/lunched} his plate clean.

Also, *drink – under the table* is understood against the spontaneous pseudo-‘drinking-competition’ domain (a subdomain of the social activity domain) and the inebriation domain (a subdomain of the biological domain), but all the verbs used in (24b) are understood primarily against the physical domain and therefore do not refer to either of the relevant domains (Chapter 7).

(24) a. Mary drank John under the table.

b. \*Mary {gulped/imbibed/consumed/guzzled/sipped} John under the table.

Fourth, how the result state is attained must be compatible with the notional difference between APs and PPs. With adjectival result phrases, the state comes to obtain immediately after the verbal force takes effect. But with *to* result phrases, the process leading up to a new state starts when the verbal force takes effect. The apparently puzzling behaviors of result phrases as shown in (25) can be thus accounted for (Chapter 13).

(25) a. He wiped his plate {clean/\*to cleanliness}.

b. He sang the baby {\*asleep/to sleep}.

c. Bob shot him {dead/to death}.

Fifth, with adjectival result phrases, the result state must directly follow from the verbal force. The selectional restrictions on adjectival result phrases, as observed in (26) and (27), can be accounted for along these lines (Chapter 16).

(26) a. He hammered it {flat/smooth/shiny}.

b. He wiped it {clean/dry/smooth}. (Green, 1972, p. 83)

(27) a. \*He hammered it {beautiful/safe/tubular}.

b. \*He wiped it {damp/dirty/stained}. (Green, 1972, p. 84)

Thus the ill-formedness of (27a) is attributed to the fact that the result phrases express a consequence, not a direct result, of the verbal force being exerted. This is confirmed by the asymmetry in the order of a direct result and a consequence, as shown in (28).

- (28) a. He hammered the metal flat, and therefore it was now {beautiful/safe/tubular}.
- b. # He caused the metal to become {beautiful/safe/tubular}, and therefore it was now flat.

As for (27b), this is because the semantics of wiping is not compatible with the state of something being added. Thus the contrast between (29a) and (29b) is exactly parallel to that between (30a) and (30b).

- (29) a. Kay wiped the table {*clean/dry*}.
- b. \*Kay wiped the table {*wet/dirty*}.
- (30) a. Kay wiped the fingerprints *from the counter*.
- b. \*Kay wiped the table *with the crumbs*.

When *wipe* is understood in a slightly different sense that is compatible with applying something to a surface, *wipe – wet* is acceptable, as shown in (31).

- (31) ... the plastic floor covering can be *wiped wet with water* to which a suitable plastic floor cleaner or disinfectant has been added ... (from web)

Thus resultatives are acceptable when all these requirements are met, but unacceptable otherwise.

Relatedly, Goldberg (1995) tries to rule out unacceptable resultatives by recourse to additional constraints. However, a number of constraints on resultatives proposed in the literature, including those posited by Goldberg (1995), have been shown to be untenable and not necessary: the Affectedness constraint (Simpson 1983) (Chapter 3), the Maximal end-point constraint (Wechsler 2005a, 2005b, 2012, 2015) (Chapter 16); and the End-of-Scale Constraint (Goldberg 1995) (Chapter 16).

The Aspectual constraint, proposed in Goldberg (1995), is not strictly correct as a constraint on resultatives in general, for this constraint looks plausible for resultatives with adjectival result phrases as in (32), but not for those with prepositional result phrases as in (33) (Chapter 14).

- (32) a. He ate himself sick.
- b. Sam cut himself free.
- c. Chris shot Pat dead.
- (33) Here was a man who, to all intents and purposes, *ate himself to death*. By the time of his final concerts in Las Vegas, they virtually had to put him on wheels to get him on and off the stage. (WB)

The Direct Object Restriction (Levin & Rappaport Hovav 1995) is not tenable, either, if we look at resultatives which are based on motion as illustrated in (34) (Chapter 18).

- (34) a. The 39-year-old Briton *drove his Renault-Williams car to victory* in the Portuguese Grand Prix to clinch his ninth victory ... (WB)  
 b. About 1 million had reportedly already *crossed the border to safety*. (COCA)  
 c. ... each departing Cuban must pay the state \$612 before they can *escape Cuba to freedom*. (COCA)

Lastly, the Unique Path Constraint (Goldberg 1995) is not strictly correct. Contrary to Goldberg's claim, the adjectival result phrase and the path PP actually do co-occur, as shown in (35).

- (35) He races after him and and with the butt of his revolver *knocks him unconscious to the ground*. (WB)

Moreover, the ban against the co-occurrence of the result phrase with motion verbs, which Goldberg (1995) cites (36) to support, is actually not correct, as shown in (37) (Chapter 23).

- (36) a. \*The box arrived open. (meaning arrival caused the box to open)  
 b. \*Jill took the child ill. (meaning the child became ill because of the traveling) (Goldberg, 1991a, p. 371)
- (37) a. But instead of *arriving to safety* in Croatia, the two children became separated when Mirsad, 14 at the time, was captured by Serb forces.  
 b. Small vans turned up to try to *take the refugees to safety*. (both from WB)

### 25.3 How to arrive at the observed syntax

Still another thing that has become clear is that there are two ways to arrive at the observed syntax of resultatives (Part IV). One is an argument structure construction analysis, as in Goldberg (1995), whereby a fixed syntax is superimposed, irrespective of the subcategorization frame of the base verb. The other is a result phrase-addition analysis, which consists in adding a result phrase to the subcategorization frame of the base verb.

A unified analysis is to be given up, for both analyses are necessary. Thus in order to accommodate non-subcategorized object cases like (38), a result phrase-

addition analysis does not work, as shown in (39). Rather, an argument structure construction analysis is necessary.

(38) He laughed himself sick.

- (39) a. \*He laughed himself.  
 b. \* [laugh himself] + [sick] = > [laugh himself sick]

But in order to handle resultatives like (40), an argument structure construction analysis is not desirable. Instead a result phrase-addition analysis is far more promising, as indicated in (41).

(40) He wiped the blade clean on his skin coat.

- (41) a. He wiped the blade on his skin coat.  
 b. [wipe the blade on his skin coat] + [clean] = > [wipe the blade clean on his skin coat]

As for resultatives like (42), a result phrase-addition analysis is possible, as shown in (43).

(42) He hammered the metal flat.

- (43) a. He hammered the metal.  
 b. [hammer the metal] + [flat] = > [hammer the metal flat]

That is, under a result phrase-addition analysis, resultatives are treated on a par with other secondary predicates like circumstantial predicates and depictive predicates.

- (44) a. John left the room *angry*. (circumstantial)  
 b. John ate the meat *raw*. (depictive)  
 c. John hammered the metal *flat*. (resultative)

At the same time, there seems to be no principled reason to rule out an argument structure construction analysis. That is, both analyses are possible for resultatives like (42).

This much has already been demonstrated in Part IV. But one thing that follows from the need for a result phrase-addition analysis is that reference to the subcategorization frame of the base verb is necessary, contrary to Goldberg (1995). Notice that in Goldberg's (1995) theory, the subcategorization frame of the base verb is irrelevant; rather, the minimally specified verb semantics (e.g. <wiper wiped>) is claimed to be sufficient. But the fact that a result phrase-addition analysis is at least necessary for certain resultatives strongly indicates that reference to the subcategorization frame is necessary after all.



This is further confirmed by the fact that different resultatives may be formed based on different subcategorizations of the same verb. Thus (45a) and (45b) are both based on the verb *wipe*; they cannot be properly differentiated without recognizing that they are based on the two different subcategorization frames in (46) (Chapter 9).

- (45) a. He *wiped* the table *clean*.  
 b. He *wiped* the blade *clean* on his skin coat.
- (46) a. He wiped the table.  
 b. He wiped the blade on his skin coat.

Similarly, (47a) and (48a) are to be accommodated by applying a result phrase-addition analysis to two different subcategorization frames, as shown in (47b) and (48b) (Chapter 19).

- (47) a. She's *cut* it (=my hair) *real short* ... (BNC)  
 b. [cut my hair] + [short] => [cut my hair short]
- (48) a. Firemen *cut* him *free* from the vehicle. (BNC)  
 b. [cut him from the vehicle] + [free] => [cut him free from the vehicle]

Even in the case of “overriding” cases, the subcategorization property may become overt, as long as it does not conflict with the syntax of the construction. Consider (49).

- (49) I've been *talking* my head off *to the FBI and the Corps of Engineers* for two days ... [Sara Paretsky, *Deadlock*, p. 226]

(49) is clearly a mixture of (50a) and (50b).

- (50) a. I've been talking to the FBI and the Corps of Engineers.  
 b. I've been talking my head off.

Thus just because *talk* appears in the ‘V one's head off’ construction does not mean that *talk* loses its ability to take a *to*-PP. The same is true of other verbs like *laugh* or *yell*, as the following examples indicate.

- (51) a. Of course the sceptics *laughed* their heads off *at such a far-fetched tale* but the more psychic were inclined to accept the men's story.  
 b. ...you were still *yelling* your head off *at her* ... (both from BNC)

Similarly, *laugh oneself silly/stupid/sick* may be accompanied by an *at*-PP, exactly like the base verb *laugh*.

- (52) a. Or take a trip around Riverbank Eye Spy and *laugh* yourselves silly *at the farmyard animal noises*.  
 b. A week ago, she'd have *laughed* herself stupid *at the idea*.  
 c. He must be *laughing* himself sick *at Mr Clarke's special powers*.  
 (all from WB)

And *wonder oneself silly* may be accompanied by an *about*-PP, exactly like the base verb *wonder*.

- (53) If the Rangers studied trends, they might have *wondered* themselves silly *about how they would perform after dealing Rodriguez ...* (COCA)

All this indicates that even when a verb appears in resultative constructions, its subcategorization property remains the same. It is just that when the direct object entity in the base verb's subcategorization frame is different from the recipient of a force responsible for bringing about a change under a resultative construal, the former yields the post-verbal NP position to the latter entity.

Anyway, while it might appear that a constructional approach to resultatives can do away with the subcategorization frame of the base verb, reference to the subcategorization frame turns out to be necessary. After all, a particular resultative expression is formed from a particular sense of the verb with a particular subcategorization frame.

Relatedly, this may have a direct bearing on a more fundamental issue of Construction Grammar, not just Goldberg's theory. Note that in all previous analyses, the resultative is defined in terms of its relation to the verb in the transitive construction. This is evident in the three paraphrases noted in Chapter 2 ('X's V-ing Y causes Y to become Z', 'X causes Y to become Z' and 'X acts on Y'). Thus (54) can be paraphrased as in (55a), (55b), or (55c), all of which involve the transitive expression "He wiped the table" in one way or another.

- (54) He wiped the table clean.  
 (55) a. His wiping the table caused the table to become clean.  
 b. He caused the table to become clean by wiping it.  
 c. He wiped the table, and as a result the table became clean.

A reviewer states that this is not in line with the basic tenet of Construction Grammar, however:

But the transitive construction is a construction itself, with a particular force dynamic construal of the event expressed by the verb. In my opinion, one should analyze the resultative construction in its own right, independently of the transitive construction that the verb also occurs in.

As Chapter 2 has demonstrated, resultatives with non-subcategorized objects fit this view. (56a) cannot be satisfactorily paraphrased without creating a further problem, as long as one uses the transitive expression, as shown in (56b) and (56c). Rather, an appropriate paraphrase must take the shape of (57), which involves a force-transmission different from that of *He wiped the table*.

- (56) a. He wiped the crumbs off the table.  
 b. \*He wiped the crumbs, and as a result the crumbs moved off the table.  
 c. He wiped the table, and as a result the crumbs moved off the table.
- (57) He did a ‘WIPE-AS-PUSH’ action on the crumbs, and as a result the crumbs moved off the table.

It is also a fact, however, that as noted above, there are resultatives that can be accommodated only by a result phrase-addition analysis, i.e. by adding a result phrase to a subcategorization frame of the base verb. Right now, I see no way to analyze the resultatives in (58) without reference to the sentences in (59).

- (58) a. He *wiped* the blade *clean* on his skin coat.  
 b. Firemen *cut* him *free* from the vehicle.
- (59) a. He wiped the blade on his skin coat.  
 b. Firemen cut him from the vehicle.

One possible conclusion to be drawn, therefore, is that maybe the resultative construction is different from other argument structure constructions like transitive constructions or intransitive constructions, which handle subcategorization frames of individual verbs, and is to be regarded as being operative at a “secondary” level, after all (cf. Jackendoff 1990).

#### 25.4 Cross-linguistic differences

While the proposed force-based account is exclusively about resultatives in English, a word seems in order about its implications for cross-linguistic differences. In the literature, many papers have been written on resultatives in other languages than English, and all these works demonstrate that these resultatives are different from English resultatives in a number of points. How to account for these cross-linguistic differences is a challenging problem, but some scholars have addressed this issue. Thus Washio (1997) observes that in terms of his three way-distinction (strong, weak, and spurious), the availability of types of resultatives differs among English, Japanese, and French, as summarized in Table 25.1.

**Table 25.1** Differences between English, Japanese, and French in Washio (1997) (adapted from Washio, 1997, p. 30)

|                           |                | English | Japanese | French |
|---------------------------|----------------|---------|----------|--------|
| Transitive resultatives   | (a) (Spurious) | OK      | OK       | OK     |
|                           | (b) Weak       | OK      | OK       | ?      |
| Intransitive resultatives | (c) Strong     | OK      | *        | *      |
|                           | (d) Strong     | OK      | *        | *      |

Washio (1997), following a number of scholars in assuming that resultatives can only be applied to the patient argument, attempts to account for these differences by invoking different types of patient.

- (60) Patient<sub>1</sub>: the verb, being intransitive, lexically specifies nothing about this; it may be interpreted as “affected” by virtue of discourse or pragmatics; Jackendoff’s discourse patient; e.g., *run (the pavement thin)*.  
 Patient<sub>2</sub>: the verb lexically specifies that it is affected; hence it may undergo some change of state; but the verb does not specify whether or how it changes; e.g., *drag the logs (smooth)*.  
 Patient<sub>3</sub>: the verb lexically specifies that it is affected; hence it may undergo some change of state; the verb does not specify whether it actually changes its state or not; but the verb specifies that, if it does change, then it changes in certain fixed directions (the verb has a disposition toward certain states); e.g., *wipe the table (clean)*.  
 Patient<sub>4</sub>: the verb lexically specifies that it undergoes some specific change of state; hence it is also affected; e.g., *sharpen the pencil (pointy)*.  
 (Washio, 1997, p. 40)

According to Washio (1997), the difference between English resultatives and Japanese ones can thus be captured by saying that in English resultatives the post-verbal NP can be any of the four types of patient, while in Japanese only patient<sub>3</sub> and patient<sub>4</sub> are allowed.

Clearly, these different types of patient reflect different degrees to which the potential of a change of state is encoded in verb meanings. Accordingly, the cross-linguistic differences are essentially a matter of degree.

But not all cross-linguistic differences can be handled in this way. Note that among the cross-linguistic differences cited in the literature are the following differences between English and Warlpiri, reported in Simpson (1983). Simpson (1983) observes that in Warlpiri, the result phrase may be predicated of the transitive subject (= a violation of the Direct Object Restriction).

- (61) *Puluku-rlu kapu-lu marna nga-rni kuntukuntu-karda.*  
 bullocks-ERG FUT-3PL grass-NPST eat-NPST fat-TRANSL  
 ‘The bullocks will eat themselves fat on the grass’ (Simpson, 1983, p. 153)

Simpson (1983) also observes that in Warlpiri, the result phrase may co-occur with verbs of change of location (= a violation of the Unique Path Constraint).

- (62) *wanta-kurra ka-lu karli yirra-ri, linji-karda.*  
 sun-ALL PRES-3PL boomerang-ABS put-NPST dry-TRANSL  
 ‘They put boomerangs in the sun to dry’ (Simpson, 1983, p. 155)

It seems quite difficult to account for these differences between English and Warlpiri along the lines of Washio (1997).

Note, however, that in Chapter 18 and Chapter 23, we have already seen that both the Direct Object Restriction and the Unique Path Constraint seem plausible only when one looks at resultatives based on force-transmission alone. Once we recognize this point, the differences between English and Warlpiri, as noted by Simpson (1983), come as no surprise. Quite probably, resultatives in Warlpiri are not based on force-transmission but something else.

The proposed force-recipient account has revealed that resultatives are not a monolithic phenomenon even in a single language (=English), in that there are both force-based types and non-force-based types. It is quite natural to expect, then, that the same is true in a cross-linguistic context: Resultatives are not exactly the same across languages. They are force-based in some languages, but not in other languages. In other words, the governing principle for resultatives may differ from language to language.<sup>170</sup>

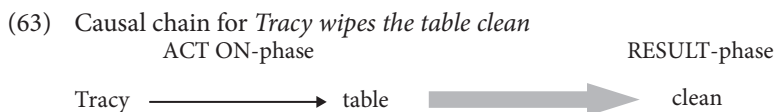
Thus the distinction between these two types, along with a number of findings on English resultatives uncovered in this book, is expected to shed new light on cross-linguistic differences.

## 25.5 Final word

Resultatives are undoubtedly one of the most popular topics in modern theoretical linguistics. For more than four decades, they have been mystifying linguists, and still continue to do so, with their apparently puzzling behaviors. But many, if not most, of those behavioral characteristics can be accounted for by

170. Notice that Washio’s (1997) theory, like other previous studies, is tantamount to assuming that resultatives are necessarily force-based.

developing a force-recipient account, which starts with a simple causal chain, as exemplified in (63).<sup>171</sup>



What I'd like to emphasize here is that the proposed force-recipient account calls for no ad hoc mechanisms or stipulations: The ACT ON component can be characterized in terms of the verb meaning, and the RESULT component in terms of the semantics of the result phrase (i.e. adjectives, *into*, and *to*). The form-meaning correspondence is, therefore, quite transparent. Furthermore, apparent puzzles posed by resultatives have been shown to be due to the complex interplay between the verb meaning and the constructional meaning, or between the verb meaning and the semantics of the result phrase.

As is well-known, resultatives have been regarded as a prime example in which the constructional meaning overrides the verb meaning (Goldberg 1995). But it turns out that resultatives are far more motivated by the meaning of their component parts (as well as by their form) than have been assumed in the literature so far.

There are still many problems left unanswered, and resultatives will surely continue to attract linguists (and laypeople). But I hope to have shown that the proposed force-recipient account can uncover many hitherto unrecognized aspects of resultatives, thereby leading to a better understanding of what English resultatives are.

Also, I hope to have done my duty as a linguist by offering answers to the two questions posed at the outset: “Why can non-subcategorized objects appear in resultatives?” and “Which resultatives are possible and which are not?” Hopefully, this will help to arouse more interest in language and linguistics among people, both linguists and laypeople alike.

<sup>171</sup>. That a force-based account is fundamentally valid for resultatives suggests that other related constructions are also to be approached in terms of force dynamics. See Iwata (2017) for an extension of the force-based account along these lines.



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The objective of this book is to develop a force-recipient account of English resultatives. Within this approach the post-verbal NP is a recipient of a verbal force, whether it is a subcategorized object or not, and the verbal force being exerted onto the post-verbal NP is responsible for bringing about the change as specified by the result phrase. It is shown that many apparent puzzles posed by English resultatives are due to the complex interplay between the verb meaning and the constructional meaning, or between the verb meaning and the semantics of the result phrase. Thus the proposed account can provide answers to the question “Which resultatives are possible and which are not?” in a coherent way. Also, the proposed account reveals that English resultatives are not a monolithic phenomenon, and that some “resultatives” cited in the literature as such are not resultatives at all. This book is of interest not only to practitioners of Construction Grammar but also to everyone interested in English resultatives.

*English Resultatives: A force-recipient account* presents a masterly synthesis of the English resultative construction, based on detailed corpus analysis of British and American English. Iwata presents a force dynamic analysis of English resultative constructions that addresses many of the issues found with earlier accounts.

In Iwata’s analysis, schematic construction meanings interact with rich verb meanings to account for the distributional patterns of verbs in resultative constructions and the semantic interpretation of particular verbs in the resultative construction. *English Resultatives* will serve as the reference point for future research on the resultative construction in English and other languages.

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