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Rita Finkbeiner, Ulrike Freywald (Eds.)

EXACT REPETITION IN GRAMMAR AND DISCOURSE

TRENDS IN LINGUISTICS

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Rita Finkbeiner, Ulrike Freywald (Eds.)
Exact Repetition in Grammar and Discourse

Trends in Linguistics Studies and Monographs



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Exact Repetition in Grammar and Discourse

Edited by
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Ulrike Freywald

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Part I: Setting the Scene: Forms and Functions of Repetition

Ulrike Freywald and Rita Finkbeiner

Exact repetition or total reduplication? Exploring their boundaries in discourse and grammar

Abstract: In this chapter, we review central criteria that are commonly used to differentiate between '(total) reduplication', understood as a grammatical operation that applies within word boundaries, and '(exact) repetition', which is a pragmatic or discourse-related process that takes place above the word level. The main focus of this article is on the grey area where the two domains meet or even overlap. In anticipation of the remainder of the book we discuss examples from a variety of languages which challenge a neat division into word-bound reduplication on the one hand and discourse-bound repetition on the other. This survey of potentially problematic cases leads to the conclusion that the demarcation line between reduplication and repetition is rather blurred: Neither is reduplication confined to the domain of the word nor is repetition completely excluded from it. Reduplication also occurs at the discourse level, conveying discourse-grammatical information such as topic marking. Conversely, purely pragmatically motivated processes of repetition can also be found within words, for example with derivational affixes and in ideophones. This introductory chapter is concluded by an overview of the articles assembled in this book.

1 Introduction

In recent years, processes of iteration in language – understood broadly as two- or many-times occurrences of one and the same linguistic item within some specifiable linguistic domain – have gained increased interest within various areas of linguistics. On the one hand, the process of *reduplication* has been on the agenda of typological studies (e.g., Gil 2005; Hurch 2005; Ammann and Urdze 2007; Stolz et al. 2011; Schwaiger 2015, 2017) as well as of grammatical studies on particular languages (e.g., Lindström 1999; Goodwin Gómez and van der Voort 2014; Mattes 2014; Finkbeiner 2014, 2015; Freywald 2015; Kallergi 2015a). Reduplication has also gained renewed interest within theoretical linguistics (e.g., Raimy 2000; Inkelas and Zoll 2005; Kobele 2006; Frampton 2009). On the other hand, and

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largely independently of the former strands of research, the process of *repetition* has come into focus in studies on conversation analysis and interactional linguistics (e.g., Bamford 2000; Svennevig 2004; Tannen 2007 [1989]; Bazzanella 2011), as well as in studies on language acquisition (Clark and Bernicot 2008; Larsen-Freeman 2012). While reduplication is traditionally assumed to be a grammatical process related to the domains of phonology, morphology and syntax, repetition is often assumed to be a “free” process associated with the domains of rhetoric, discourse, and pragmatics. However, on a closer look, it becomes clear that the demarcation line between reduplication and repetition is rather difficult to draw, in particular when it comes to the linguistic domain of the word.

Thus, a long-standing problem still remains largely unresolved: to distinguish *total reduplication*, a process within grammar proper, from *exact repetition*, understood as the – grammatically virtually unrestricted – iteration of words, phrases, clauses, and utterances. Apart from some confusion regarding terminology,¹ the distinction between the two processes is far from being self-evident. If we take reduplication and repetition as forming two complementary sections of the same scale it is crucial to be able to determine where both sections meet. However, the boundary between reduplication and repetition appears to be quite fuzzy, presenting us with a number of ambiguous cases. Thus, instead of a clear-cut categorical distinction we rather find a nebulous transition zone (cf. Gil 2005; Maas 2007; Stolz 2007; Stolz et al. 2011; Forza 2016).

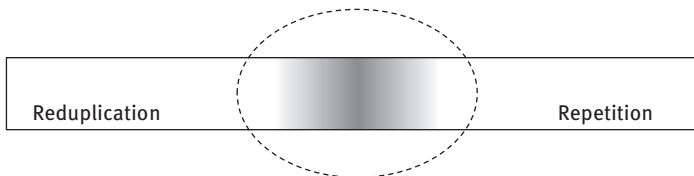


Figure 1: The transition zone between reduplication and repetition.

The present volume sees itself as a contribution to the ongoing endeavour to explore this grey area in greater detail and to help refine (and maybe redefine) the notions of reduplication and repetition by addressing open theoretical questions and by providing empirical evidence from a variety of typologically different languages. The fuzziness becomes particularly intricate in languages which do not regularly

¹ For example “free reduplication” vs “bound reduplication” (Reckendorf 1909), “doubling/iteration” vs “reduplication” (Maas 2007), “syntactic doubling” vs “reduplication” (Barbiers 2014); see Stolz and Levkovych (this volume, fn. 13) for discussion.

employ reduplication as a morphological means – whether partial or total – and therefore are classified as “reduplication avoiders”. Reduplicative patterns in these languages often surface only in semantically opaque, archaic forms whose underlying formation processes are neither transparent nor productive anymore (this is the traditional view on North and Central European languages such as English, German, Dutch, French, and the Scandinavian languages, among others, cf. Rubino 2005; Stolz et al. 2011).² However, even in these reduplication-unfriendly languages there are, in fact, niches of productive total reduplication.³ These phenomena deserve particular attention in several respects: First, they are highly understudied. Detailed analyses of these instances not only complement the descriptions of the respective languages but also contribute to the general understanding of reduplication by possibly adding new types of reduplication to the overall inventory of already known reduplicative processes. Second, addressing reduplication avoiders will fill blank spots on the map showing the areal distribution of reduplication – and in this way will contribute to the still much-debated question of whether reduplication can be counted as a language universal (see Stolz et al. 2011). Third, the marginality of reduplication in reduplication-phobic languages requires a particularly careful distinction both from more central types of word-formation in the same language and from repetition which is freely available in any language. Therefore, there is a special focus on reduplication-avoiding languages in this book.

The difficulties in telling reduplication and repetition apart comprise different linguistic levels and aspects. In order to categorise a process as repetition or reduplication it is necessary to determine its features according to functional and formal criteria. For this, the following questions (based on the list in Gil 2005) seem relevant to us:

- *Where?* ⇨ In which functional domain?
- *What?* ⇨ To what linguistic unit?
- *How?* ⇨ In what formal way?

In the remainder of this introduction we will outline selected problems concerning these issues and point to relevant borderline cases. Using these criteria does not always lead to clear decisions. Rather, it will become evident that formal and functional criteria do not correspond to each other as clearly as assumed but instead run in crosswise directions. At the same time, the following discussion gives an outlook on the problems and phenomena that will be addressed in detail

² This does not imply that semantically intransparent, unproductive reduplication is automatically also unsystematic, cf. Mattes (2014) for reflection.

³ For instance in English (Horn 1993; Hohenhaus 1994; Ghomeshi et al. 2004), German (Finkbeiner 2014; Freywald 2015; Kentner 2017), and French (Rossi 2011, 2015).

in the individual contributions. It will be concluded by a brief overview of the papers assembled in this collection.

2 Criteria for the distinction between reduplication and repetition

The criteria defined in Gil (2005) have been most influential in subsequent attempts to distinguish between reduplication and repetition. We will discuss these criteria by addressing the questions mentioned above one by one. In doing so, we will point at potentials and limits of Gil's criteria and will illustrate our considerations with some problematic cases.

2.1 *Where?*

Functional domain of application

For the distinction between reduplication and repetition it is usually deemed decisive to determine to which functional domain many-times occurrences of one and the same linguistic item belong: If a pragmatic function is served, we deal with repetition, if the function is purely grammatical in nature, we deal with reduplication.



Figure 2: Mapping of functional domains: grammatical vs pragmatic function.

Whenever reduplication is used to express grammatical categories this process is doubtlessly part of the grammar proper. This can be observed in the well-known cases where reduplication marks, for example, durative aspect or number, cf. (1) and (2):

- (1) Jamaican
luk *luk~luk*
 ‘to look’ ‘to keep on looking’
 (Kouwenberg and LaCharité 2003: 13)

(2) Warlpiri

kurdu kurdu~kurdu

'child' 'children'

(Wiltshire and Marantz 2000: 558)

Many-times occurrences fall into the pragmatic domain when they are used in order to convey pragmatic or discourse-related information, for example, speech act reinforcement, expression of (re-)assurance, signalling of speaker commitment, clarification, etc. Depending on whether repetitions are produced collaboratively or not, a distinction can be made between self- and other-repetition. Examples (3)–(5) illustrate two functions of self-repetition. In (3) the repetition of *lez* 'let go' has the effect of speech act reinforcement; uttering the imperative twice signifies "that the speaker [= a character in a Zyrian folk tale; UF and RF] is afraid and that he really means what he says" (Stolz et al. 2011: 139).

(3) Zyrian

Lez lez mij koran, sije i šeta

let_go let_go what ask_for:2SG it and give:1SG

'Let go, let go, whatever you ask of me, I give it to you.'

(Stolz et al. 2011: 139; taken from Rédei 1978: 131)

The repetition in example (4) from Estonian serves the same function.⁴ Speaker E encourages her grown-up daughter P (who tells her of her high consumption of pumpkins) to eat as many pumpkins as she likes and to maintain this habit. The imperative *söö* 'eat' is produced twice, which reinforces the request:

(4) Estonian

P: =oi.: *kui ea. [mul] läeb ühe nädalaga üks ära*

PTCL how good I:ADS go:3SG one:GEN week:KOM one PTCL

'(That's) great. I use one per week.'

E: *söö söö*

eat:imp:2SG eat:imp:2SG

'Go ahead and eat.'

(Keevallik 2010: 804–805)

⁴ See Keevallik (2010) for more examples. In her paper, Keevallik discusses a broad range of further interactional functions of repetitions, labelling them as "syntactic reduplications".

The repetition of *never* in (5) indicates a high degree of speaker commitment. The speaker ties herself to her resolution to never smoke again:

- (5) English
I shall never, never smoke again.
 (Sperber and Wilson 1995: 219)

All three cases share the feature that repetition adds a form of emphasis (or: pragmatic prominence) to the repeated element without influencing its meaning in any way (cf. also Stolz et al. 2011). This corresponds to the “communicative reinforcement” criterion listed in Gil (2005: 33), who considers the presence of this kind of reinforcement as providing an explicit indication for the process of repetition (but not the other way round).

Other-repetition involves turn-taking. It is constitutive here that the addressee repeats an utterance (or some part of an utterance) of the speaker. Other-repetition occurs, for example, in clarification questions, cf. (6) (see also Poschmann, this volume):

- (6) English
 Deborah: *Do you read?*
 Peter: *Do I read?*
 Deborah: *Do you read things just for fun?*
 (Tannen [1989] 2007: 73)

Other-repetitions can also be used to ratify listenership (cf. Tannen [1989] 2007 and Murata 1995, who labels this type as “solidarity repetitions”); this is illustrated in (7):⁵

- (7) English
 Chad: *They all want to touch this ... silly little mouse*
 Steve: *At five o'clock in the MORNING on the TRAIN station.*
 Chad: *Yeah.*
 Steve: *In New Mexico.*
 Chad: *In New Mexico.*
 (Tannen [1989] 2007: 70)

⁵ At a more global conversational level, other-repetitions can also serve to signal mutual understanding and personal closeness with respect to the relationship between discourse participants, cf. Cannava and Bodie (this volume), who compare rates of identical words in conversations between friends vs strangers.

Notably, in other-repetitions pragmatic reinforcement seems to be no necessary ingredient. On the contrary, as Cummins (this volume) notes, by repeating an utterance of her interlocutor a speaker is not necessarily committed to the truth of this statement, it is not even required that she intends to convey its content. This is the case with metarepresentational (or: metalinguistic) uses of expressions and utterances. That way, other-repetitions can be used to express discontent on the part of the listener or to indicate that the listener is contemplating the statement of the speaker. The sequence in (8) (taken from Cummins) gives an example (the utterance of B is produced with a flat intonation):

(8) English

A: *We were only having a laugh.*

B: *You were only having a laugh.*

(Cummins, this volume)

The absence of speaker commitment is not limited to metalinguistic use, however. It can also be observed in repetitions that are used to affirm the listener's attention (see (7) above). Here, too, the listener neither means to convey the content of the repeated phrase nor does she add any new information to the Common Ground but only reassures the speaker of her attentiveness.

A crucial criterion for the decision whether to allocate a reduplicative process to grammar or to pragmatics is the difference in meaning between the single and the multiple form. It is widely acknowledged that reduplication is most often associated with an iconic meaning, reflecting a correlation between “more of the same linguistic substance” and “larger quantity of the same content”; this leads to the expression of semantic dimensions such as plurality, iterativity, distributivity, and intensification, but also diminution and attenuation (all of which are subsumable under “change of quantity”, as Mattes 2014: 117 puts it; cf. also Kouwenberg and LaCharité 2005 for discussion).

According to Gil (2005) (and many others), reduplication always comes with semantic alteration while repetition may take place without any change in meaning. Accordingly, the absence of differences in meaning can be taken as a categorial feature of repetition. However, as Gil (2005) points out, it is not the case that repetition never induces a change in semantics. Thus, differences in meaning do not indicate directly the status of either repetition or reduplication. The crucial point is, however, that, contrary to repetition, the meaning of a reduplicated form may be arbitrary, i.e. non-iconic, which is characteristic for grammatical processes in general (Gil 2005: 34–35). Arbitrary, non-iconic meanings of reduplication, which can be found in a number of languages,

include, for example, verbal transitivity or the purely formal change of word class (cf. (9) and (10); see also Schwaiger 2015; Forza 2016; sceptically, however, Schwaiger, this volume). Interestingly enough, there are some grammatical domains which seem to never employ reduplication, such as case, grammatical gender, negation, and respect (to name just a few) (cf. Stolz et al. 2011: 194; Schwaiger, this volume).

(9) Marking of verbal transitivity

Twi

di *di~di*

‘to eat (transitive)’ ‘to eat (intransitive)’

(Moravcsik 1978: 325)

(10) Derivation: adjective derived from noun

a. Marshallese

diy *diy~diy*

‘bone’ ‘boney’

b. Woleaian

ranga *ranga~ranga*

‘tumeric’ ‘yellow’

(Harrison 1973: 439)

As an outcome of the classification outlined above, examples (9) and (10) count as reduplications by definition.

There are, though, at least the following two types of cases that pose a challenge to the classification of repetition and reduplication according to differences in meaning: (i) cases of *repetition* that carry arbitrary meaning, and (ii) cases of *reduplication* that do not entail any change in meaning whatsoever.

(i) The first constellation involves multiple occurrences of linguistic items that fulfil discourse functions – and therefore belong without doubt to the pragmatic domain – and at the same time convey an arbitrary meaning, which means that they do not show any kind of iconic semantics or of reinforcement. A case in point are self- and other-repetitions that function as discourse markers in conversations, as is the case in Tojol-ab’al Maya (cf. Brody, this volume). Here, the reciprocal repetition of (part of) an utterance of one interlocutor by both interlocutors signals topic shift. This function cannot appropriately be described as being connected with communicative reinforcement of any sort, neither is it used for stylistic reasons. Repetitions of this kind carry a precise discourse-grammatical meaning, and this meaning is not iconic at all. The

general rule ‘repeat X’ to form a linguistic expression that indicates topic shift comes very close to affixation of a reduplicative morpheme that is to be filled with the phonetic material from the previous phrase (in terms of Travis 2001; cf. also Erbaşı, this volume).

Similarly, the construction *X hin, X her* in German (lit. ‘X thither, X hither’; which means roughly: ‘X or no X’) is subject to strict grammatical and semantic constraints, for instance with regard to the syntactic position in the host clause, the intonational integration into the overall structure and the lexical filling of the two X-slots (cf. Finkbeiner 2017, this volume). (11) provides an example:

(11) German

Mindestlohn hin, Mindestlohn her, unser Hauswein bleibt weiterhin gewohnt günstig.

‘Minimum wage here, Minimum wage there, our house wine will continue to be a bargain.’

(Finkbeiner, this volume)

This construction shares a number of formal and functional features with irrelevance conditionals, which underpins the view that they belong to the grammatical domain and encode grammatical meaning. What is more, this meaning is again not iconic, that is, it does not entail semantic components of increased quantity or reinforcement. At the same time, the interpretation of the *X hin, X her*-construction depends heavily on pragmatic inferential processes, as Finkbeiner points out. This interplay of grammatical and pragmatic restrictions renders this construction a borderline case, lying right within the transition zone between repetition and reduplication.

Another critical case are “lexical clones” (Horn 1993, this volume). They have been described for several languages, among them a considerable number of ‘reduplication avoiders’, such as English, German, Dutch, French, Finnish, and Russian.⁶ Lexical cloning sometimes goes under different names, such as Identical Constituent Compounding (Hohenhaus 2004; Finkbeiner 2014); Contrastive (Focus) Reduplication (Travis 2001; Ghomeshi et al. 2004), or REAL-X Reduplication (Stolz et al. 2011; Freywald 2015). Consider (12)–(15) for illustration:

⁶ However, they can also be found in several other, more reduplication-friendly languages in Europe, such as Italian (cf. Wierzbicka 1991; Dressler and Merlini Barbaresi 1994) and Modern Greek (cf. Kallergi 2015a,b).

(12) English

a. *We have muffins, and we have DESSERT desserts.*
(Horn 1993: 49)

b. *My car isn't MINE-mine; it's my parents'.*
(Ghomeshi et al. 2004: 312)

(13) German

er muss den ganzen Tag arbeiten also von früh
he must the whole day work that.is from early
bis spät also früh-früh bis spät-spät
to late that.is early~early to late~late

'He must work all day, that is from early till late, that is from early-early
[= really early] till late-late [= really late].'

(Freywald 2015: 920)

(14) French

A: *Cet été je pars en vacances en Grèce.*

'This summer I am going to spend my holidays in Greece.'

B: *Oh, quelle chance! En Grèce Grèce ou dans les îles?*

'Oh, how lucky you are! Are you going to Greece-Greece [= continental
Greece] or on the islands?'

(Rossi 2015)

(15) Finnish

a. *kirja kirja~kirja* b. *ruoka ruoka~ruoka*
'book' 'genuine book 'food' 'real food (as opposed to fast food
(no e-book)' or snack)'

(Korpela 2015)

c. *koti koti~koti*
'home' 'parents' home (as opposed to one's current place of
residence)'

(Forza 2016: 6)

It is a matter of debate whether there is a change in lexical meaning between simplex and reduplicated form or whether interpretational differences arise by way of pragmatic processes only. For German and English, experimental studies have shown that speakers assign a specific "reduplicative meaning" to lexical clones (cf. Horn 1993; Ghomeshi et al. 2004; Finkbeiner 2014). This reduplicative meaning regularly

involves some kind of graduation (increase of intensity or else attenuation; for example, a typical dessert – a *DESSERT dessert* – can be conceptualised as ‘a proper dessert’ but also as ‘a mere dessert’). On the other hand, as Horn (this volume) notes, “no move is made to register such an item in the permanent lexicon”. Still, it is not quite clear whether we deal with a grammatical process (i.e. word-formation) or a pragmatic process here. Furthermore, some linguists hold the view that lexical clones convey affective and/or expressive meanings (cf. Rossi 2011, 2015).⁷

(ii) The second problematic case we have in mind are instances of reduplication that do not fulfil the “more semantics”-criterion. We find evidence for this in the reduplication of derivational morphemes in English nouns which are derived from phrasal verbs (Lensch, this volume):

(16) English

- a. *fixer-upper, washer-upper*
- b. ... *is brilliant as a cheerer-upper of players.*
- c. *A bra, a stomach-flattener, a butt holder-inner.*

(Lensch, this volume; b. and c. are from *The Daily Mail*, 1991, and *The Guardian*, 2005)

As this process takes place within a word – in fact, affecting a bound morpheme – it is predestined to count as reduplication. It lacks, however, a special reduplicative meaning, as Lensch points out in her study.⁸ The presence of the second suffix *-er* does not influence the core meaning of the whole word. Lensch notes, however, that the double suffix attaches preferably to nouns that “denote volitional agents or instruments that are used purposefully and not by accident or chance”. As a result, nouns with a double *-er*-suffix tend to be interpreted as more agentive. Accordingly, as the meaning of the (simple) suffix *-er* is agentive in the first place, this can be seen as a process of reinforcement and thus as indication for *word-internal repetition*.

Further pertinent examples are cases where repetition applies to reduplication itself. This is an option with ideophones in some languages and is reported,

⁷ The development of (secondary) affective connotations seems to be a quite typical characteristic of reduplication, cf., for example, Kallergi (2015a,b) for Modern Greek and Kouwenberg and LaCharité (2015) for Caribbean Creoles.

⁸ It does not conform to several decisive formal features of reduplication either; first, the contiguity criterion is evidently not fulfilled, and, second, the number of *-er*-instances is not strictly limited to two, cf. *he looked like a stayer-omer-for nower* (example from *The Times*, cf. Lensch, this volume).

for example, by Dingemanse (2017) for Siwu. In (17) and (18), the basic forms of the ideophones are already reduplications: *gelegele* ‘shiny’ and *fututuu* ‘pure white’:⁹

(17) Siwu

kà *ì-bara* *gelegele~gelegele*
 ING S.I-DO IDPH.shiny~EM2
 ‘It’ll be gelegelegelegele [shiny].’
 (Dingemanse 2017: 367)

(18) Siwu

i-tì *si* *i-fudza-ɔ* ↑*fututu~tutututu*↑
 c.I-head if S.I-be.white-2SG.o IDPH.pure.white~EM4
 ‘That your head may become white ↑*futututututu*↑ [pure white].’
 (Dingemanse 2017: 366)

One possibility is to analyse this as “multiple reduplication” (as Gil 2005 does for formally parallel examples in Riau Indonesian). However, there are strong arguments for repetition as well, the strongest one being the complete absence of any change in meaning. According to Dingemanse, the surplus instances of *gele* and *tu*, respectively, have an effect of “performative foregrounding”, on which grounds he classifies them as expressive morphology (‘EM’ in the glosses).

Analogous examples are discussed in Stolz and Levkovych (this volume). In Angolar, the verb *foga* ‘to dance’ undergoes reduplication in order to express durative aspect (resulting in *fo~foga* or *foga~foga*). Additionally, cases of triplication are attested, too, cf. (19):

(19) Angolar

Thô a ka foga~foga~foga até pomenha ka biri.
 after s/he TAM REP~RED~dance until morning TAM open
 ‘Afterwards one dances on and on and on until the morning comes.’
 (Stolz and Levkovych, this volume; taken from Maurer 1995: 154)

The meaning of the durative remains unchanged in the triple form. “Pragmatically, however, triplication and reduplication convey different connotations”

⁹ Glosses used by Dingemanse: C – noun class marker, I – abbr. for the I-noun class, S – subject marker, ING – ingressive, IDPH – ideophone, EM – expressive morphology (digits denote the number of repetitions), ↑ – start and end of prosodic foregrounding.

(Stolz and Levkovych, this volume). Accordingly, the authors analyse this triplication as “repetition within the word”.

This conclusion is further supported by verb triplication in Stau, a Sino-Tibetan language (cf. Gates 2017). In Stau, verbs are reduplicated or triplicated to indicate a large or increased number of agents/participants (for example, in the course of a story). The distinction between reduplication and triplication is one of gradience, depending on the actual amount of agents or participants and on the speaker and the communicative situation. In this way, triplication serves as a means to put emphasis on the fact that the number of agents has increased or that it is very high:

In addition, reduplication and triplication are used as a pragmatic emphasize to let the listener know there has been an increased number of agents on the scene or that the large size of the group is an important piece of information for the narrative. Typically, triplication indicates a larger number than reduplication, but the amount of agents is relative to the speaker and the situation. (Gates 2017: 24)

As with Angolar, the function of triplication is primarily pragmatic here. Hence, triplicated verbs in Stau might also fall within the realm of “repetition within the word” (note that neither reduplication nor triplication is obligatory in order to express verbal plurality in Stau, and that triplication always implies the existence of the reduplicated form of the same verb, cf. Gates 2017).

This touches upon another, very central criterion: the unit to which reduplication applies. According to common opinions, reduplication applies only to words or to units which are smaller than a word, while repetition targets only units which are larger than a word (Gil 2005; Forza 2016). As a consequence, by definition there is no reduplication beyond word boundaries – and no repetition within.

The problematic examples discussed so far have shown, however, that repetition may apply within word boundaries. The processes demonstrated above clearly entail features that are usually ascribed to repetition, namely pure expressiveness and/or communicative reinforcement. In the next paragraph, we discuss a few more examples that are problematic for the view that the word boundary represents the demarcation line between reduplication and repetition.

2.2 *What?*

Unit of application

Handbook definitions confine reduplication to the domain of the word, which includes reduplication of words and morphemes and of elements that are smaller than morphemes, such as syllables and even segments. The notion of

repetition, on the other hand, involves multiple occurrences of larger units, such as (syntactic) words, phrases, clauses and whole utterances (Gil 2005; Stolz et al. 2011; Schwaiger 2015):

By definition, repetition and reduplication differ in the following way: whereas repetition applies across words, and is therefore subsumed under syntax or discourse, reduplication applies within words, and is consequently taken to be part of morphology. (Gil 2005: 31)

Two problematic cases which involve repetition within words were already discussed above (repetition in Siwu ideophones and repetition of the English derivational morpheme *-er*). We now turn to examples which target the word boundary itself, i.e. the whole word, and beyond.

The coverage of the two notions repetition and reduplication intersects at word-level: words may undergo purely morphological processes, but – as potential heads of syntactic phrases – they can also be subject to processes that operate at phrase level. Having such problems in mind, Stolz and Levkovych (this volume) point to the fact that “the question of what counts as a word is one of the major obstacles which make it difficult to distinguish repetition from reduplication”.



Figure 3: Mapping of units of application: within word boundary vs beyond word boundary.

Therefore, examples such as (20) are notoriously problematic:

(20) Sardinian

Biviat unu Sennore, bezzu, chi iscribat
 see:PST:3SG INDEF:M gentleman old:M REL write:PST:3SG
libros mannos mannos
 book:M:PL big:M:PL big:M:PL

‘He saw an old man who was writing really/very huge books.’

(Stolz et al. 2011: 28)

There are few reliable parameters which can help decide whether *mannos mannos* represents one word or two. The occurrence of inflection at each of them might give a hint that *mannos mannos* is probably not one complex

word. In languages without inflection, however, it can be undecidable whether reduplication results in one complex word or in a double production of one single word.

Even more problematic are lexical clones, as discussed above, cf. (12)–(15), for they can have as a basis not only words but also phrases and sentences (at least in English):¹⁰

(21) English

a. *Well, he didn't GIVE-IT-TO-ME–give-it-to-me (he only lent it to me).*

(Ghomeshi et al. 2004: 326)

b. *“Who are you?” she said. [...]*

“My name’s Richard.”

She rolled her eyes. “I know that. I didn’t mean who are you what’s your name – I meant who are you who are you.”

(Horn, this volume; from Ann Packer, 2011, *Swim Back to Me*, “Walk for Mankind”, p. 4)

In the light of these data, the question whether these formations follow grammatical or solely pragmatic rules becomes even more pressing. Features such as intonational contour and meaning constitution, among others, speak against a classification as a case of mere multiple saying. If analyses of lexical cloning as compounding (as proposed by Hohenhaus 2004 for English and Finkbeiner 2014 for German) are correct, this would be another strong argument against a purely pragmatic analysis. Obviously, it is necessary to admit that the process of reduplication may involve units that are larger than a word.

This viewpoint is further supported by evidence from verb reduplication in Turkish. In (22), the two instances of the verb *okudular* ‘(they) read’ fulfil several key criteria of reduplication (such as identity, adjacency, limitation to one reduplicant; cf. Erbaşı, this volume). In Turkish, reduplicated verbs assume an iterative or durative meaning:

(22) Turkish

Kitab-ı oku-du-lar oku-du-lar bitir-e-me-di-ler.

book-ACC read-PAST-3PL read-PAST-3PL finish-ABIL-NEG-PAST-3PL

‘They kept reading the book (but still) they could not finish (it).’

(Erbaşı, this volume)

¹⁰ In German, so far, examples for cloning of phrases are not attested (cf. Freywald 2015).

As Erbaşı (this volume) argues, Turkish verb reduplication does not take place at word level but involves phrases. Relying on comprehensive syntactic evidence, Erbaşı claims that we deal with reduplication of the Tense Phrase (TP) here. Thus, TP reduplication, too, “challenges the attempts to distinguish repetition and reduplication since TPs are neither words (the copying of which is termed as ‘clear reduplication’) nor sentences (the copying of which is termed as ‘clear repetition’)” (Erbaşı, this volume), and this might serve as another indication that reduplication is not restricted to words or units that are smaller than a word.

A further decisive means for assigning the status of repetition or of reduplication is another formal feature: the number of reduplicants. It is remarkable that the number of lexical clones in (12)–(15) and (21) is strictly limited to one. This again makes a repetition analysis doubtful. – The aspect of *how*, i.e. in which form, reduplication and repetition are employed, will be discussed in the next paragraphs.

2.3 *How?* Form of application

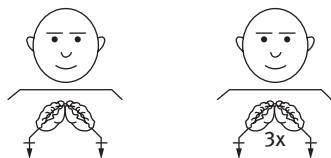
Usually, reduplication is considered to be restricted to exactly one reduplicant, that means to doubling in the narrow sense of the word (cf. Gil 2005: 36). In contrast, with repetition the number of iterations is normally not precisely defined. Applying this criterion to lexical clones suggests that cloning should be classified as reduplication. As stated above, in lexical cloning a linguistic unit – be it a word or a phrase – can only be reduplicated once. Likewise, the German *X hin, X her*-construction is not flexible with regard to the number of copies, which means that the construction is not extensible (Finkbeiner, this volume).

Many exceptions of that rule are recorded in the literature, however, among them those we saw in (17)–(19) (surplus reduplicants in Siwu ideophones and Angolar durative verbs). Often these surplus reduplicants add some kind of emphasis to the word, which has the effect of communicative reinforcement.¹¹ Although this is a typical feature of repetition, Gil (2005: 60) analyses more-than-two-occurrences within words as reduplication, more precisely as

¹¹ Cf. also Stolz et al. (2011: 57–58); the authors present additional examples from Lamang and conclude that cases of “recursive reduplication” “lack systematicity and are most often emphatic ad-hoc formations which are pragmatically motivated or represent downright cases of stylistic repetition” (Stolz et al. 2011: 57).

“multiple reduplication” (on the grounds that it takes place inside the word). It is important to bear in mind, though, that there is a difference between optional, quantitatively not defined usages of multiple occurrences of a reduplicated syllable, morpheme or word on the one hand and obligatory triplications on the other. For instance, in German Sign Language pluralisation is expressed by full triplication with certain nouns, cf. (23):¹²

(23) German Sign Language



‘house’

‘houses’

(Pfau and Steinbach 2006: 146–147)

The meaning encoded by the tripled sign is clearly grammatical (and iconic), so we are dealing here with a phenomenon that belongs to the domain of reduplication. Note that triplication is not optional; there does not exist a sign which consists of two occurrences of the sign ‘house’ in German Sign Language.

Another example for obligatory triplication is provided by Harrison (1973). In Mokilese, leftward triplication is used in order to mark progressive/continuative aspect:

(24) Mokilese

a. *rik sakai rik~rik sakai rik~rik~rik sakai*
gather stones RED~gather stones RED~RED~gather stones
‘to gather stones’ ‘to be gathering stones’ ‘to continue to gather stones’

b. *moair moah~moah~moair*¹³
‘to sleep’ ‘to be/continue sleeping’
(Harrison 1973: 424f., 434)

¹² Cf. also Kimmelman (this volume), who discusses partial triplication in Russian Sign Language.

¹³ The twofold reduplication of some verbs like *moair* exists – if at all – only as a derived form and then stands for the stative: *li-moah~moair* ‘always sleeping’ (Harrison 1973: 434).

Thus, one can say that single form, reduplicated form and triplicated form are in a paradigmatic relationship with each other in Mokilese.

Apart from these examples of triplication as a grammatical process, there are, on the other end of the continuum, also conventionalised triple constructions that may fulfil special functions in discourse. A case in point is the turn-initial *bla, bla, bla* construction in German (cf. Finkbeiner 2016). While the interjection *bla* in principle may be repeated randomly, conveying some kind of ‘I don’t care’ attitude on the side of the speaker, there is a conventionalised usage in turn-initial reactions in which *bla* is subject to restrictions both as to its prosodic realisation and to the number of occurrences (namely, three). By turn-initial *bla, bla, bla* the speaker conveys a clearly pejorative stance towards the interlocutor’s words, as is shown in (25):

(25) German

Bitte schlag doch im Sinne des Artikels und der Wikipedia deine Änderungen hier vor – dann kann man in Ruhe darüber diskutieren, ohne dauernd solchen Müll in den Artikel zu schreiben. – Tarantelle 10:57, 15. Jul. 2008 (CEST)

‘Please do suggest your changes here, for the sake of this article and of Wikipedia – then one can discuss this calmly without writing bullshit into the article all the time.’

Bla, bla, bla. *Von jemand, der versucht hat, einen angeblichen Fürsten im Jahr 2008 durchzusetzen, lass ich mir keinen „Müll“ vorwerfen. [...] – Stud-mult 11:20, 15. Jul. 2008 (CEST)*

‘Blah, blah, blah. I won’t let anyone who tried to push through an alleged prince in the year 2008 blame me for “bullshit”.’

([http://de.wikipedia.org/wiki/Diskussion:Leyen_\(Adelsgeschlecht\)](http://de.wikipedia.org/wiki/Diskussion:Leyen_(Adelsgeschlecht))); from Finkbeiner 2016: 270)

One may best conceive of this usage as a conventionalised conversational means of expressing (meta-linguistic) depreciation, which is bound to the triple occurrence of *bla*.

These examples of obligatory triplication may give an impulse to seriously take into account the existence of triplication – and more-than-two-reduplications in general – as a grammatical process in its own right and to investigate these phenomena – including phenomena of conventionalised discourse – in greater detail in the future.

The discussion of borderline cases which reside within the transition zone between reduplication and repetition has shown that it is worth considering expanding the notions of reduplication and repetition in two directions: First,

reduplication seems to be applicable also to units larger than words; apparently, *reduplication* extends to structures *outside word boundaries*. Second, repetition can be found not only outside of words but also inside; this suggests that *repetition* extends to structures *inside word boundaries*.

3 Outline of this book

The present volume brings together work from different linguistic camps and directions in order to address the problems sketched in Section 2 by both contributing to a refinement of the notions of reduplication and repetition and providing empirical evidence to support these views.

Part I assembles, next to this introductory chapter, contributions which attempt to shed new light on the notions of reduplication and repetition from a more general perspective and to challenge traditional ways of delineating their domains of application. **Thomas Stolz** and **Nataliya Levkovych** endeavour in their contribution to unravel the intricate relation between reduplication and repetition by discussing in great detail tricky but telling phenomena from a broad range of typologically different languages. As a result, they arrive at the conclusion that reduplication and repetition can be separated from each other at the functional level only. At the formal level, however, they see no allocation of the two processes to two different linguistic domains, on the grounds that neither is reduplication confined to morphology (and to units equal or smaller than a word) nor is repetition limited to syntax and discourse (and to units larger than a word). Taking a constructionist approach, Stolz and Levkovych rely on the criterion whether or not a case of multiple occurrence of the same linguistic unit represents a construction frame, i.e. a form-meaning pair in the sense of Construction Grammar.

Thomas Schwaiger pursues the discussion of the defining features of reduplication vs repetition, also adopting a typological perspective. In his paper, he challenges the common view that reduplication can serve derivational as well as inflectional purposes. According to his reasoning, reduplication should be considered as being inherently derivational by nature. Schwaiger's main arguments feed on the observations that, in contrast to inflectional processes, reduplication (i) is rarely, if ever, obligatory and (ii) involves always more or less concrete semantics (mostly iconic). His conclusion that reduplication is a derivational process provides Schwaiger with an additional, new criterion for distinguishing reduplication and repetition: reduplication proper must not involve inflected words (under the undisputed assumption that inflection follows derivation).

Consequently, according to Schwaiger, any multiple occurrence of inflected words is repetition by definition.

Part II encompasses studies which start their exploration of the borderland between reduplication and repetition on the grammatical side. Starting from multiple-occurrence phenomena that are formally and/or functionally located in the domain of grammar, all studies attempt to stretch the limits of established definitions and to fathom the nature of reduplication and repetition in the languages under investigation.

Vadim Kimmelman provides an in-depth analysis of reduplication and repetition in Russian Sign Language (RSL). The aim of his study is, first, to investigate whether different types of morphological and syntactic reduplication in RSL (and other sign languages) serve similar functions as in spoken languages, and second, to examine how they fit the established notions of reduplication and repetition (and what this tells us about the borderline between them). Kimmelman arrives at the conclusion that functions and forms of reduplication in RSL do not fundamentally differ from those in spoken languages (except for some specifics due to the different modality) and that none of them is purely stylistic. However, reduplication with a distributive meaning shows some unexpected features in RSL. According to Kimmelman's data, in distributive contexts, reduplication may apply to units larger than a word (up to full clauses) and allows more than one reduplicant. As this process cannot be analysed as pragmatically motivated repetition either, it poses a problem for conventional definitions of reduplication.

Christoph Petermann surveys the manifold appearances of total reduplication in Modern Japanese, putting special emphasis on reduplication types that have not received much attention so far. Using data from the JpWaC web corpus, he brings to light some innovative and productive reduplication patterns which do not occur in the handbooks. By discussing phenomena which involve reduplication of complex noun phrases, Petermann confirms the view maintained throughout this volume that even units above word level may undergo reduplication proper.

As already pointed at above, the differentiation of reduplication and repetition is particularly intricate in isolating languages, for inflectional morphology cannot be used as an indicator here. In her paper, **Yanyan Sui** tackles the problem whether to analyse reduplication in Standard Chinese as affixation or compounding. She demonstrates that both morphological processes can be found in Chinese reduplication and that they have to be carefully distinguished. Sui develops formal and functional criteria which allow her to distinguish inflectional affixation (exemplified by aspectual reduplication), derivational reduplication (represented by diminutive reduplication) and compounding (which is present in intensifying reduplication). According to Sui, these types of reduplication can

be clearly separated from (superficially often similar) repetition. Only the latter expresses emotional involvement, exaggeration or rhetorical effects. Therefore, Sui excludes, for example, multiple occurrences of non-gradable adjectives from the realm of reduplication (such as *xuě bái* 雪白 ‘snow-white’ – *xuě bái xuě bái* 雪白雪白); the intensifying function is ruled out here for semantic reasons, the only remaining effect being emphasis.

The contribution of **Anke Lensch** addresses a doubling phenomenon in English which is clearly morphological but lacks crucial features of reduplication: the duplicate affixation of the nominal suffix *-er* to phrasal verbs, yielding nouns such as *fixer-upper* or *washer-upper*. Lensch presents an extensive corpus study using contemporary British and American newspaper texts. Based on these corpus data, she discusses lexical, (morpho-)phonological and semantic features of this word pattern and comes to the conclusion that *-er...-er*-affixation represents a regular and productive derivational pattern in English. Interestingly, semantic differences between nouns with only one *-er*-suffix and nouns with an extra *-er* are hard to grasp (*washer-up* vs *washer-upper*), which challenges the idea that only repetition, but not reduplication, can be semantically empty. However, Lensch observes an increased agentivity in *-er...-er*-nouns which might point to a subtle semantic change.

Betül Erbaşı investigates verb reduplication in Turkish – a process that looks like operating at word level at first sight and therefore seems unproblematic for a word-based definition of reduplication, cf. *yürüdüm yürüdüm kilo veremedim* ‘I kept walking (but still) I could not lose weight’ (example from Erbaşı). Erbaşı shows, however, that it is not words that are reduplicated here but phrases. Using syntactic diagnostics from the generative grammar framework, she argues that the reduplicated units are Tense Phrases (TPs). This raises the consequential question of whether reduplication can also apply to phrases. Erbaşı argues in favour of a positive answer. In her analysis, she assumes a [+copy] feature which is located in the head of the adverb phrase ContAdvP (hosting continuous adverbs). The head ContAdv⁰ takes the TP that is to be reduplicated as its complement. By assuming this procedure TP doubling is modelled as a process of reduplication proper.

Grammar, usage and history of cognate object constructions in English (such as *First he snored a little short snore*; *Tom grinned an enormous grin*) are discussed by **Matthias Eitelmann** and **Britta Mondorf**, who present a detailed analysis of their syntactic and semantic structure, focussing especially on (degrees of) transitivity and transitivity (in particular with regard to pseudo-objects as in *smile a smile*). The outline of the historical development of cognate object constructions, based on a corpus of prose fiction from the 15th c. to the 1990s, gives an account of the quantitative rise of this construction during the 19th c. and uncovers a strong preference for specific lexical patterns. One of the findings of

the corpus study is that the cognate object pattern is much more frequent with verbs and object nouns that, while etymologically related, are not formally identical (e.g. *die a death* vs *smile a smile*). From this, Eitelmann and Mondorf conclude that cognate object constructions do not involve reduplication but serve stylistic purposes and, therefore, while structurally forming part of grammar, are to be classified as pragmatically induced repetition.

The papers in **Part III** approach the topic of this book from the pragmatic side. The studies compiled in this part investigate the discourse functions of “saying things twice” and aim at identifying the pragmatic mechanisms that lie behind the production as well as the interpretation of repetitions.

Three decades after he first noticed them, **Laurence R. Horn** takes stock of the current situation of lexical clones in English (cf. *doctor doctor* referring to a physician in contrast to *doctor* referring to an academic). In his paper, Horn reviews the linguistic features of lexical clones and relates them to other kinds of nonce-formation, such as innovative *un-* and *-ee-*formations, also touching upon the question whether we deal here with a context-dependent, and thus pragmatic, process or with a regular mechanism of word-formation that is part of core grammar. The diverse semantico-pragmatic functions and effects of lexical clones, which Horn extrapolates from a large pool of authentic data, are conflated into one basic function: to refer to or to induce partitions. Lexical clones are used in manifold ways to refer to a subset, subdomain or interval of a category or scale, which leads to the observed interpretations in terms of prototype, realness (“*echt-icity*” in Horn’s terms), or intensification. If no such subdomain or interval is pre-established already, a partition can be coerced.

Rita Finkbeiner takes up a case of syndetic reduplication in German, the coordinative pattern *X hin, X her* ‘X hither, X thither’. The construction shares semantic and formal properties with irrelevance conditionals (for example, sentence-peripheral position, cf. *Wirtschaftskrise hin, Wirtschaftskrise her, der Landeshaushalt soll ausgeglichen bleiben*. ‘Economic crisis here, economic crisis there, the state’s budget is expected to stay balanced.’). Finkbeiner shows in her analysis of *X hin, X her* that the meaning constitution of this construction involves inferential processes which operate upon very general Gricean principles. Therefore, a full account of reduplicative constructions such as *X hin, X her* cannot dispense with references to the pragmatic component of language. With this in mind, referring to Construction Grammar approaches to reduplication in particular and to discourse phenomena in general, Finkbeiner argues for the integration of an interface with pragmatics into a (constructionist) theory of reduplication.

Another example of the tension between grammar and pragmatics in repetition phenomena is examined by **Claudia Poschmann** in her contribution on echo

questions. Poschmann rejects previous analyses of echo questions as results from phonetic or syntactic copying processes. Rather, she argues in favour of a purely pragmatic analysis that rests essentially upon an entailment relation between the echoed utterance and the echo question (formulated in terms of focus alternatives). Poschmann defends the view that grammatical copying approaches are weakened by the fact that formal repetition plays only a minor role in the constitution and interpretation of this discourse pattern: Neither does exact repetition of the previous utterance in itself trigger an echo question interpretation nor is repetition even a necessary feature of echo questions. The successful realisation of an echo question depends solely on the fulfilment of the focus condition of entailment.

In his article on the relation between (other-)repetition and implicatures and presuppositions **Chris Cummins** explores the ways how exact repetition in discourse may act as a cue for the addressee to interpret an utterance as metarepresentational and hence to ignore existing presupposition and implicature triggers. Cummins argues that repetition entails a weakening of the speaker's commitment to the content/truth of their utterance so that implicatures and presupposition projections can systematically be lost. Cummins presents experimental data that support this view: the results of a dialogue completion task reveal that a significantly larger number of participants infer from apparently inconsistent or self-contradictory utterances (e.g. *John didn't stop smoking, he didn't use to smoke.*) that they were used metarepresentationally by the speaker, even without having any information about the prior discourse.

Functions of exact repetitions at discourse level are at the centre of the contribution by **Mary Jill Brody**, who discusses strategies of topic management and speaker-hearer interaction in Tojol-ab'al Maya. Based on a larger stretch of natural conversation, she demonstrates that reciprocal repetitions signal the readiness of the discourse participants to change the discourse topic. Accordingly, Brody analyses this type of repetition as an interactive, collaborative discourse marker – which stretches conventional definitions of discourse markers to their limits. It also challenges in an interesting way the perceptions of repetition and reduplication. The notion of a discourse marker that is phonetically determined by the precedent phrase is reminiscent of a phonetically unspecified RED-morpheme, as assumed in several models of reduplication.

Kaitlin Cannava and **Graham D. Bodie** investigate the functions of other-repetitions in conversation from a quantitative perspective. In their study on English, they focus on two typical patterns of linguistic coordination between interlocutors: Language Style Matching and Local Lexical Repetition. Both types are measured by counts of matched or shared words and modelled within the Johnstone Boundary Condition Model. What is measured here is the degree of 'sameness' of lexicon and style of participants in a dialogue. Cannava and Bodie

compare conversations about personal problems among friends with those among strangers. Results show, among other things, that the number of repetitions is dependent on relationship status. Friends repeat each other more than strangers. Thus, repetition might be interpreted as a strategy for signalling mutual understanding and personal closeness.

After this short review of some of the problems and challenges for a clear separation of reduplication and repetition within a broad range of languages, the demarcation line between the two processes still looks rather blurry. At least, one outcome of this discussion might be to dispense with the conception of reduplication and repetition as strictly *complementary* spheres altogether. Rather, the overall picture points to a large amount of overlap, with repetition phenomena reaching into the area of reduplication and reduplication processes occurring within the domain traditionally reserved for repetition.

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Thomas Stolz and Nataliya Levkovych

Function vs form – On ways of telling repetition and reduplication apart

Abstract: In this paper, it is argued that the word-boundary is not crucial when it comes to distinguishing pragmatically motivated repetition from grammatically motivated reduplication. It is shown that both phenomena may involve entire syntactic words as their input to yield strings of identical words. Similarly, there is also evidence of repetition and reduplication operating within a given word-unit. The main difference between repetition and reduplication is tightly connected to the distinction of pragmatics and grammar in the sense that repetition fulfills exclusively pragmatic tasks whereas reduplication is responsible for the expression of grammatical categories. Empirical evidence of this distinction in genetically, areally, and typologically different languages is discussed. The approach employs a qualitative methodology in order to evaluate the data synchronically.

1 Introduction

Our study addresses the vexed question of how *Repetition* and *Reduplication* are related to each other, if at all. What our approach is meant to add to the general discussion of the topic at hand is the presentation and evaluation of a small selection of particularly intriguing pieces of evidence which speak against lumping together the two phenomena sweepingly – without, however, claiming that they are always neatly separable. To simplify an otherwise rather complex issue, we focus on exactly these two notions (together with their appropriate attributes), namely (*Exact*) *Repetition* and (*Total/Partial*) *Reduplication*. Other notions which are frequently found in the relative literature (such as e.g. *Contrastive reduplication* (Ghomeshi et al 2004), *Doubling* (Inkelas and Zoll 2005), *Iteration* (Aboh, Smith and Zribi-Hertz 2012), etc.) will be touched upon unsystematically at best.

What we are specifically interested in is *Repetition* as a phenomenon which may apply not only word-externally but also word-internally. A case in point is discussed by Sakel (2004: 59) in her grammar of the Mosetenan language Mosetén (spoken in Bolivia). The grammarian of Mosetén argues that there is emphatic *Repetition* “in the discourse” which affects word-internal morphological elements

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such as the clitic *-ki* (which usually expresses a contrastive meaning like English *but*). Sakel (2004: 408) provides a minimal pair of sentences which differ only as to the number of occurrences of the clitic *-ki*, cf. (1).

(1) Mosestén

a. Single *-ki*

Yoj-tsa' mi'-we öjñi' jïj-ka-i **jam-ki** jedye' äej-ä-'.
 R-FR 3M-DR river go-DK-M.S **NEG-CO** thing kill-VI-3F.O
 'Like I went to the river, but I did not catch anything.'

b. Repeated *-ki*

Yoj-tsa' mi'-we öjñi' jïj-ka-i **jam-ki-ki** jedye' äej-ä-'.
 R-FR 3M-DR river go-DK-M.S **NEG-CO-RD** thing kill-VI-3F.O
 'Like I went to the river, but I did not catch anything.'

Sakel (2004: 407) mentions that the contrastive marker *-ki* “frequently appears in reduplicated form and then expresses more intensity than the non-reduplicated form”. The two sentences (1a) and (1b) have identical English translations. Their propositional content is the same. However, Sakel (2004: 408) assumes that there is a difference in the level of connotations. This means that (1a) allows the inference that the speaker “almost did catch something”, whereas in the case of (1b) there simply “there was no possibility” for the speaker to catch anything. It is not possible to correlate the formal difference of the single occurrence of *-ki* and the double occurrence of *-ki* with the distinction of properly grammatical categories. The contrast of *-ki* vs *-ki-ki* can be described much better in terms of pragmatics since its purpose is that of giving emphasis and inviting inferences. We therefore consider the Mosestén case to be an example of word-internal *Repetition* and not a form of *Reduplication*. Clitics are neither genuine bound morphemes nor phonological words of their own. Haspelmath and Sims (2010: 322) define the clitic as “a bound word form”. One might therefore take issue with the classification of the Mosestén case as representative of a properly word-internal phenomenon. At the same time it is also unsatisfactory to subsume the case under the umbrella of genuinely word-external phenomena. The question of what counts as a word is one of the major obstacles which make it difficult to distinguish *Repetition* from *Reduplication*.

In contrast to many definitions of *Reduplication* and *Repetition*, however, we do not assume that (solely) the word boundary is crucial for distinguishing *Reduplication* from other phenomena such as *Repetition*. In the light of Haspelmath's (2011) deconstruction of the notion of word as a universally recognizable category, we assume that it does not make much sense to take a doubtful concept as the criterion which supposedly separates *Reduplication* from *Repetition*. Independent of

whether or not the word can be defined universally, in what follows we argue that the word boundary fails to mark the dividing line between the two phenomena. Moreover we emphasize strongly that the crucial difference of *Reduplication* and *Repetition* primarily is of a functional nature whereas the question of which level of grammar – morphology or syntax – is involved in processes of *Reduplication* and *Repetition* is only of secondary importance when it comes to distinguishing the one from the other. This perspective on *Reduplication* is in line with the views which come to the fore in the approaches of Müller (2004: 33–35), Maas (2005: 399), Vittrant and Robin (2007: 77), Floyd (2014: 78–79) – to mention but a small number of authors who defend ideas which are compatible with ours.

Moreover the notion of word is also problematic if we look at *Total reduplication* in the sense of *Reduplication* of fully inflected word-forms. Kallergi (2015b: 878) provides an example of *Reduplication* from Modern Greek which gives evidence of the *Reduplication* of a noun that is inflected for number and case (cf. (2)):

(2) Modern Greek

i bluzá tu itan trip-es trip-es
 the shirt his was hole-PL hole-PL
 ‘His shirt was full of holes here and there.’

The pluralized noun *tripes* ‘holes’ is reduplicated to express the dispersive. The noun is morphologically complex in the sense that it contains a portmanteau morpheme *-es* for plural and nominative in addition to the stem *trip-* (nominative singular = *tripa* ‘hole’). *tripes* alone is a perfectly well-formed syntactic word. What, however, is *tripes tripes*? Is it a compound and thus a single (though complex) word unit? Or is it a binary syntagm which consists of two identical syntactic words? Cases of this kind are representative of what is often termed *Syntactic reduplication*. Since the multiple occurrence of identical syntactic words (and even bigger chunks of text) is generally accepted as *Repetition* (e.g. Kouwenberg and LaCharité 2015: 975–976) problems arise as to the distinction of the *Reduplication* of fully inflected words and their *Repetition*. To our mind, if one wants to treat *Reduplication* comprehensively, it is a must to include *Syntactic reduplication* unless what is aimed at is only the description of certain phenomena of word morphology (Kallergi 2015a: 18–19). The latter, however, can never pass as a full account of *Reduplication* as such. Moreover, to neatly distinguish *Repetition* from *Reduplication* the discussion of *Syntactic reduplication* cannot be avoided in the first place.

To weigh the pros and cons of the issues at hand, we look (with different degrees of intensity) at data from fifteen languages (Angolar, Bafut, Beja, Bikol, Breton, Chamorro, English, Liberian English, Modern Greek, Mosestén, Ponapean, Riau Indonesian, Seselwa, Tamil, and Thai; further languages are only mentioned

in passing) which constitute a convenience sample whose members display phenomena most of which, theory-independently, are not easy to classify clearly as either *Repetition* or *Reduplication*. We approach these phenomena from a functional-typological point of view (e.g. Daniel 2011: 53–54) which means that, in combination with formal criteria, the functional aspects of *Repetition* and *Reduplication* are of utmost importance to us. Our convictions as to theory and methodology are based on those developed by Stolz, Stroh and Urdze (2011) and Stolz et al. (2015). More generally we presuppose a Base-Reduplicant model of *Reduplication* which rests on the mechanism of copying.¹ Accordingly we distinguish terminologically the Base of a *Reduplication* or *Repetition* from its Copy or Copies. Furthermore, we look at the problem under scrutiny from the point of view of *Reduplication* for the canonical type (Corbett 2005) of which we have a relatively robust working definition already which we present in (3). Note that, in this paper, the canonical type provides a frame of reference on the basis of which the empirical data can be judged and classified since numerous examples of *Reduplication* deviate from the definition in one way or another and are thus noncanonical to some extent.²

(3) The canonical type of *Reduplication*

The canonical type of *Reduplication* applies if two syntagmatically immediately adjacent linguistic signs, which are identical in form and meaning, form a construction the meaning/function of which is at least slightly different from that of the singleton item which participates in the reduplicative construction.

This definition reveals that our analysis of *Reduplication* is rooted in Construction Grammar as explained in Stolz (2006). The definition is furthermore based on principles which have been exposed previously and elaborated upon in Levkovych (2007), Stolz (2007), Stolz, Stroh and Urdze (2011) and Stolz et al. (2015).

1 Only in as far as the process of copying is concerned does our approach fit in with those of Marantz (1982), Steriade (1988), McCarthy and Prince (1995) and others who belong to the wider framework of Generative Grammar and Optimality Theory.

2 There are for instance cases of word-internal partial *Reduplication* which involve a Copy that is separated from its Base by additional phonological material as e.g. Bikol *buru-bayle* 'dance a little bit' (Mattes 2014: 76–77) which contains a prefix *Curu-* whose initial segment C is identical to the initial consonant of the stem. The remaining three segments of the prefix do not change. Mattes (2014: 76) speaks of a “reduplicant-affix-hybrid”. According to Haspelmath and Sims (2010: 39) the Bikol case could be considered to be a duplifix. Since *bayle* 'dance' starts with a bilabial stop /b/, the prefix also hosts an initial /b/. This constellation of facts defines the Bikol case as an instance of noncanonical partial *Reduplication*. We are grateful to the editors of this volume for drawing our attention to this problem.

In many (but by no means all) aspects this definition concurs with those of other students of *Reduplication* such as, among many others, Fabricius (1998: 13–14), Hurch (2002: 56), Tamanji (2012: 58), Dietrich (2014: 274), etc. who, in contrast to our point of view, take the word boundary as the upper limit of the domain in which *Reduplication* can apply.

The paper is organized as follows. In Section 2 we formulate a number of basic assumptions and present bona fide examples of *Repetition* and *Reduplication*. Section 3 is dedicated mainly to a review of extant definitions of *Reduplication* and the role assigned to *Repetition* therein. Section 4 highlights cases of *Reduplication* beyond the word level as well as cases of *Repetition* within the word boundaries to show that the word is not a suitable means to distinguish *Reduplication* from *Repetition*. In the same Section 4, we put forward arguments in favour of a replacement, namely that of the problematic notion of word with that of grammatical vs pragmatic function in order to determine the limits of the domains of *Reduplication* and *Repetition*. The conclusions are drawn in Section 5. Since the linguistic bibliography on *Reduplication* and *Repetition* counts innumerable items, we refrain from giving full coverage of the extant literature, i.e. we limit the review of relative publications to a selection of those scholarly papers and monographs which are of immediate import to our line of argumentation. We look at the language facts from a strictly synchronic point of view. The occasional diachronic digression is relegated to the footnotes.

2 Points of departure

This section addresses previous hypotheses as to the possibility of distinguishing properly *Reduplication* from *Repetition*. Since there are many relatively similar proposals of this kind in the extant literature we restrict the discussion to only a small selection of ideas which show that there is as yet no absolutely uncontroversial solution to the problem at hand. The problem of how to define *Reduplication* without reference to *Repetition* is taken up again in more detail in Section 3. As to Section 2, we present examples of undisputable cases of *Repetition* and *Reduplication* in the subsections 2.1–2.3 to prepare the reader for the subsequent analyses of less clear-cut instances of the two categories under scrutiny (cf. Section 4).

With a view to answering the question whether or not it is possible to distinguish *Repetition* from *Reduplication* we start from the following basic assumptions whose tenability, for the time being, is not questioned. Bollée (2003: 219) depicts “repetition as a universal feature of orality” which is distinct from *Reduplication* although the author admits that she has no “satisfactory solution” yet for

the problem of “distinguishing reduplication from emphatic or iconic repetition” (Bollée 2003: 220). Epps (2014: 155) claims that “repetition is probably universal” and belongs to the playful aesthetic functions of language. From Bollée’s presentation of the problem it appears that *Repetition* is universal also because it is largely located outside the domain of grammar. Its wide cross-linguistic distribution notwithstanding, *Reduplication* is not properly universal (Rubino 2005; Dixon 2010: 140).³ One of the reasons for its failure to fulfil the requirements of a universal is that *Reduplication* belongs to the domain of grammar. The languages of the world, however, are known to vary exactly in this domain so that not all of them share the same properties. It can be assumed therefore that the rules of *Repetition* are simple whereas those of *Reduplication* may be very intricate. Speakers may repeat almost anything they want and whenever they want, whereas they cannot freely reduplicate units of their utterances or skip reduplicating them if they want to express certain grammatical categories. Bollée (2003: 220) also ponders the idea that since “[u]niversal features can [...] be grammaticalized or lexicalized” reduplicative constructions of individual languages may have developed from erstwhile *Repetition*. Moreover, the same author emphasizes that semantics might be decisive because “in pragmatic repetition the meaning of the simple form is retained, reduplication can develop specific meanings”. This latter criterion will serve as our guidance throughout the remainder of this paper.

In addition to the above quotes there is another set of “preconceived ideas” which are invoked in studies dedicated to *Reduplication*, namely

- (a) everything that happens beyond the word-boundary is *Repetition* as opposed to
- (b) everything that happens word-internally is *Reduplication*.

This view is held by Gil (2005: 31) who declares the word boundary to be the limiting case of *Reduplication* whereas *Repetition* covers the phenomena, which apply beyond this boundary (note that in the following quote a third term – namely that of iteration – pops up):

Repetition and reduplication are superficially similar phenomena characterized by the iteration of linguistic material. By definition, repetition and reduplication differ in the following way: whereas repetition applies across words, and is therefore subsumed under syntax or discourse, reduplication applies within words, and is consequently taken to be part of morphology. Accordingly, the distinction between repetition and reduplication rests crucially on the notion of word.

³ For a thorough review of Rubino (2005), the reader is referred to Stolz et al. (2015).

Gil's distinction of *Repetition* and *Reduplication* as phenomena which belong to two different levels of grammar is perhaps too neat to be true universally.⁴ By definition *Partial reduplication* is a word-internal morphological process. In the case of *Total reduplication*, however, it is by no means always clear whether we are dealing with a complex word unit (compound) or a syntagm (or something in between). Pace Dixon and Aikhenvald (2002: 29), we agree with Kallergi (2015a: 2–3) who finds it “arguable whether the reduplication of an entire word [...] always occurs ‘within a word’”. Moreover, if the word-boundary is the only crucial factor for distinguishing *Repetition* from *Reduplication*, the two categories could be lumped together again by way of labelling them *Word-internal Repetition / Reduplication* and *Word-external Repetition / Reduplication*. However, in lieu of exercising us in terminological sophistry, we will demonstrate below that the word-boundary is largely irrelevant for the distinction of the two notions under review.

Recurrence comes into play when the distinction of *Repetition* and *Reduplication* is at issue. According to Moravcsik (1978: 315) *Reduplication* preferably applies once per word-form and speakers are not free to vary as to the number of Copies of a Base they produce whereas ideally *Repetition* can be (infinitely) recursive according to the speakers' liking. In the same vein Morgenstern and Michaud (2007: 117–118) for instance make a distinction between *Repetition* and *Reduplication* on the following grounds:

[...] on délimitera le champ d'étude en distinguant la réduplication de la répétition. Si le yorouba *dáradára* ‘très bien’ est considéré comme une forme rédupliquée [...], comment classer les *vite vite* ou *très très* du français? E. Moravcsik choisit d'inclure dans le domaine de la réduplication des cas comme *He is very very bright* [...]. Il existe néanmoins un argument décisif contre ce choix. Un mot peut être répété plus de deux fois [...], tandis que la réduplication possède un gabarit fixe: en émerillon, il n'est pas possible de réitérer l'opération de réduplication [...] pour véhiculer un degré supérieur d'intensification.

4 In the French tradition, a similar distinction is made between *redoublement* (“doubling”) which refers to word-internal processes and *réduplication* (“reduplication”) which refers to processes affecting entire syntactic words as is evident from Skoda (1982: 30–31), who explains that

[l]e redoublement diffère aussi du procédé auquel on donne souvent, par commodité, le nom de réduplication. Il s'agit de la répétition d'un mot entier qui est ainsi livré deux fois ou même plus sous une même forme (au même cas) avec le même sens. [...] Le redoublement est fondé sur le principe de répétition totale ou partielle d'une syllabe qui ne constitue pas à elle seule un mot complet.

Both kinds of phenomena are based on the same general principle, namely that of *Repetition*. One might ask whether there is a distinct category of *répétition*. Or is *réduplication* (since it can apply multiply according to Skoda) identical with what others label *Repetition*?

As we will see in Section 4, in connection with the above criteria, there are debatable cases out there, which deserve being studied under the looking-glass.

2.1 Delimiting the domain

To keep the discussion within reasonable bounds, it is necessary to narrow down further the range of phenomena that are taken account of in this study. For both *Repetition* and *Reduplication*, we assume a basic constellation of facts according to which minimally two (binary) linguistic signs are involved in a syntagmatic relation. Figure 1 leaves open the question of whether or not the space between the two linguistic signs can be filled by further elements (of any kind) which are neither reduplicated nor repeated.

| | |
|------------------------|------------------------|
| sign 1 | sign 2 |
| content X / function X | content Y / function Y |
| expression A / form A | expression B / form B |

Figure 1: Two linguistic signs.

The Breton examples (4a–b) illustrate the constellation of the two linguistic signs of Figure 1 with the intensification of adjectives via *Total reduplication*. The examples stem from the Breton translation of the first volume of the Harry Potter heptalogy. The adjective under scrutiny is marked out in boldface.

(4) Breton

a. Singleton adjective

Bras a-walc'h eo ar Sae da c'holeiñ

big enough is DEF cloak to cover

ac'hanomp hon-daou gant Norberzh.

of:1PL we-two with Norbert

'The cloak is **big** enough to cover the two of us and Norbert.'

(HP I Breton, 246)

b. Reduplicated adjective

Bras-bras e oa e zivaskell draenek

RED~big PTCL was its wing spiny

diouzh e gorf treut du-pod.

from its body meagre black-marmite

'Its spiny wings were **very big** in comparison to its skinny jet body.'

(HP I Breton, 243)

In (4a) the singleton adjective *bras* ‘big’ occurs. The same adjective undergoes *Reduplication* in (4b) to *bras-bras* ‘very big’ to indicate a higher degree of intensity, namely that of the relative. The differences between the two realizations of the adjective are captured by Figure 2 which shows that we are dealing with a paradigmatic relation of singleton and reduplicated adjective.

| | |
|------------------------|-----|
| singleton adjective | |
| <i>bras</i> | |
| big | |
| reduplicated adjective | |
| <i>bras~bras</i> | |
| very | big |

Figure 2: From positive to relative in Breton.

There is a systematic difference according to which a non-reduplicated construction of the type $[X_{\text{adjective}}]_{\text{positive}}$ contrasts grammatically with a total reduplicative construction $[X_{\text{adjective}} \sim X_{\text{adjective}}]_{\text{relative}}$. The example, which involves *bras~bras* ‘very big’, is not in any way emotionally loaded, i.e. the use of the two identical (potential) syntactic words is not pragmatically motivated.⁵ It is a grammatically acceptable strategy of expressing the absolute superlative (~ relative) of Breton adjectives which competes with a variety of other functionally similar constructions (Favereau 1997: 93–94).⁶ On this basis, we argue that *Reduplication* comes in the shape of fully-blown constructions which have a meaning / function of

⁵ Emotional involvement, however, comes to the fore in example (i) (again from the Breton version of Harry Potter vol. I) which illustrates *Repetition*.

- (i) Breton
Er-maez er-maez!
 to:DEF-country_side to:DEF-country_side
 ‘Out, out!’
 (Breton HP I, 47)

Uncle Vernon’s outburst gives evidence of pragmatically motivated *Repetition*. What is meant by the speaker is already sufficiently conveyed by the singleton occurrence of *er-maez* ‘out(side)’. The double occurrence of the same item does not change the meaning of the speech-act. However, the *Repetition* of *er-maez* reflects the emotional involvement of the speaker who is experiencing a long-dreaded danger and wants to be alone with his wife to discuss the matter in private.

⁶ *Bras* ‘big’ itself is also used very commonly as an intensifier in so-called adjectival compounds like *pell* ‘far’ → *pell-bras* ‘very far’ (Favereau 1997: 93).

their own which is (however slightly) different from that of the non-reduplicated unit involved (as assumed by e.g. Inkelas and Zoll 2005: 7). *Repetition*, on the other hand, largely lacks the connection to functionally specified construction frames.

In this connection, the question arises how many words the construction [*bras~bras*]_{relative} ‘very big’ comprises. If there is a multi-word construction, Gil’s above approach would automatically consider *bras~bras* ‘very big’ an instance of *Repetition*. The orthographic conventions of Standard Breton require the use of a hyphen which interconnects the two instances of *bras* ‘big’ so that one might think of a compound-like structure and thus of a mono-word construction,⁷ although it is also possible to take the hyphen as an indicator of a status intermediate between one word and a sequence of two words.⁸ As we will see below the situation is not always as clear as that in several of the languages we discuss in this paper.

As mentioned above a relatively common strategy is that of limiting the domain of *Reduplication* to the word-level (= proper morphology) by excluding so-called *Syntactic reduplication / repetition* so that (*Proper*) *Repetition* can lay claim to everything that happens beyond the word unit.⁹ Accordingly, Mattes (2014: 34) delimits her research objects as follows:

There are some phenomena which are superficially similar to reduplication, and which are labeled as such by some authors, but which are not considered as reduplication phenomena here: [...] b) Syntactic repetition, e.g. English *very, very nice*, or German *sehr sehr schön*. [...] Syntactic repetition is considered a borderline case of reduplication by some authors [...].

Yet other linguists do not exclude *Syntactic reduplication* from the phenomenology of *Reduplication* but emphasize that the multiple occurrence of formally and semantically identical syntactic words constitutes exactly the one constellation for which it is extremely difficult to decide whether we are dealing with *Reduplication* or *Repetition*. This problem is addressed by Kouwenberg (2003b: 2) who states that

⁷ It is worth noting that Breton makes parallel use of a coordinative construction type [ADJ_x-*ha*-ADJ_x] which involves two identical adjectives and the conjunction *ha* ‘and’ (Stolz, Stroh and Urdze 2011: 497–499). Orthographically these constructions are again treated as hyphenated mono-word constructions the meaning range of which is too wide to allow us to identify a fixed constructional semantics.

⁸ We are grateful to the anonymous reviewer for bringing this possibility to our attention.

⁹ As the anonymous reviewer emphasizes it is not always absolutely clear what the individual scholars from whose work we quote mean when they refer to *Syntactic reduplication*. This is an important issue that deserves to be looked into in a separate dedicated study in the future.

[a]lthough pragmatic repetition is non-morphological, distinguishing between it and morphological reduplication can be difficult where the repeated item is a single word. In such cases, the analysis will depend crucially on whether a distinction can be made between two identical words on the one hand (repetition), a single word consisting of two identical parts on the other (reduplication).

More often than not prosodic properties figure prominently among those criteria which might help us to tell apart *Repetition* from *Reduplication* (Kallergi 2015a: 219). However, since the organization of suprasegmental systems is largely a matter of the individual language, one cannot postulate universally valid diagnostics beyond the higher degree of probability of pauses with *Repetition* in contrast to *Reduplication* (of syntactic words). Consider the examples from Thai in (5a–c) and (6a–c) (Iwasaki and Ingkaphirom 2009: 34–35).

(5) Thai: Simple reduplication (preservation of tonal properties)

- a. *cháa* ‘slow’ → *cháa-cháa* ‘really slow’
- b. *nùm* ‘young’ → *nùm-nùm* ‘really young’
- c. *dii* ‘good’ → *dii-dii* ‘really good’

(6) Thai: Complex reduplication (fixed pattern)

- a. *ìm* ‘full’ → *ìm-ìm* ‘very full’
- b. *yâak* ‘difficult’ → *yâak-yâak* ‘very difficult’
- c. *dii* ‘good’ → *dii-dii* ‘very good’

The two different prosodic patterns of *Reduplication* in Thai prove two things. Suprasegmentals are employed not only to set *Reduplication* apart from *Repetition* but also to differentiate between several kinds of categories in the domain of *Reduplication*. *Simple reduplication* resembles *Repetition* closely because the prosodic patterns of both are practically identical. *Complex reduplication* is considered complex because of the prosodic differences of the two constituents of the construction. It is formally different from both *Simple reduplication* and *Repetition*. To solve this problem one might want to declare *Simple reduplication* to be no *Reduplication* at all but a form of *Repetition*. We take issue with this solution because there are functional criteria to be considered too (cf. below).¹⁰ The above situation is by no means a unique property of Thai. Similar

¹⁰ In her account of *Reduplication* phenomena in the Mengisa variety of Beti-Fang, Ndibnu Messina Ethe (2012: 186) assumes that “[l]a réduplication syntactique n’est une réelle réduplication. Elle n’est en fait qu’une répétition de certains éléments [...]. Répétition qui admet l’insertion d’un autre élément intensificateur entre ces mots.” Superficially, the possibility of

constellations are reported for a variety of languages such as Pichi (Yakpo 2012: 256–269).

If a major syntactic border (such as a sentence or a clause boundary) runs between Sign 1 and Sign 2, the probability that we are dealing with a case of *Reduplication* approximates zero since the usual conditions for the status of constructions are not met (Fischer and Stefanowitsch 2006: 4–7). If cases of this kind are unlikely candidates for being subsumed under the heading *Reduplication*, they can be considered – ex negativo – as possible realization forms of *Repetition*.¹¹ Thus, it is relatively safe to say that relations of linguistic signs across sentence or clause boundaries fall under the rubric of *Repetition*. Put differently, the problems of distinguishing *Reduplication* from *Repetition* arise below the clause level, i.e. they are expected to turn up within phrases and words.

There is a variety of spell-outs of the indexes used in Figure 1. Not all of the logically possible relations among these spell-outs are located within the scope of our study. Only if both $X = Y$ and also $A = B$ is the case do we have to decide whether *Repetition* or *Reduplication* applies. Therefore the linguistic signs the

breaking the cohesion of the chain of words by way of inserting additional phonological material seems to provide a valid form-based argument against classifying a given constellation of facts as an instance of *Reduplication*. However, the author's example from Bafut (ii) can be interpreted differently.

(ii) Bafut

a **lââ** (kwelɛ') **ndââ** **ndââ**.
 she **cook** (plantain) **cook** **cook**
 'She has **cooked** (the plantain) **continually**.'
 (Ndibnu Messina Ethe 2012: 186)

The inserted *kwelɛ'* 'plantain' is not another intensifier but the object NP of the action verb *lââ* 'to cook'. The two identical words in boldface host the homorganic nasal *N*- which is obligatory in a variety of constructions of Bafut (Tamanji 2009: 212–218). In the reference grammar of Bafut, Tamanji (2009: 218) explains that the Copy of a reduplicative construction is obligatorily equipped with the initial homorganic nasal and that Base and Copy may be separated from each other by "a full lexical item" so that a construction type $[V_x (Y) C_{\text{nasal}}-V_x]_{\text{continuous}}$ can be assumed (similarly also for the intensification of adjectival meanings). Admittedly this is a noncanonical kind of *Reduplication*. However, it has much more in common with the definition in (3) than with *Repetition* because it represents a fixed form-function pair.

11 In connection to this issue it has to be noted that correlative constructions which may consist of combinations of several clauses and thus yield complex sentences frequently involve identical linguistic signs which link the correlated clauses to each other (Haspelmath 2008: 16–18). Stolz (2007a: 60–62) argues that correlative constructions of this kind are not strictly binary since they can undergo iteration in the sense that more than two clauses can be combined by a corresponding number of identical markers.

relation of which is at issue must resemble each other on the expression side as well as on the content side. In cases of $X \neq Y$ and $A = B$ we are facing homophony, i.e. identical forms have different meanings. If, however, the constellation involves $X = Y$ and $A \neq B$ we are facing synonymy, i.e. different forms have identical meaning. If $X \neq Y$ and $A \neq B$ we are outside the core area of *Repetition / Reduplication*, i.e. identity arises neither as to form nor as to function. Of course, similarity and dissimilarity are gradual in the sense that X/Y and/or A/B may be more or less (dis)similar to each other. On this basis it is possible to construe a continuum of similarity of linguistic signs which belong to the same phrase or word. Figure 3 is meant to show that it is not enough for the two signs to be either formally identical or functionally the same. The double-headed arrow indicates the increase / decrease of similarity on the formal and the functional side. Those phenomena, which are especially interesting for the distinction of *Repetition* and *Reduplication* presuppose a kind of equilibrium, i.e. the two signs must correspond to each other not only on the expression side but also on the content side.

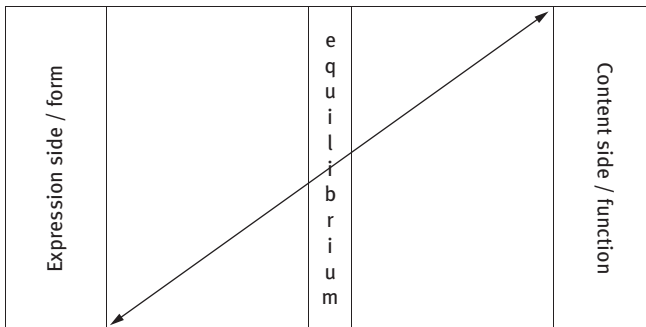


Figure 3: The continuum of similarity.

On the left side of Figure 3 there is maximal identity of the two signs in terms of their form whereas they have nothing in common as to their content. It is the other way round at the right extreme where there is nothing that ties the one sign to the other on the level of their expression side but at the same time Sign 1 and Sign 2 have identical meanings. Associability of meaning is crucial for *Morphological Doubling Theory (MDT)* whose proponents define *Reduplication* such that it covers synonym and antonym constructions as well (Inkelas and Zoll 2005: 47–65). We agree with Wälchli (2007: 101–102) in his rebuttal of this extended version of *Reduplication*. In the segment of the continuum which bears the label equilibrium the two linguistic signs correspond

to each other functionally/semantically as well as formally/phonologically. *Total reduplication*, *Syntactic reduplication/repetition* and *Exact repetition* are paradigm cases of the equilibrium.

Independently of the above assumptions we can identify four logical possibilities for the form that the relation of *Repetition* and *Reduplication* can take. These possibilities are termed Scenarios I–IV in Table 1.

Table 1: The four scenarios of the relation of *Repetition* and *Reduplication*.

| scenarios | <i>Repetition</i> | <i>Reduplication</i> |
|-----------|---|---|
| I | <i>Repetition</i> and <i>Reduplication</i> indistinguishable. | |
| II | | <i>Reduplication</i> is a special kind of <i>Repetition</i> . |
| III | <i>Repetition</i> is a special kind of <i>Reduplication</i> . | |
| IV | <i>Repetition</i> is different from reduplication. | <i>Reduplication</i> is different from repetition. |

In the subsequent paragraphs we will have occasion to refer back to the scenarios of Table 1 repeatedly because the scholars who study *Reduplication* are in disagreement as to the interpretation of its relation to *Repetition*. To check which of the four scenarios corresponds to linguistic reality, it is necessary to proceed inductively, i.e. from tangible empirical proof. To this end, we take a cursory look at a bona fide example of *Repetition* (= Section 2.2) and contrast it with an equally bona fide example of *Reduplication* (= Section 2.3).

2.2 Bona fide *Repetition*

2.2.1 No matter how often

With the definition of the canonical type of *Reduplication* in (3) in the back of one's mind, it may seem reasonable to assume that, if *Reduplication* and *Repetition* are unlike each other, the definition of the canonical kind of *Repetition* must be radically different from that of *Reduplication*. Thus, one might expect more than two linguistic signs to be involved which are neither syntactic neighbours of each other nor constituent parts of a construction with a meaning of its own that is sufficiently different from that of each of its members in isolation. Where *Reduplication* requires identity on both levels of the linguistic sign, *Repetition* may make do with identity on only either the expression

side or the content side. To facilitate the comparison of the two notions under discussion, we focus on those cases in which *Repetition* comes closest to *Reduplication*, namely when the *Repetition* applies to identical linguistic signs in their entirety.

We enter the realm of *Repetition* via the familiar gate-way of English – a language that will become increasingly less prominent during the remainder of this paper. Consider the chunk of text in (7) which is drawn this time from the English original of the first volume of the Harry Potter series. We highlight in boldface a word unit that is used three times in the same utterance.

(7) English

*He liked to complain about things: people at work, **Harry**, the council, **Harry**, the bank and **Harry** were just a few of his favourite subjects.*
(HP I English, 33)

The first name of the protagonist *Harry Potter* is used repeatedly in an enumeration of topics which a certain character (*Uncle Vernon*) likes to address in his daily ranting. In each of the three occurrences, the name refers to the same person (and not to three different persons who share the same first name). The three attestations of *Harry* belong to the same syntactic context, i.e. no major syntactic boundary separates the one from the other(s). However, the three instances of the name are separated the one from the other by intercalated NPs. *Harry*₁, *Harry*₂ and *Harry*₃ (together with a further three NPs, viz. [*people at work*]_{NP}, [*the council*]_{NP}, [*the bank*]_{NP}) are co-subjects of the same predicate, i.e. the copula in the past tense *were*. Each of the occurrences of *Harry* refers to the protagonist independently of the other two attestations of the same name. On the referential level, the triple attestation of *Harry* does not alter anything, i.e. whether there is one mention of *Harry* or several instances of this name the function remains the same. There is no set limit as to the number of times the name could be mentioned (ideally ad infinitum). Thus, it is impossible to identify a fixed construction frame. This is a clear case of *Repetition*. When we say that mentioning the name of *Harry* more than once has no repercussions in terms of reference, this does not imply that *Repetition* is always completely devoid of functions. These functions, however, are not properly grammatical.¹²

¹² Note that even undisputable grammatical morphemes like the TMA markers in the Portuguese-based Creole Principense can be subject to *Repetition* for emphatic purposes (Maura 2009: 174).

2.2.2 A matter of style

Example (7) is an instance of *iteratio without contact*, i.e. a *figura elocutionis* (figure of speech) of the literary art of rhetoric (Lausberg 1990: 79–96).¹³ We are dealing with a stylistic device the employment of which depends entirely on the aesthetic preferences or the emotional involvement of the speaker. *Repetition* of this kind serves as optional ornamentation in order to lend a rhetorically convenient flair to a given utterance or to emphasize the (subjectively judged) importance of the message conveyed. It has the effect of supporting visibly the idea that *Uncle Vernon* is in the habit of complaining about *Harry*. Nevertheless, *Repetition* is not a properly grammatical way of encoding the habitual aspect in English.¹⁴ *Repetition* is not compulsory and may come in very different shapes and sizes.

13 Since some of the confusion in *Reduplication* research results from the use of parallel terminologies which sometimes crisscross over linguistic categories by way of referring to those of rhetorics (as e.g. Maas 2005, 2007), we shortly summarize the problems that might come up if the two terminological traditions of linguistics and Classical philology are mixed up. Lausberg (1990) treats *Reduplication* (*reduplicatio*) as a special kind of *Repetition* (*Wiederholung*) and thus is an advocate of Scenario II – or so it seems. Both notions are subsumed under the heading of *figurae elocutionis* (figures of speech), i.e. they are considered to be functionally similar to each other. At the same time, they form part of a sizable array of stylistic devices, which come in the scalar order of a continuum of identity (cf. our Figure 3). The term *reduplicatio* does not refer to word-internal morphological processes but to the co-occurrence of immediately adjacent identical words or identical groups of words in a chunk of text (Lausberg 1990: 82–84). This means that *Partial reduplication* falls outside the scope of Lausberg’s descriptive categories. Nevertheless, one might get the idea that if not all kinds of *Reduplication* are like *Repetition*, then maybe some kinds of *Reduplication* can still be lumped together with *Repetition*. In point of fact, *reduplicatio* is a misnomer (in terms of contemporary linguistics) because it can be applied only to cases of “Wiederholung des letzten Gliedes einer (syntaktischen oder metrischen) Wortgruppe [...] zu Beginn der nächsten (syntaktischen oder metrischen) Wortgruppe” (Lausberg 1990: 82–83). Accordingly, there is a major syntactic or prosodic boundary, which separates the two occurrences of a given unit (usually a syntactic word). *Reduplicatio* is a case of *Repetition* – and not a case of *Reduplication*. Under the same rubric as *reduplicatio* but as a separate category, we find *geminatio* which, to add to the confusion, can be labelled alternatively as *iteratio* (“Wiederholung eines Einzelwortes”) or *repetitio* (“Wiederholung einer Wortgruppe”). To top it all, the typical form of *geminatio* is called “Doppelung” (*duplication* ~ *doubling*). In spite of all these terminological problems, *geminatio* comes relatively close to *Total reduplication* and *Immediate exact repetition*. To summarize this overview of traditional philological terminology it can be stated that there is no direct continuity between traditional and contemporary terms, which outwardly resemble each other. The notions for which they are employed very frequently do not match.

14 In terms of Quirk et al. (1978: 101) a recurrent “characteristic activity” is usually expressed by the construction [*would* V_{infinitive}]_{habitual}*

Moreover, as a matter of style, *Repetition* is subject to culture-dependent preferences and aversions (cf. Brody, this volume, on Tojol-ab'al).

2.3 Bona fide Reduplication

Before we continue to discuss the functional side of the phenomena under scrutiny, we need to remind ourselves of what an undisputable case of *Reduplication* looks like. Our assumptions about the canonical status of *Total reduplication* notwithstanding, it is usually *Partial reduplication* that most scholars accept as bona fide variety of *Reduplication*, whereas certain instances of *Total reduplication* are suspicious of being representative of *Repetition* instead (Kallergi 2015a: 30–31).

We survey the eleven patterns of *Reduplication* of the Micronesian language Ponapean in Table 2. Since several of the so-called rules (those marked by *) come with an array of sub-(sub-)rules, we opt for economy by way of mentioning only one of a number of variants thereof.

Table 2: Reduplication patterns in Ponapean (Rehg 1981: 74–85).

| # | rule | input | output | meaning _{input} |
|------|--|---------------|-------------------|--------------------------|
| I | $[C_1V_1C_2]_{\omega} \rightarrow [C_1V_1C_2C_1V_1C_2]_{\omega}$ | <i>kang</i> | <i>kang~kang</i> | 'to eat' |
| II | $[C_1V_1]_{\omega} \rightarrow [C_1V_1V_1C_1V_1]_{\omega}$ | <i>pa</i> | <i>pah~pa</i> | 'to weave' |
| III | $[V_1C_1]_{\omega} \rightarrow [V_1C_1V_1V_1C_1]_{\omega}$ | <i>us</i> | <i>us~uhs</i> | 'to pull out' |
| IV | $[V_1V_1C_1]_{\omega} \rightarrow [V_1jV_1V_1C_1]_{\omega}$ | <i>ehd</i> | <i>ei~ehd</i> | 'to strip off' |
| V | $[G_1V_1(C_1)]_{\omega} \rightarrow [G_1eG_1V_1(C_1)]_{\omega}$ | <i>was</i> | <i>we~was</i> | 'obnoxious' |
| VI* | $[C_1V_1V_1C_2]_{\omega} \rightarrow [C_1V_1C_1V_1V_1C_2]_{\omega}$ | <i>duhp</i> | <i>du~duhp</i> | 'to dive' |
| VII | $[V_1C_1V_2(X)]_{\omega} \rightarrow [V_1C_1iV_1C_1V_2(X)]_{\omega}$ | <i>alu</i> | <i>ali~alu</i> | 'to walk' |
| VIII | $[C_1V_1C_2V_2(X)]_{\omega} \rightarrow [C_1V_1V_1C_1V_1C_2V_2(X)]_{\omega}$ | <i>luwak</i> | <i>luh~luwak</i> | 'jealous' |
| IX* | $[C_1V_1V_1C_2V_2(X)]_{\omega} \rightarrow [C_1V_1V_1C_1V_1V_1C_2V_2(X)]_{\omega}$ | <i>duhpek</i> | <i>duh~duhpek</i> | 'starved' |
| X | $[C_1C_1V_1C_2]_{\omega} \rightarrow [C_1C_1i/uC_1C_1V_1C_2]_{\omega}$ | <i>mmed</i> | <i>mmi~mmed</i> | 'full' |
| XI | $[C_1V_1C_2V_2(X)]_{\omega} \rightarrow [C_1V_1C_2C_1V_1C_2V_2(X)]_{\omega}$ | <i>dune</i> | <i>dun~dune</i> | 'to attach' |

In Ponapean, *Reduplication* involves strings of segments which form part of the phonological chain of a word unit. These strings of segments combine with the phonological chain of the word either with or without excrescent segments / vowel lengthening. The added strings and the original phonological chain are not functionally identical. Only in combination do they express a given meaning which none of them can express on its own. What we are facing is a

noncanonical form of *Reduplication*. Nevertheless, it is still an undisputable case of *Reduplication*.¹⁵

The majority of the Ponapean patterns are instances of *Partial reduplication*, namely patterns IV–XI. In these cases, the added string of segments is similar to only a part of the phonological chain of the input. Since under *Partial reduplication* the Copy does not have the same semiotic status as the Base (because it cannot function independently), the conditions reflected by Figure 3 are not fully applicable to this brand of *Reduplication*.¹⁶ Patterns I–III, however, illustrate *Total reduplication* of monosyllabic words, i.e. the added string of segments is similar to the entire phonological chain of the input. Since patterns IV–VI also involve monosyllabic inputs but yield partially reduplicated outputs, the patterns I–III can be considered to be genuine cases of *Total reduplication* (in lieu of covert cases of *Partial reduplication*).

However, in several of the above patterns we have predetermination in the sense that in the output there is fixed segmentism in the Copy. The patterns II–III require the vowel of the added string of segments to be long although the relative vowel of the input is short. In the case of patterns IV and VI, it is the other way round, i.e. the vowel of the added string is short although the corresponding input vowel is long. In patterns IV and VII, the added string of segments contains an excrescent segment which has no corresponding equivalent in the input. In patterns V and X, the vowel in the added string of segments is invariably /e/ and /i/ ~ /u/, respectively, no matter what vowel occurs in the input.

This means that under *Reduplication*, the chains of segments of the input and the output may differ schematically such that the added string of segments has some properties of its own which the input does not share. Thus, the correspondence of the input and the added string of segments may be inexact.¹⁷ The question arises whether or not *Repetition* can be inexact at all and, if yes, whether or not it allows for fixed segmentism and similar phenomena too.

15 The editors of the volume make us aware of the fact that *Reduplication* and *Repetition* most probably also differ as to the direction of the processes they undergo. In the case of *Reduplication* there is left-word as well as right-word *Reduplication*. For *Repetition*, however, it seems to be more plausible to assume that it always has a right-word orientation. For obvious reasons the topic of directionality needs to be studied in depth – a task that cannot be fulfilled in this paper.

16 Marantz (1982) understands *Reduplication* as a form of concatenative affixal morphology. Under this analysis, the reduplicative affix assumes morpheme status so that it can be considered a linguistic sign in its own right. Yet, Base and Copy would be dissimilar on the formal level so that the equilibrium highlighted in Figure 3 is not achieved.

17 One might ask whether *Repetition* can ever be inexact the way *Reduplication* can be inexact. The editors mention cases of *Partial repetition* and sundry phenomena which are suggestive of the possibility that *Repetition* too can be subject to inexactness.

Examples (8a–b) form a minimal pair which proves that it is grammatically relevant whether a verb like *kang* ‘to eat’ undergoes *Reduplication* or not.

(8) Ponapean

a. *Punctual*

I **kang** rais.

I **eat** rice

‘I ate rice.’

b. *Durative*

I **kang-kang** rais.

I **RED~eat** rice

‘I am eating rice.’

(Rehg 1981: 271)

According to Rehg (1981: 271) the “[d]urative aspect in Ponapean is signalled by re-duplication or, if the verb is inherently reduplicated, by the use of *wie*”. This means that a verb with reduplicative stem-formation¹⁸ like *lepalep* ‘to doze’ cannot be reduplicated further to encode the durative. The correct construction of this category requires the use of a dedicated morpheme as in *wie lepalep* ‘to be dozing’. Thus the use of *Reduplication* is not free, but rule-governed, i.e. there are contexts in which *Reduplication* is compulsory whereas in other contexts, *Reduplication* is barred. Similarly, there are (severe) limits on the number of times a given string of segments can be added to the phonological chain of a word.

The case of *Repetition* in English (= (7)) and that of *Reduplication* in Ponapean (= (8)) are representative of the two extremes of a range of phenomena which must be accounted for if one advocates the idea that *Repetition* and *Reduplication* are but two sides of the same coin. The *Repetition* of the name *Harry* belongs to the realm of stylistics as opposed to durative marking by *Reduplication* which is situated in the sphere of grammar. If speakers want to express the durative in Ponapean they have to employ *Reduplication* (or the *wie*-construction wherever required). In contrast, English speakers can invoke the connotations which associate with example (7) in many different ways – including those which do not involve *Repetition*. It might be asked therefore whether it is possible at all to find a common denominator for stylistic and grammatical phenomena. In Section 3, we look at a number of statements put forward by different linguists as to the relation of *Repetition* to *Reduplication*.

¹⁸ Reduplicative stem-formation is not a genuine case of *Reduplication* because the singleton components do not exist independently (Stolz, Levkovych and Dewein 2009).

3 What the grammarians assume

Rehg (1981: 73) describes the process of *Reduplication* in Ponapean as follows: “Reduplication involves the total or partial repetition of a word”, i.e. the author tells us that *Repetition* is an essential part of the process – or that *Repetition* and *Reduplication* are in a relation of inclusion such as that presupposed by Scenario II. If we take the above quote literally, Ponapean *Reduplication* illustrates either word-internal *Repetition* or *Reduplication* which results in a multi-word construction – two ideas which for scholars like Gil (2005), however, are absolutely impossible. Like Rehg (1981) numerous other linguists associate *Reduplication* with *Repetition* – one way or the other. It is often unclear whether *Repetition* is used in an unspecific way or as a technical term. For some authors, *Reduplication* always goes along with *Repetition*. For others, *Reduplication* and *Repetition* must be kept apart (at least for parts of their domains). This section recapitulates some of these ideas focussing on synchrony.¹⁹

There is a plethora of publications in which definitions of *Reduplication* can be found which resemble that given by Rehg (1981) more or less closely. We limit ourselves to a very small selection of quotes from the relative literature. According to Abbi (1992: 12) “[r]eduplication stands for repetition of all or a part of a lexical item carrying a semantic modification.” This does not necessarily mean that any kind of *Repetition* counts as *Reduplication* but *Reduplication* is depicted a special kind of *Repetition*. This interpretation corresponds to Scenario II in Table 1. Similar views are held by many authors whose background in theory, methodology and empiry is not necessarily the same for all. For the generativist school of thought, Raimy (2000: 1) argues that “reduplication is the repetition of a sequence of segments”. Raimy’s definition (similar to that provided by Abbi) can be understood to presuppose the identity of *Repetition* and *Reduplication* on the level of form, i.e. we are dealing with a version of Scenario I. This equation of *Repetition* and *Reduplication* is advocated also by Conradie (2003: 204):

¹⁹ According to Fischer (2011) and kindred spirits *Reduplication* is grammaticalized/lexicalized *Repetition*. Like Bybee et al. (1994) and Niepokuj (1997) they suppose a diachronic cline of the shape: *Repetition* > *Total reduplication* > *Partial reduplication*. This “evolutionist” hypothesis has been argued against most strongly by Hurch and Mattes (2005: 154). Moreover, recent studies are suggestive of the potential failure of the widely assumed implicational universal *Partial reduplication* \supset *Total reduplication* since numerous languages have been shown to lack evidence of *Total reduplication* whereas they make use of *Partial reduplication* productively (Stolz et al. 2015). This means that the general validity of the cline from *Repetition* to *Partial reduplication* via *Total reduplication* needs to be reconsidered thoroughly.

Reduplication, as a morphological system consisting of the unchanged repetition or duplication of a one-word lexeme or onomatopoeic element in its entirety, is commonly used in Afrikaans and not restricted to informal speech registers.

The only difference is the language specific restriction to processes which affect entire word units. In accordance to Raimy's approach, Rubino (2005: 114) claims that "[t]he systematic repetition of phonological material within a word for semantic or grammatical purposes is known as reduplication." On the other hand Hurch and Mattes (2007: 192) are much more cautious when they say that

[w]e are fully aware that other repetitive phenomena, which we exclude from our definition, can be related to reduplication, or that the categorization of repetitive and reduplicative structures can in some cases be continuous rather than dichotomic.

These authors avoid lumping together *Repetition* and *Reduplication* sweepingly without, however, discounting the possibility that there is a continuum which connects the one to the other at least for some of their "life-forms". More generally, however, they seem to support Scenario IV of Table 1. Our own stance is largely compatible with that of Hurch and Mattes (2007) except that we do not agree with their insistence on the word-boundary as the demarcation line which separates *Repetition* from *Reduplication*.

To some extent, even Scenario III is defended by authors like Kouankem (2012: 54) who argues that

[l]inguists have always disregard[ed] syntactic repetition, although it exhibits behaviours that are worth noting in descriptive studies on reduplication. We consider it as a case of special reduplication which can be useful to inform about certain analys[es] of clear reduplication.

We do not consider *Repetition* to be "qualified" *Reduplication*. Nevertheless we subscribe to the author's plea for integrating *Syntactic repetition* with *Reduplication*. More specifically we argue that what is termed *Syntactic repetition* in this quote because it is a phenomenon located outside the morphological word can be shown to be genuine *Reduplication* on functional grounds.

To round off this incomplete survey of statements we quote Fischer (2011: 57) who assumes that

[t]he repetition of lexical material is found on various levels [...]. We normally only speak of reduplication when the item in question has been lexicalized. It seems clear, though, that this lexicalized repetition developed out of an earlier, looser usage since the functions it serves are more or less the same as that of more general repetition.

Fischer's idea corresponds nicely again with Scenario II in Table 1. This means that in the relative literature, one can find proponents of each of the four scenarios of Table 1 – with Scenario II being most probably the default option.

There are of course pitfalls, which are connected to the absence of specialized terminology so that one has to resort to the notion of *Repetition* in its most general (and therefore rather untechnical) reading to explain *Reduplication*. It is very plausible that when the above authors use the term *Repetition*, they do not have discursive *Repetition* in mind but rather an ad-hoc description of the process of copying. Kallergi (2015a: 291–293) reviews the extant terminological solutions in the domain of *Repetition* which involve inter alia the notions of *Recursion* and *Iteration*. It is most probably the latter term which could function as a replacement of *Repetition* in the above quotes. However, the term *Iteration* (aka *Reiteration*) is put to different uses too.

In addition to the above proposals, there are approaches, which defend the idea that the relation of *Repetition* and *Reduplication* is neither one of inclusion nor a strict disjunction. For authors like Aboh, Smith and Zribi-Hertz (2012: 1–2) *Repetition* and *Reduplication* are subcategories of *Reiteration*:

Reiteration is meant here as a cover term denoting any situation where the same linguistic form X (segment, syllable, morpheme, word or phrase) occurs (at least) twice within the boundaries of some linguistic constituent or domain. Thus informally defined, reiteration immediately appears to subsume a set of heterogeneous cases commonly attested cross-linguistically [...]. Available linguistic works on reiteration primarily focus on the subset of cases [...] which fall under the label of reduplication. Reduplication is a morphological process by which the root or stem of a word is repeated. This repetition may either be complete or partial.

The final two sentences of this quote suggest that *Reduplication* still is some kind of *Repetition*. Note, however, that the authors only take account of (phonological) similarities on the expression side.

Subsuming *Repetition*, *Reduplication* and sundry phenomena under the rubric of *Reiteration* as advocated in contemporary approaches such as that of Maas (2005, 2007) ultimately leads us back to the beginnings of *Reduplication* research. The founding fathers of this research programme used to apply a very broad definition of *Reduplication* (Pott 1862: 16–24). Brandstetter's (1917: 4) choice of words is symptomatic of this holistic perspective:

Das Wort Reduplikation oder deutsch Verdoppelung wird in dieser Abhandlung für jede Art sprachlicher Doppelsetzung gebraucht, also für die Doppelung von Lauten, Silben, Wörtern, Wortgruppen und ganzen Sätzen.

We grant that it may be justified ultimately to aim at producing a comprehensive survey of all of those strategies, which at least superficially resemble each other in the sense that they seem to involve *Repetition* of some kind. Simplifying, this all-embracing approach marks the maximal version of Scenario I of Table 1. To our mind, it makes more sense to start from investigating a narrowly defined set

of phenomena in order to secure a foothold in the confusingly variegated territory of *Repetition* phenomena.

It is possible to circumvent the terminological association of the two notions under scrutiny. Botha (1988: 10) refers to *Reduplications* in Afrikaans as “words formed by the copying of words” whereas Erelt (1997: 9) defines *Reduplication* generally as

a pattern where to a word stem is attached another stem that is formally and/or semantically identical to the former, and the resulting construction (word or phrase) is in systematic functional contrast with the single occurrence of the word stem.

The term *Repetition* is used in neither of the quotes, so that it may be assumed that the authors have something in mind that resembles the scenario IV of Table 1.

We side with those linguists who argue that only *Reduplication* (but not *Repetition*) yields a semantically / functionally different output from the singleton form. This is the case with Floricic and Mignon (2007: 55) who argue that

[p]ar le redoublement se constitue une unité qui à maints égards confère à la forme redoublée un statut lexical distinct de celui de la forme simple et de la forme réitérée, que la réitération se manifeste sous la forme d’une jonction avec ou sans marquant.

In contrast, Yakpo (2012: 265) suggests that “the core meaning of repetition is augmentative, hence an iconic ‘more of the same’”. Accordingly, *Repetition* is characterized by an identifiable semantic component which is different from that of the singleton item. This is tantamount to ascribing construction status to *Repetition*. Yakpo (2012: 265) assumes further that *Repetition* “produces a range of mostly emphatic, intensifying nuances, whose exact meanings vary with the word class of the item repeated”. Proper grammatical categories such as plural number are claimed not to form part of the functional range of *Repetition* which is said to be much wider than that of *Reduplication*.²⁰ It is difficult to pinpoint the supposed semantics of *Repetition*. One may even argue that *Repetition* does not convey meaning in the first place. In this connection it is interesting to read that Yakpo (2012: 265–266) observes that

²⁰ Admittedly it is often unclear how instances of reinforced emphasis like English *very very red* vs *very red* should be interpreted in terms of the status of the categories the constructions express. As Rozhanskiy (2015: 1006) observes “[e]mphasis is one of the most often mentioned functions of reduplication. However, a detailed analysis of this function is problematic, because interpretation of the term “emphasis” is blurred and varies from author to author.” Emphasis seems to be located on the fuzzy boundaries of grammar and pragmatics. We agree with the editors of this volume that this area deserves to be investigated thoroughly in a separate study.

“[v]ery often, the word in question is triplicated rather than duplicated for increased emphasis or dramatic effect”. We therefore assume that *Repetition* primarily belongs to the realm of pragmatics in lieu of that of semantics. What Yakpo describes for Pichi is representative of many languages and most probably of *Repetition* (as opposed to *Reduplication*) universally, namely that it is extra-grammatical.

Goodwin Gómez and Van der Voort (2014: 2) emphasize that the crucial criterion on which the distinction of *Repetition* and *Reduplication* rests is of a semantic nature (and not so much based on formal aspects):

Not all repetition, however, is reduplication. A distinctive characteristic of reduplication is that it does not entail repetition of semantic content. Rather, the meaning of a reduplicated form is different from that of its components.

The authors make it clear that *Repetition* and *Reduplication* cannot be lumped together no matter how similar the two categories seem to be on the surface. Their resemblance may be purely superficial. Since it is difficult to draw the dividing-line between *Repetition* and *Reduplication* on the basis of formal criteria alone, it is inescapable to have a look at the functional aspects of *Repetition* and *Reduplication*.

In Beja, distributive meanings are commonly expressed by way of copying a Base to yield a construction which the grammarians of the language classify as a case of *Repetition* (Wedekind, Wedekind and Musa 2007: 79) because the output of the copying process looks like a binary multi-word construction. Consider the noun *nabhoob* ‘noon’ in (9).

(9) Beja

Nabhoob~nabhoob *naan* *daatiniya?*

RED~noon INTERR do:2Sg.M

‘What do you do **each noon?**’

(Wedekind, Wedekind and Musa 2007: 79)

Since *nabhoob~nabhoob* ‘each day; daily’ is only an instantiation of the under-specified construction type $[N_x \sim N_x]_{\text{distributive}}$ which has two slots which may be filled ideally by any pair of identical nouns it can be assumed that a regular pattern arises which expresses a certain grammatical category systematically. There is thus a firmly established form-function pair which, to our mind, invites being classified as *Reduplication*. The reduplicative strategy is widely common with distributives cross-linguistically (Stolz et al. 2015). Yakpo (2012: 266) identifies a parallel construction type in Pichi which, however, he terms “[a]nother type of repetition that may be seen as iconic”. This interpretation is

the logical consequence of taking the word boundary as the upper limit of the domain within which *Reduplication* is allowed to apply. However, the examples from Breton (4) and Beja (9) are different from the bona fide *Repetition* illustrated by the English example (7) insofar as the former two are the product of grammatical rules and thus count as instances of *Reduplication* whereas the *Repetition* in example (7) cannot be described with reference to genuinely grammatical rules.

As Keane (2005) shows *Syntactic reduplication* is by no means restricted to mono-word bases. There are systematic examples of so-called *Echo reduplication* of binary syntagms which involve regular segmental modification on the Copy as in (10) from Tamil. The initial syllable /na/ of the adjective *nalla* ‘good’ is replaced with /ki/ in the Copy to yield *killa* which has no meaning of its own.

(10) Tamil

avan **[[nalla paiyan]**_{Base} **[[killa paiyan]**_{Copy}^{echo} -*ṇṇu nampatee.*
 he **[[good boy]** **[[*good boy]]**-QUOTE believe:NEG:IMPER
 ‘Don’t believe that he’s **[[a good boy] [and so forth]]**.’
 (Keane 2005: 247)

Echo expressions in Tamil are restricted to “negative contexts” (Keane 2005: 248). They have a clearly delimited function, namely that of indicating ontological categories which are associated with that of the Base. Their outer form is subject to certain phonological requirements on the Copy. Thus, there is a construction type $[(ADJ)_x N_y ki-(ADJ)_x N_y]_{echo}$ which contains *ki-* as obligatory first syllable on the Copy. This is certainly a noncanonical kind of *Reduplication* – even a doubly noncanonical brand because of its reduced exactness and its phrasal Base.²¹ However, what it shares with other kinds of *Reduplication* is its functionality in terms of expressing meanings which are not identical with that of the Base. There are more than two words involved in the construction. This size, however, does not preclude the possibility that a construction arises. Cases like that in (10) cannot pass as instances of *Repetition* if function is the crucial criterion. Alternatively (i.e. if one opts for ignoring function as a criterion) one would have to accept the possibility to have *multi-word inexact Repetition* with fixed segmentism which does not seem to be a better choice after all.

²¹ *Multi-word Reduplication* without segmental modification is attested in several languages among which we find Guyanese Creole (Devonish 2003: 52–59) and Nweh (Atemajong Njika 2012: 116).

Reduplication has grammatical functions. *Repetition* does not have grammatical functions, however, this does not imply that *Repetition* is generally without functions. The domain of *Repetition* is of a pragmatic and stylistic nature. Thus, *Repetition* fulfills pragmatic and/or stylistic functions. That *Repetition* and *Reduplication* should be dissociated from each other is evident also from the fact that they may interact successively to give shape to an utterance as we will see in Section 4.

4 A succession of processes

In this section we attempt to rebut empirically the idea of Gil's and others according to which *Repetition* applies outside the word-level in contrast to *Reduplication* which is confined to the word unit.

For Nweh Atemajong Njika (2012: 113) explains that ideophones “duplicate” to express “successive actions” and that the process may be repeated “as many times as the speaker wishes to emphasize”. This means that there is a basic process of *Reduplication* which turns a mono-word expression which serves the purpose of encoding “single action” into a binary construction which expresses “successive actions”. On this basis pragmatically motivated *Repetition* may operate as often as the subjective needs of the speaker require.²² This is a scenario which recurs in several languages. It is suggestive of a chronology according to which *Repetition* applies after *Reduplication*. This order can be observed on both sides of the word-boundary.

For cases which are ambiguous as to their status as instances of *Total reduplication* or *Syntactic reduplication*, the data from Vernacular Liberian English are representative. Singler (2003: 157) mentions that “reduplicated adjectives are themselves open to iteration”. An adjective like *bi* ‘big’ may be reduplicated to *bi-bi* ‘(very) big’.²³ In this reduplicated form it may then be subject to *Repetition* as in (11a–b).

²² Noss (2001: 260–264) describes how in Gbaya folk tales the *Repetition* of ideophones serves stylistic purposes. In the same vein Dingemanse (2015: 949) claims that in Siwu “[the] performative iteration of [word units] accepts ideophones as input [...], and its output consists at least of one copy, again without a pre-set upper bound”. The *Repetition* of the process is thus recursive and it depends on the speakers choice how many Copies will be produced.

²³ Singler (2003: 156) states that this adjective belongs to a small set of adjectives which occur preferably in the reduplicated form “conveying little or no emphasis” in attributive function.

(11) Vernacular Liberian English

a. *Reduplication*

kɛ ge wi bi-bi rafo.
 can give 1PL **RED~big** rifle
 ‘...[they] give us **(very) big rifles.**’
 (Singler 2003: 156)

b. *Repetition*

da dɔkta we da bi-bi-bi biabia.
 DEM doctor with DEM **INTENS~RED~big** beard
 ‘...that doctor with that **really (very) big beard.**’
 (Singler 2003: 157)

There is an abundance of similar cases in several of the Creole languages presented in the volume edited by Kouwenberg (2003a). In contrast to these cases, what seems to be much more interesting, however, is the evidence of *Repetition* occurring on the word-level.

4.1 *Repetition* within the word

We continue with data from the Portuguese-based Creole Angolar (São Tomé), for which it is assumed that *Reduplication* can be total or partial (Mauer 1995: 153–154). The two types of *Reduplication* can be used interchangeably, i.e. they are functionally identical. The main functions are intensification (with adjectives), distributive (with numerals) and durative (with verbs). *Recursive reduplication* is possible: “La forme simple peut être rédupliquée plusieurs fois et la réduplication peut être totale ou partielle” (Maurer 1995: 153). In example (12) the input singleton is *foga* ‘to dance’ which has two possible outputs, namely *Partial reduplication fo~foga* = *Total reduplication foga~foga*, both of which are employed to encode the durative. However, example (12) gives evidence of *Triplication* in lieu of the expected *Reduplication*.²⁴

(12) Angolar

Thô a ka foga~foga~foga atê pomenha ka biri.
 after s/he TAM **REP~RED~dance** until morning TAM open
 ‘Afterwards one **dances on and on and on** until the morning comes.’
 (Maurer 1995: 154)

²⁴ In this subsection we pretend that *Reduplication* is connected to the innermost of the identical sequences of segments whereas all other positions are related to *Repetition*.

The same happens in example (13). In this case the input is *pia* ‘to watch’, which may undergo *Partial reduplication* to yield *pi~pia* or *Total reduplication* with the output form *pia~pia* to encode the durative. As in the previous example there is *Triplication* in (13).

(13) Angolar

a ka pi~pi~pia ranthu.
 IMPERS TAM **REP~RED~watch** Congo_dance
 ‘They **kept watching** the Congo dance.’
 (Maurer 1995: 154)

Semantically the triplicated constructions are instances of the durative just as the reduplicated constructions are. This means that *foga~foga~foga* expresses the same grammatical category as *foga~foga*. This is the same in the case of *pi~pi~pia* and *pi~pia*. Pragmatically, however, *Triplication* and *Reduplication* convey different connotations.

Maurer (1995: 155) assumes in connection to the *Reduplication* of ideophones in Angolar that “pour souligner encore plus l’emphase, la syllabe peut être répétée davantage de fois”, i.e. the excess phonological material has the purely pragmatic function of adding emphasis to an utterance. In Ladham et al. (2003: 169) the Angolar case is reviewed again. The authors conclude that “reduplication may, after all, represent a grammatical strategy, different from the narrative strategy of multiple iterations” about which they state that they are attested also in other Portuguese-based Creoles of the Gulf of Guinea. On this basis, it is possible to distinguish *Word-internal reduplication* from *Word-internal repetition*.

Something similar can also be observed in the Austronesian language Riau Indonesian as studied by Gil (2005). By way of comparing the evidence from Angolar with that of Riau Indonesian, it is argued that we are not facing *Multiple reduplication* at all. Both of the languages attest to *Word-internal repetition* operating on *Reduplication*. In example (14) the input *culit* ‘to pull’ is subject to *Partial reduplication* which results in the word-form *cu~culit* which has a dispersive or diminutive meaning. As is evident from the example, the realized word-form consists of many more syllables than the expected output form.

(14) Riau Indonesian

A kalau orang itu sikit cu~cu~cu~cu~cu~culit
 EXCL TOP person DEM.DIST a_little **REP~REP~REP~REP~RED~pull**
bayar mahal kalau orang perbaiki ini.
 pay expensive TOP person CAUS:good:EP DEM.PROX

‘Those people just **fiddle a little bit** and then you pay a lot, the people who fix things.’

(Gil 2005: 60)

Gil’s (2005: 60) explanation of this constellation of facts runs as follows:

Again, in spite of the presence of multiple copies, [this] is a clear instance of reduplication. The unit of output is smaller than a single word, and the interpretation is clearly arbitrary, expressing atelicity. In fact, with its six copies of the syllable *cu-*, *cu-cu-cu-cu-cu-culit* is the instance of multiple reduplication with the greatest number of copies in the corpus, and, to the best of my knowledge, a current world record.

Gil argues that the Riau Indonesian case is an instance of *Multiple reduplication* exactly because it happens inside of a given word. This means that in his view the distinction of *Reduplication* and *Repetition* is purely formal (or distributional) whereas functional criteria are not invoked at all. We take issue with this opinion since it can be shown that the main difference between the two categories is of a functional nature.

This can be shown for instance on the basis of data from the Austronesian language Chamorro which is notorious for the interesting patterns of *Reduplication* it displays (Inkelas and Zoll 2005: 106–108). *Reduplication* is always *Partial reduplication* in Chamorro. One pattern of *Partial reduplication* is employed to intensify adjectival meanings. In this case the rightmost syllable body (= CV) of a predicative adjective is copied to yield the intensified form. In example (15) the input is *dikike* ‘small’ ‘which is partially reduplicated to *dikiki-ke* ‘very small’.²⁵

(15) Chamorro

Dikiki-ke' *i* *patgon*.

small-RED DEF child

‘The child is **very small**.’

(Topping 1973: 216)

Topping (1973: 216) explicitly states that

[f]or extra emphasis the final CV may be repeated more than once [...]. The number of times a syllable can be repeated for emphasis is partly a matter of one’s own speaking style.

²⁵ Superficially, Base and Copy are not identically since the mid-high front vowel /e/ is different from the high front vowel /i/. However, this difference in quality results from the regular processes of vowel raising / vowel lowering dependent on the syllable type (open vs closed) (Topping 1973: 21).

Therefore one may find examples like (16) in which *Triplication* applies.

(16) Chamorro

Dikiki-ki-ke' *i* *patgon*.

small-RED~REP DEF child

'The child is **really very small**.'

(Topping 1973: 216)

In both of the examples (15)–(16) the grammatical category expressed by the predicative adjective is that of the intensive. In this sense *Reduplication* and *Triplication* are synonymous semantically. However, the triplicated word form carries an additional pragmatic load, namely that of emphasis. There is no such emphasis in the case of *Reduplication*.

The examples of supposedly *Multiple reduplication* in Angolar, Chamorro, and Riau Indonesian are uttered in situations in which the speaker is emotionally involved so that emphatic speech is triggered. In the Angolar cases, the climax of a dance event is described the cultural importance of which the narrator wants to convey to the audience. The absence of contextual information notwithstanding, the Chamorro examples also invite a reading according to which *Triplication* associates with insistence and emphatic speech. In the Riau Indonesian case, the speaker is very much upset because of the habitually bad performance of the local tradesmen. This emotional involvement manifests itself in the *Repetition* of strings of segments.

4.2 A chronology of steps

We assume that the supposed instances of *Multiple reduplication* can be analyzed as the combination of two successive processes which we label Step #1 and Step #2:

- Step #1 consists in the proper *Reduplication* which is responsible for the expression of the grammatical category (of the durative, for instance).
- Step #2 involves stylistically-motivated *Repetition* which operates on the input provided by the reduplication at Step #1 to yield a pragmatically-loaded output.

Thus, there is no *Multiple reduplication* in the first place, but “*simple*” *Reduplication* followed by *Repetition* for stylistic purposes. In Table 3 we suggest a chronology which reflects the assumed succession of processes for the data from the three languages discussed in this section. Interestingly we have not found any evidence of an inverted succession of processes, i.e. of *Repetition* feeding *Reduplication*.

Table 3: The chronology of processes.

| language | input | Reduplication | Repetition |
|-----------------|----------------|-----------------------------------|---------------------------|
| Angolar | <i>pia</i> | <i>pi~pia</i> | <i>(pi~)pi~pi~pia</i> |
| Chamorro | <i>dikike'</i> | <i>dikiki~ke'</i> | <i>dikiki~(ki~)ki~ke'</i> |
| Riau Indonesian | <i>culit</i> | <i>cu~culit</i> | <i>(cu~)cu~cu~culit</i> |
| | | Step # 1 | Step # 2 |
| | | grammar | pragmatics |
| | | durative / intensive / diminutive | emphasis |

Given that this analysis captures the empirical facts adequately, the erstwhile demarcation line which used to separate *Repetition* from *Reduplication* dissolves since the Angolar, Chamorro, and Riau Indonesian examples are indicative of the possibility of *Repetition* applying also inside the word-unit. If it is possible for *Repetition* to affect parts of the phonological chain of words, it suggests itself that *Reduplication* may apply word-externally as shown by the examples of *Syntactic reduplication* in Modern Greek in (2) above.

If the word-boundary can no longer be taken to provide the principal touchstone for distinguishing *Repetition* and *Reduplication* because both of the phenomena can apply word-internally and word-externally, then we need a replacement – and this replacement is of a functional nature. *Repetition* and *Reduplication* are different from each other because they have different functions.

To sum up it can be said that whether or not one repeats chunks of utterances is irrelevant semantically and grammatically, i.e. the singleton chunk and the repeated chunk together are synonymous to the singleton chunk. Pragmatically and perhaps also on the level of connotations, *Repetition* might invoke the association with insistence – and thus may have function, too, but of a different, i.e. extra-grammatical kind.

5 Conclusions

To conclude, *Repetition* and *Reduplication* belong to two different spheres functionally. *Reduplication* is equipped with fixed construction frames which are associated with meanings of their own and often are of a grammatical nature. *Repetition* is largely independent of fixed construction frames and does not trigger changes in meaning and / or grammatical function of a given item. *Reduplication* and *Repetition* are not distributed over disjunct modules of grammar

(such as word-based morphology for *Reduplication* and syntax for *Repetition*). Both are licit inside and outside the word. They may even conspire word-internally and word-externally. Still, their distribution is not the same because *Repetition* sides with pragmatics and style whereas *Reduplication* is a matter of grammar and lexicon.

However, one major obstacle remains which blurs the supposedly neat distinction that we have summarized in the foregoing paragraph. This obstacle is the unclear categorial status of intensification and, to some extent, also emphasis which are two notions the expression of which is frequently associated with patterns which are classified in the literature as either *Reduplication* or *Repetition*. For Bollée (2003: 222), for instance, “emphatic repetition [has] intensifying meaning”²⁶ with adjectives (and may be applied recursively) whereas *Reduplication* is associated “with the meaning of attenuation” of adjectives. The English translations of the examples of *Repetition* (from the French-based Creole Seselwa) involve the construction type [very ADJ]_{intensive/relative}. We are of the opinion that without further contextual information, it is next to impossible to decide whether the Seselwa examples come with any additional dose of pragmatics. If the Seselwa construction [ADJ_x ADJ_x]_{intensive/relative} is the regular way of expressing the absolute superlative as in the Breton case in (4), it might be argued that we are dealing with the regular construction which is employed to express a grammatical category of adjectives. If this is the case, both Bollée’s *Reduplication* and her *Repetition* are properly grammatical strategies. If, however, it can be shown that the intensification of the adjectival meaning is not primary but only a potential epiphenomenon of emphasis, i.e. of emotional involvement on the part of the speaker, then it will make sense to employ different terms for cases like Seselwa *píti píti* ‘very small’ and Seselwa *gri-gri* ‘greyish’ (Bollée 2003: 223).

Form-based approaches and function-based approaches lead to widely different interpretations of the relation of *Repetition* and *Reduplication*. Scholars whose focus is on morphology of necessity exclude phenomena which involve more than one word unit. In contrast if one starts from the functional side one cannot stop at the word-boundary in one’s search for constructions. We have embraced this latter approach in the hope that some light is shed on the intricacies that characterize the relation of *Repetition* and *Reduplication*.

²⁶ Similar views are held by Migge (2003: 61) whereas Gooden (2003: 94–99) considers comparable structures of Jamaican to be genuine cases of *Reduplication*. The same point of view is defended by Obeng and Winkler (2003: 113) for Limonese Creole.

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Abbreviations

| | | | |
|--------|----------------------------|-------|--------------------------|
| ADJ | = adjective | M | = masculine |
| C | = consonant | N | = noun |
| CAUS | = causative | NEG | = negation |
| CO | = contrastive | O | = object |
| DEF | = definite | PL | = plural |
| DEM | = demonstrative | PROX | = proximal |
| DIST | = distal | PTCL | = particle |
| DK | = associated motion marker | QUOTE | = quotative |
| DR | = downriver relation | R | = relative clause marker |
| EP | = end-point oriented | RED | = reduplication |
| EXCL | = exclamation | REP | = repetition |
| F | = feminine | S | = subject |
| FR | = frustrative | SG | = singular |
| G | = glide | TAM | = tense-aspect-mood |
| IMPER | = imperative | TOP | = topic |
| IMPERS | = impersonal | V | = verb / vowel |
| INTENS | = intensive | VI | = verbal stem marker |
| INTERR | = interrogative | | |

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Thomas Schwaiger

The derivational nature of reduplication and its relation to boundary phenomena

Abstract: This chapter takes a fresh look at the status of reduplication in morphology. Modern linguistics has mainly treated the process from a theoretical perspective for its phonological characteristics, thereby often neglecting its likewise special morpho-semantic properties. But, curiously, even the slower growing amount of pertinent functional(-typological) work on the phenomenon has by and large taken for granted that reduplicative forms are equally capable of expressing derivational as well as inflectional meanings. The present study, however, argues reduplication to be of an essentially derivational nature. This is, firstly, shown by checking reduplicative features obtained from language typology against typical criteria for distinguishing morphological inflection and derivation. Secondly, the derivational propensity of reduplication is explained by iconic saliency, making the process prone to express more concrete semantics as opposed to rather abstract inflectional notions. Crucially, what emerges from the discussion is a hitherto unexplored additional criterion for keeping reduplication and repetition apart.

1 Introduction and overview

This paper attempts to integrate a familiar issue in the research of linguistic iteration phenomena with a fresh take on the hitherto rather unchallenged assumption that the morphological process of reduplication can be employed for both derivational as well as inflectional purposes.¹ The problem concerns the principled delineation of different types of superficially similar iterative lan-

1 The following abbreviations are used in this article: 1 = first person, 3 = third person, ACC = accusative, adj = adjective, APiCS = *Atlas of Pidgin and Creole Language Structures*, CL5 = noun class 5, DEM = demonstrative, EXCLA = exclamation, EXI = existential, FAM = familiar,

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guage structures by applying a set of appropriate distinguishing criteria. The novel view of reduplication advocated here considers the phenomenon to be an operation of morphology which is functionally very prone to, if not exclusively used for, the expression of derivation. In addition to the new light that is thus cast upon the status of reduplicative constructions in general, what is also gained is a further criterion which in at least some cases may help to decide whether in a language one is dealing with syntactic repetition or morphological reduplication.

Section 2 introduces reduplication and outlines its modern investigation in formal and functional approaches, uncovering a certain imbalance and setting of investigative priorities that have led to a situation in which a closer inspection of the morphological functions of the process in terms of the traditional division of morphology into inflection and derivation has fallen through the cracks. Accordingly, Section 3 tackles the question of where to locate reduplication in the morphological component from a typological point of view, demonstrating that the operation has largely, if not exclusively, derivational traits, which will be ascribed to the semantically fairly concrete iconic basis of reduplication. Section 4 utilizes these insights as another feature for delimiting syntactic repetitions and morphological reduplications in potentially ambiguous cases of exact word repetition. Section 5 offers some conclusions and an outlook.

2 Formal versus functional approaches to reduplication

The cross-linguistically widespread morphological device of reduplication can be relatively theory-neutrally defined as “[t]he systematic repetition of phonological material within a word for semantic or grammatical purposes” (Rubino 2005: 11).² It is well-known (see also Freywald and Finkbeiner’s introduction to this volume) that the process can be divided into full/total/complete reduplication of units of morphology like words (1a), stems or roots (1b) and, more rarely, affixes (1c) as well as into partial reduplication of phonologically circumscribed

IMP = imperative, INDF = indefinite, INF = infinitive, M = masculine, PL = plural, PST = past, R = realis, RED = reduplication, REL = relative, SBJ = subject, SG = singular.

² The definition excludes lexical reduplications like many onomatopoeia (see Schwaiger 2015: 477–478), which lack a simplex counterpart and are better regarded as extra-grammatical formations.

units like feet (2a), syllables (2b) and, more controversially (because formally overlapping with processes of consonant gemination or vowel lengthening), single segments (2c). As can be seen from the latter examples, a partial reduplicative exponent (often and henceforth called the reduplicant) may follow, precede or intrude into the morphological base. The functions of reduplication across lexical categories typically pertain to some kind of plurality (1c), intensity (2a), diminution (2c) or a combination of the former (e.g. [2b]) and, a little less typically, to word-class changes (though frequently these display additional nuances of the former types, e.g. plurality in the derived nouns of [1b]) as well as to seemingly loose semantic relations between reduplicated and unreduplicated word forms like in (1a).

(1) Indonesian

- a. *gula* 'sugar' *gula~gula*³ 'sweets'
mata 'eye' *mata~mata* 'spy'
 (Sneddon 1996: 16)

Acoma

- b. *kúdu-* 'round' *kúdu~kúdu* 'candy'
ši:ña- 'cracked' *šiña~šiña* 'crackers'
 (Miller 1965: 155)

Hungarian

- c. prefix *vissza-* 'back' *vissza~vissza-néz* 'to look back from time to time'
 prefix *át-* 'through' *át~át-jön* 'to come over from time to time'
 (Kiefer 1995/1996: 175, 176)

(2) Gooniyandi

- a. *jiginya* 'little' *jiginya~ginya* 'very little'
 (McGregor 1990: 237)

Trumai

- b. *pen* 'vomit' *pe~pen* 'vomit many times'
lat' 'lie' *la~lat'* 'lie many times/a lot'
 (Guirardello-Damian 2014: 220, 221)

³ This paper consistently follows the Leipzig glossing rules in indicating the boundaries between bases and reduplicants by way of a tilde even when the sources in question mark these boundaries differently or not at all.

Shuswap

| | | | |
|-------------------------------|--------|-------------------------------|--------------|
| c. <i>pésalk^oe</i> | ‘lake’ | <i>pé-p~salk^oe</i> | ‘small lake’ |
| <i>cqélp</i> | ‘tree’ | <i>cqe-q’~lp</i> | ‘small tree’ |

(Kuipers 1974: 38, 39)

Reduplication thus exhibits interesting peculiarities both in form as well as in function, but ever since Wilbur (1973) initiated a steadily growing interest in the phenomenon within contemporary linguistic research, formal studies on phonological aspects of reduplication have been in the majority compared to functional investigations, even despite Moravcsik’s (1978) early modern functional-typological classic on the subject.

The first formal studies in the wake of Wilbur’s (1973) seminal dissertation have largely concentrated on the at times surprising interactions of phonological and morphological rule ordering when it comes to reduplication, phenomena since then commonly known as overapplication and underapplication in the relevant literature. Later on, the interest of formalists gradually shifted to the segmental make-up, prosodic shapes and relative positioning of reduplicants vis-à-vis their bases, and it was especially during this period that reduplication became to be explicitly envisaged as a kind of concatenative morphology. Accordingly, the process was viewed as affixation – basically either of a segmentally empty skeletal morpheme melodically filled by a mechanism of phonological copying in early non-linear/prosodic morphology (e.g. Marantz 1982; see also Lensch, this volume, on English reduplication in derivation) or of a reduplicative input affix evaluated for its output form in terms of faithfulness and identity constraints within correspondence theory, a still very popular optimality-theoretic sub-theory (e.g. McCarthy and Prince 1999; see also Kentner 2017 on reduplication in German) – and/or compounding, the latter especially in Inkelas and Zoll’s (2005) morphological doubling theory (but see also Sui, this volume, on reduplication in Standard Chinese). Both the primary focus on reduplication form and the equation of the process with one and/or the other type of morphological concatenation have led respective researchers to an unquestioned parallelization concerning reduplicative functions in morphology, a very succinct example being the following quote by Wiltshire and Marantz (2000: 560–561): “Cross-linguistically, reduplicating affixes serve the same types of functions that any affix with its own phonological form can serve, including all derivational and inflectional functions. Thus reduplication functions in the morphology just like other forms of affixation.”⁴

⁴ Although such a parallel conceptualization obviously works less straightforwardly with reduplication and compounding (compounds being formally and functionally distinct from both inflections and derivations, albeit more closely related to at least some of the latter) as,

Functional(-typological) studies on reduplication, on the other hand, have concentrated on the observation that reduplicative constructions often express “meanings of increased quantity, intensity, diminution and attenuation which are concepts capable of pulling together many superficially disparate uses” (Moravcsik 1978: 324), a fact eventually described by Moravcsik (1978: 330) as “a tendency [...] for languages to use reduplicative patterns – i.e. quantitative form differentiation – for the expression of meanings that have something to do with the quantity of referents.” This view gained increasing popularity under the guise of (different interpretations of) the iconic principle of reduplication (see also Horn, this volume, on the lexical clone):

- (3) More of the same form stands for more of the same meaning.
(Kouwenberg and LaCharité 2005: 534)

It is clear that this principle runs into problems when confronted with the widespread yet intuitively counter-iconic meanings of diminution and attenuation mentioned by Moravcsik (see also [2c]). Functional researchers like Kiyomi (1995) have thus chosen to distinguish an iconic (expressing plurality and intensity) and a non-iconic process of reduplication (expressing mainly diminution). By contrast, Kouwenberg and LaCharité (2005) opt for a radial-category type set-up of reduplicative meaning in which attenuative (i.e. diminutive in the broad sense) meanings are related to unambiguously iconic meanings like distributive or dispersive (i.e. plurality) via semantic extension.⁵ Linguists like Regier (1998) and Fischer (2011) in turn have incorporated another iconic dimension rooted in baby talk (register) and child(-directed) language, which are all known to make

for example, in the morphological doubling approach, the overall assessment reads basically the same: “Reduplication, especially partial reduplication, is associated cross-linguistically with all sorts of meaning, both inflectional and derivational” (Inkelas and Zoll 2005: 14). Examples explicitly treated as inflectional in later work by Inkelas (2014: 173–174) involve nominal plurality, verbal pluractionality and related aspect (including Indo-European perfect[live] reduplication, e.g. Latin *te-tigi* from *tango* ‘I touch’ or *ce-curri/cu-curri* from *curro* ‘I run’), case as well as possession. Anticipating the discussion in Section 3, the first two of these categories are rather non-prototypical/inherent than unequivocal instances of inflection (see Dressler 1989: 6; Booij 1993: 30, 35), while the absolutive case marking status of reduplicated nouns in Chukotko-Kamchatkan is dubious (see Stolz, Stroh and Urdze 2011: 194, footnote 229), leaving only the rare and understudied possessive reduplications in languages like Arosi and Tarok.

⁵ That this is semantically a plausible scenario has recently been shown in the formally more arbitrary domain of affixation for German verbs derived by the suffix *-eln* (see Weidhaas and Schmid 2015).

frequent use of (often extra-grammatical) reduplication(-like) structures (see Dressler et al. 2005: 467–468). But such differences in details of implementation aside, in general the iconic view of reduplication is a more specific reflection of a broader functional stance in morphology which assumes that “the properties of morphological expression correlate directly with aspects of the meaning expressed” (Bybee 1985: 4), speaking for reduplication as an independent morphological operation in its own right, which despite sharing a segmental-additive character with affixation (cf. Mayerthaler 1981: 110) nevertheless shows a strong non-concatenative trait in obtaining its form directly from the respective base (see also Wilbur 1973: 5). However, apart from a few scattered remarks in the literature adduced in Section 3, also functionally oriented reduplication studies have relatively little to say about the exact place which the process holds or can hold in linguistic morphology at large.⁶

In sum, then, what one finds are asymmetric interests and differing degrees of progress within basically two approaches to the phenomenon of reduplication which both display a certain neglect of the morphological status of the process in terms of the broad functions of inflection and derivation. Consequently, the goal of the following section is to look into this matter more thoroughly.

3 The derivational nature of reduplication

In spite of the general indifference towards the question of inflection and derivation in reduplication as sketched in the preceding section, occasionally there have been more nuanced remarks on this subject (primarily from the functionalist camp of linguistics). Though not pursued with any systematicity, researchers have thereby time and again suggested a propensity for derivation in reduplication. Cross-linguistically, Bybee (1985: 97) remarked for her typological sample of verbal morphology that “[r]eduplication is more common among derivational processes than among inflectional.” On a grammatically wider but language genetically smaller scale, Fabricius (1998: 19) found that “[r]eduplication occurs more commonly as a derivational process in Australian languages than as an inflectional process.” Furthermore, for the individual language Wari’ it has been noted that its solely compositional and reduplicative

⁶ To cite the modern functional classic once again, Moravcsik (1978: 325) seems to side with the formalist mainstream opinion (for an early example of which see Wilbur 1973: 6) in discerning “derivational meanings” and “non-derivational [inflectional?] meaning categories” that reduplicative constructions may serve to express.

“verbal morphology might be considered almost exclusively derivational, since reduplication itself appears largely, if not completely, derivational in its meaning” (Everett and Kern 1997: 6). The potential theoretical significance of such observations, however, has only slowly and recently⁷ begun to gain slightly more attention in two articles (which due to their handbook nature are relatively cursory with respect to the topic at hand) by Inkelas (2014: 175–176) and Schwaiger (2015: 477).

More directly bearing on the question of exact word reduplications and their demarcation from syntactic word repetitions further discussed in Section 4, it is telling to look at Stolz, Stroh and Urdze’s (2011: 194) list of categories apparently not found to be expressed by total reduplication in the languages of the world, many of them of a more or less unambiguously inflectional type, e.g. grammatical gender/class, case, definiteness, possession, negation, imperative/prohibitive, person and others. While most of the listed meanings seem to be absent in partial reduplication as well, Stolz, Stroh and Urdze (2011: 194, footnote 228) remark that on the whole the restrictions do not hold for partially reduplicated forms (see also Inkelas and Zoll’s quotation in footnote 4), though the candidates left are far from unambiguous. For possession (requiring a lot more research; see again footnote 4), the authors themselves mention instances from Movima (see Stolz, Stroh and Urdze 2011: 194, footnote 230), for the imperative one can adduce mostly constructionally complex examples as below:⁸

(4) Yaqui

- a. *Katee hiosia-ta chap~chapta*
 don’t paper-ACC IMP~cut
 ‘Don’t cut the paper!’

⁷ Though see also the generally less received unpublished dissertation by Saperstein (1997), in which the author offers some pertinent theoretical discussion (Saperstein 1997: 160–163), concluding that “[i]t is worthy to consider and further investigate whether [the relative rareness of inflection in reduplication] is a genuine tendency” (Saperstein 1997: 163) and, if yes, why this should be so.

⁸ Note that the second sentence in (4) defies complexity and contradicts a claim from the typological literature that “reduplication is never the sole marker of an imperative” (Aikhenvald 2010: 33). While this statement, then, is in need of qualification (as is not ruled out by Aikhenvald herself, one should add; see also Schwaiger 2011: 127–128), it is nonetheless striking that most examples given throughout Harley and Amarillas’s (2003) study involve a specific syntactic configuration as given here in the first example sentence, namely one with the additional appearance of the negative imperative form *kat* ‘don’t’ (cf. Harley and Amarillas 2003: 110), questioning reduplication as the (sole) carrier of the inflectional meaning.

- b. *Uka vachi-ta chi~chiwe*
 that.ACC corn-ACC IMP~hull
 ‘Hull the corn!’
 (Harley and Amarillas 2003: 110)

It is likewise interesting that Stolz, Stroh and Urdze (2011: 194–195) doubt the equal footing of total reduplication and affixation given the skewed distribution of reduplicative functions above.⁹ Thus, it seems warranted to look more closely into the matter of which functions (full and partial) reduplication may take over and whether any apparent restrictions may be motivated instead of being accepted as a mere accident.

In modern morphological investigation, there are in principle two theoretical perspectives on the distinction between inflection and derivation, a dichotomous (e.g. Anderson 1982; Scalise 1988) and a continuous one (e.g. Plank 1981: Chapter 2, 1994; Bybee 1985: Chapter 4; Dressler 1989; Booij 1993).¹⁰ The latter assumption of an inflection-derivation continuum is adopted here because cross-linguistically the “view of a more or less continuous gradation between kinds of morphological categories, possibly punctuated differently in different languages, appears to be more realistic than that taking the neat dichotomy of inflectional and derivational morphology for granted or that reckoning with chaotic diversity” (Plank 1994: 1672; see also Plank 1981: 26 and, specifically on plurals, Acquaviva 2008: 21–48). In what follows, taking mainly Dressler (1989) as a benchmark,¹¹ the most important criteria for classifying a morphological device along such a continuum are explored with respect to reduplication from a typological angle.¹² Due to their

9 Although the ensuing claim that “there are almost no restrictions for affixation” (Stolz, Stroh and Urdze 2011: 195), taken together with a similar non-restrictedness claimed for partial reduplication as mentioned before, suggests that for the latter the interpretation as a form of affixation is not ruled out by the authors. But as alluded to above, partial reduplication appears fairly restricted in its functioning, too.

10 Strictly speaking, Booij (1993) takes an intermediate position, arguing for a tripartition into contextual inflection, inherent inflection and derivation. However, as only contextual inflection is claimed to be sharply distinct from derivation, the differences between inherent inflection and derivation perceived as being gradual (cf. Booij 1993: 31), this approach seems perfectly compatible with the continuum view.

11 The reason for choosing Dressler (1989) as the main point of reference is that it still seems to be one of the most comprehensive collections of criteria in showing the latter’s often very intimate interrelatedness from a functionalist standpoint (couched in the framework of natural morphology).

12 To a large extent this discussion is based on language data worked on by the author during and after his participation in the Graz reduplication project (<http://reduplication.uni-graz.at>), running

interconnectedness, not every criterion is discussed below, however (e.g. the first ones mentioned by Dressler 1989: 6, namely that derivation serves lexical enrichment and inflection serves syntax, because most or all of the remaining criteria seem to converge on these anyway). Regarding others, reduplication patterns in the languages of the world do not appear to be studied well enough to allow for any definite conclusions (e.g. productivity; Dressler 1989: 7).¹³

3.1 Obligatoriness

The fact that, in contrast to derivation, inflection is obligatory within syntactic constructions (cf. Dressler 1989: 6) is prototypically manifested in grammatical agreement/concord phenomena (cf. Dressler 1989: 7; see also Plank 1981: 17).¹⁴ In this context, it is significant that even paramount cases like the number agreement between adjectives and the nouns they modify turn out to be not obligatory when the adjectival plural is expressed by reduplication. This can be exemplified by Somali, for which Berchem (1991: 156) notes that adjective reduplication as in (5) is stylistically preferred but grammatically optional when the modified noun expresses a plural concept:¹⁵

(5) Somali

| | | | |
|--------------|---------|------------------|------------------|
| <i>cas</i> | ‘red’ | <i>cas~cas</i> | ‘red (plural)’ |
| <i>cusub</i> | ‘new’ | <i>cus~cusub</i> | ‘new (plural)’ |
| <i>fudud</i> | ‘light’ | <i>fud~fudud</i> | ‘light (plural)’ |
| <i>fog</i> | ‘far’ | <i>fog~fog</i> | ‘far (plural)’ |
| <i>yar</i> | ‘small’ | <i>yar~yar</i> | ‘small (plural)’ |

(Berchem 1991: 159)

from 2005 to 2010 with funding from the Austrian Science Fund (project number P18173-G03) under the direction of Bernhard Hurch at the University of Graz (see also Schwaiger 2011, 2015, 2017).

13 Though sometimes restrictions on reduplicative productivity are stated (e.g. phonologically, so that only bases of a certain length may undergo reduplication, or semantically, so that only human or animate nouns may reduplicate for plurality; see also Acquaviva 2008: 28–29 for animacy-related plurality splits in general), pointing to the derivational pole just like the criteria discussed in more detail in a moment.

14 For Bybee (1985: 82), obligatoriness is the only criterion perhaps capable of providing a discrete division between inflectional and derivational morphology.

15 To save space, the examples given here and in the following can be taken as representative of regularities (or at least tendencies) holding across reduplicating languages in general (see Schwaiger 2017 for a more detailed cross-linguistic work in the same direction).

3.2 Abstractness, transparency and degree of meaning change

Inflectional meanings are said to be more abstract and transparent than derivational ones (cf. Dressler 1989: 7), the former thus involving smaller meaning changes than the latter (cf. Dressler 1989: 8). Conveniently, this can here also be shown to involve Dressler's (1989: 7, 8) example of collectives being more derivational than simple plurals (the less predictable and greater meaning changes of collectives – next to distributives, which seem to be similar in this respect – typically being expressed by nouns reduplicated for plurality; see also Acquaviva 2008: 24, including footnote 6), but in a more extreme manifestation it is demonstrated by the following Indonesian reduplications:

(6) Indonesian

| | | | |
|---------------|-----------|----------------------|------------------|
| <i>gula</i> | 'sugar' | <i>gula~gula</i> | 'sweets' |
| <i>laki</i> | 'husband' | <i>laki~laki</i> | 'man' |
| <i>mata</i> | 'eye' | <i>mata~mata</i> | 'spy' |
| <i>kuda</i> | 'horse' | <i>kuda~kuda</i> | 'easel, trestle' |
| <i>langit</i> | 'sky' | <i>langit~langit</i> | 'ceiling' |

(Sneddon 1996: 16)

The loose semantic relations holding between these forms have already been noted in Section 2 regarding (1a). However, it is still possible to identify a connection to the more usual reduplicative meanings of diminution (by extension via the related notion of similarity,¹⁶ e.g. a trestle may be said to resemble a horse in appearance) and/or plurality (e.g. a spy may be metaphorically perceived as someone who has many eyes).¹⁷ Note that this interpretation as an essentially lexicalized (lexicalization being a frequent development of derivational morphology in general) yet still partially motivated morphological pattern finds additional support in Sneddon's (1996: 16) own remarks that “[d]ictionaries inconsistently list such reduplicated forms under the single base or as separate entries. [...] In a few cases such words can also indicate plurality”.

¹⁶ Moravcsik (1978: 323) already proposed a relationship between the meaning of attenuation, similarity and pretense (for an example of the latter see [9b]).

¹⁷ Thanks to Thomas Stolz for suggesting the latter conceptualization in terms of extended plurality.

3.3 Word-class change

Inflection normally does not change the word class of a base, while derivation often does so (cf. Dressler 1989: 7). Concerning reduplication, two points are of significance here. For one, reduplicative patterns are fairly often found to change the word class of the bases to which they apply but, as already hinted at in Section 2, these changes are often accompanied by the more common semantic changes involving plurality, intensity or diminution (cf. Moravcsik 1978: 324; see also [1b]). A second observation concerns reduplicative word-class changes in general, i.e. with or without the additionally discernible semantic impact just mentioned: There seems to be a clear preference of directionality in that verbs as a class are seldom derived from the other word classes, while with the rest of possible transpositional directions no restrictions are found. This is noted by Haspelmath and the APiCS Consortium (2013: 101) for a sample of pidgin and creole languages, in which the authors do not find a single case of a reduplicatively derived verb, and it appears as a robust tendency in more generally oriented typological work, too (see Schwaiger 2017: 102–106). Anticipating the discussion at the end of this section (where the derivational nature of reduplication is associated with the principle of iconicity), an explanation of this state of affairs in terms of the iconic properties of reduplication suggests itself with reference to the scale of temporal stability in Table 1, depicting the rate of change over time of the concepts typically expressed by the major lexical classes (cf. Givón 2001: 50).

Table 1: The scale of temporal stability (cf. Givón 2001: 54).

| most stable | least stable |
|-----------------------------------|---------------------------------|
| <i>tree, green</i> noun adj | <i>sad, know</i> adj verb |
| | <i>work</i> verb |
| | <i>shoot</i> verb |

It turns out that it is the temporally least stable word class that is exempt from being derived by reduplication, a fact which on a somewhat more abstract level can be linked to the principle ‘more of the same form stands for more of the same meaning’ (see Section 2) in the sense that a reduplicative structure increases time stability (in all cases of nominalization) or at least does not decrease it below a certain threshold (in case of denominal adjectivizations), which is akin to notions of ongoingness or duration (mostly as a type of verbal aspect) on a more concrete

level of meaning in reduplication.¹⁸ The possibility exists that not all verbs are excluded from derivation by reduplication but only those furthest on the right in Table 1, which could permit that stative verbs (being very close to adjectives regarding temporal stability) may be reduplicatively derived after all in some languages of the world. But be that as it may, the fact that reduplication may cause word-class change at all makes it definitely a derivational morphological process according to the criterion under scrutiny.

3.4 Positional preference

When it comes to the criterion that inflectional morphology is typically more peripheral in a word form than derivational morphology (cf. Dressler 1989: 8), the recently formulated root privilege of reduplication is very instructive:

- (7) No matter what the specific morphological and phonological conditions on reduplication may be, reduplication ends up copying at least a portion of the morphological root.
(Inkelas 2012: 358)

Except stem modification (see Plank 1994: 1673), this is probably as close as a morphological process may get to, or be dependent on, the centre of a word form¹⁹

18 That this more abstract manifestation of motivated reduplicative semantics is not entirely implausible is suggested on a different level of meaning by Kiyomi's (1995: 1150) classification of intransitivizing reduplication as a form of diminution due to the correlation between low affectiveness of the patient and intransitive verbs (see also Eitelmann and Mondorf, this volume, on cognate objects), transitivity getting weaker by reduplication vis-à-vis an unreduplicated transitive base.

19 One reviewer asks what to conclude from the fact that many stem modifications are inflectional. From the present viewpoint, the question rather is whether clearly inflectional stem modifications really exist. Plank's (1994: 1673) illustration by English *tooth-teeth* does not qualify as affirmative evidence, because noun plurals represent inherent/non-prototypical inflection also by other criteria (note that the same would hold for tense contrasts like *come-came* as well; see Booij 1993: 30–31, contrary to Dressler 1989: 6). This, then, is not intended to mean that exponent type alone may determine the morphological status of a pattern. This seems to be suggested by the reviewer when s/he desires a stance on how to treat instances where reduplication is parallel to other means of exponence, for example reduplicative and suffixal plural formations in Nuuchahnulth (Davidson 2002: 205–212). As a cluster of several criteria speaks for the generally more derivational character of plurals, there is no obvious problem in the circumstance that one of the formation types is suffixing

without disrupting the latter,²⁰ and if the root privilege indeed holds as generally as is suggested by the above formulation, then reduplication is a prototypical derivational process by the criterion of positional preference.²¹

Additional support comes from the fact that opposed to the well-known cross-linguistic preference for suffixation, partial reduplication is preferably initial²² even in languages like Turkish, which otherwise exclusively use suffixing derivational and inflectional morphology (which again speaks against a simple subsumption of reduplication under affixation).

3.5 Shape variation

The last criterion to be discussed here concerns the formal shapes of reduplicants. As Dressler (1989: 9) notes, “[w]hereas roots have the most varied shapes possible within any given language, affixes of D[erivational]M[orphology] show less variation, affixes of I[inflectional]M[orphology] least”. It is clear that the forms of especially partial reduplication fit perfectly onto the derivational middle

(after all, there are plenty of definitely derivational suffixes in the world’s languages). Besides, the specific status of the different formations in Nuuchahnulth in any case appears to be more complicated than merely constituting alternative expressions of one and the same concept, their semantics varying between collectivity, simple plurality and distributivity (cf. Davidson 2002: 205).

20 Interestingly, reduplication is also regarded as one possible diachronic source of base-disruptive infixes, which renders the following quote from a review of Alan Yu’s famous monograph on the topic all the more remarkable in the context of the present paper: “Reading through all the examples of infixation assembled by Yu I have the impression that there might be a bias, not only towards derivation in general, but towards certain types of functional categories such as nominalization, intensive, frequentative, number (especially verbal number), and diminutives” (Wälchli 2008: 148).

21 The rare examples of affix reduplication (to be distinguished from the potentially open-ended recursive application of affixes; see Schwaiger 2011: 125) as in (1c) look like an apparent problem here. However, apart from their rareness such reduplications appear to be dependent on the compatibility of the affixal meaning and the iconic principle of reduplication, leading to the hypothesis that only semantically fairly concrete affixes may be reduplicated instead of their bases for similar semantic effects (see also below).

22 Also, this specific preference might be linked to a structural-processual account of temporal asymmetries between prefixes and suffixes and logical asymmetries between stems and affixes which in connection with an immediacy-of-processing-assumption lead to a precedence of more lexical (i.e. derivational) over more grammatical (i.e. inflectional) material and thus to a higher lexicalness of the former (cf. Berg 2015: 150). But this would need further study.

of this scale, partaking in the greater variation of roots by copying part of their segmental melody but at the same time being restricted to a smaller size and/or unmarked structures in accordance with the lesser variation allowed for inflectional formatives across languages (see Bybee 2005).

3.6 Iconicity and the derivational nature of reduplication

Judging from the preceding cross-linguistic demonstration it looks as if reduplication is a process prone to fulfil functions of morphological derivation. In fact, it is tempting to say that the process is exclusively derivational because it does not even meet the decisively inflectional criterion of obligatoriness in cases where this would be expected. Following Plank (1981: 15–29), as a next step one now has to get away from the symptoms (i.e. the criteria) and tackle the causes why reduplication should be primarily, if not exclusively, derivational. Iconicity as discussed in Section 2 is a prime candidate for functional explanation here, for its fairly concrete semantic basis naturally combines with concepts of differing degrees of concreteness with respect to the universal organizational principle – based on Sapir (2004 [1921]: Chapter 5) – which generalizes single categories and relations into grammatically significant conceptual types of the following sort (cf. Plank 1981: 16–17; see also Sapir 2004 [1921]: 80–81):²³

- (8) I. Basic (concrete) concepts
- II. Derivational concepts
- III. Concrete relational concepts
- IV. Pure relational concepts

This division rests on semantic concreteness versus abstractness and the power to express syntactic relations versus material content, setting up a cognitively and psychologically plausible continuous scale from maximally concrete/material concepts to maximally abstract/relational concepts (cf. Plank 1981: 17, 19; Sapir 2004 [1921]: 81). Derivation as suggested to be the preferred function of reduplication in the present paper is not solely congruent with II in the above scheme, but

²³ Plank (1981: 18) hastens to add that in its basics Sapir's conception is of course already well-known from the seventeenth and eighteenth century philosophical grammar tradition as well as from the beginnings of the comparative philological school in the nineteenth century, yet that its potential for explaining the distinction between inflection and derivation seems to be laid out genuinely by Sapir.

broader in also involving concepts of type I and III (crucially, both also concrete, albeit to different degrees). Not expected to lie in the domain of reduplication, however, are pure relational (i.e. prototypically/contextually inflectional) concepts (IV), and this seems to be borne out by the discussion so far. Importantly, this also excludes perfect(ive) formations of the Indo-European kind from the last conceptual type, because whether treated as aspect or as tense, neither is clearly inflectional under the view defended here (see footnote 4 and 19). In addition, this approach helps to explain why most “[f]unctional categories [i.e. grammatical morphemes including affixes, because they] form closed classes by definition, [...] cannot be semantically scalar and should not be available for iconic reduplication triggering ‘more-of-the-same’ effects” (Aboh, Smith and Zribi-Hertz 2012: 12).

4 Repetition versus reduplication revisited

After the evaluation of (full and partial) reduplication as generally derivational in the last section, it is worthwhile to revisit the long-standing question of whether and how to keep the process separate from repetition (see also Freywald and Finkbeiner, this volume, and Stolz and Levkovych, this volume, on telling repetition and reduplication apart). Basically, it makes sense to differentiate reduplicative and repetitive constructions, the origin of the former normally being located in morphology, while the latter are usually taken to be a discourse and/or syntactic phenomenon (cf. Gil 2005: 31; see also Brody, this volume, on repetition as a discourse marker and Finkbeiner, this volume, on exact repetition in syntactic constructions). However, one often has to cope with all sorts of boundary phenomena when confronted with certain language structures (remarkably not only in spoken languages; see Kimmelman, this volume, on Russian Sign Language), and the exact repetition of words turns out to be especially problematic (obviously much more than any kind of partial reduplication) in the context of distinguishing between syntactic repetition and morphological reduplication (see also Freywald and Finkbeiner, this volume). As demonstrated below, the derivational nature of the latter may provide additional decision guidance in at least some of these cases.

To get a grip on the basic problem, Gil (2005: 32–39) proposes the distinguishing criteria and diagnostic tests in Table 2 (see also Freywald and Finkbeiner, this volume), illustrating on the basis of the Riau dialect of Indonesian that there is a continuum from clearly repetitive structures as in the vendor cry (9a) to clearly reduplicative ones like (9b), depending on how many criteria are fulfilled for which construction type.

Table 2: Diagnostics (criteria)¹ for distinguishing repetition and reduplication (cf. Gil 2005: 33, 37).

| | Criterion | Repetition | Reduplication |
|---|-------------------------------|--|-------------------------------|
| 1 | Unit of output | greater than word | equal to or smaller than word |
| 2 | Communicative reinforcement | present (or absent) | (absent) |
| 3 | Interpretation | (iconic or) absent | arbitrary (or iconic) |
| 4 | Intonational domain of output | within (one or) more than one intonation group | (within one intonation group) |
| 5 | Contiguity of copies | (contiguous or) disjoint | (contiguous) |
| 6 | Number of copies | (two or) more than two copies | (usually two) |

¹ The criteria are arrived at when ignoring the parentheses in the table, while omitting the parenthesized material leaves one with the diagnostics.

(9) Riau Indonesian

- a. *Aqua bang aqua aqua*
 mineral.water elder.brother.FAM mineral.water mineral.water
aqua roti, roti ah roti aqua aqua
 mineral.water bread bread EXCLA bread mineral.water mineral.water
aqua aqua aqua aqua
 mineral.water mineral.water mineral.water mineral.water
 ‘Mineral water sir mineral water mineral water mineral water bread,
 bread bread mineral water mineral water, mineral water mineral water
 mineral water mineral water.’
 (Gil 2005: 40)

- b. *Saya ti-tidur, saya tahu*
 1:SG RED~sleep 1:SG know
 ‘I was only pretending to sleep, I knew what she was doing.’
 (Gil 2005: 59)

Apart from the fact that some of the diagnostics perhaps do not work as straightforwardly as suggested – in general (e.g. arbitrary interpretation, for which see Section 2 on iconicity) or at least not for every language (e.g. disjointness or number of copies, for which see also Finkbeiner, this volume, and Sui, this volume, or Freywald and Finkbeiner, this volume, respectively) –, the first criterion of course rests upon the often rather vexed complication of being able to tell what constitutes a word in a language (see also Stolz and Levkovych, this volume). For an isolating language like Riau Indonesian this remains problematic

(see Gil 2005: 31–32). However, for languages showing already a little more word structure, the criterion of the output unit may be complemented by the additional morphological criterion in Table 3, which is distilled from the discussion up to now.²⁴

Table 3: Further criterion for distinguishing repetition and reduplication based on morphological scope.

| Criterion | Repetition | Reduplication |
|-----------------------|------------------------|----------------------------|
| 7 Morphological scope | may include inflection | may not include inflection |

If, as claimed in Section 3, reduplication is an essentially derivational process, then one should in certain cases be able to decide whether an exact word repetition is syntactic or morphological judging from the morphological scopes involved. That is, if the repetition involves clearly inflectional morphology, this would point toward the structure as being a syntactic one, because otherwise it would constitute a violation of the reasonable principle that prototypical inflection always follows derivation. If, on the other hand, repetition involves derivational morphology, the structure under scrutiny may well qualify as genuine reduplication, especially and ideally if additional criteria also converge on this result. Evidently, all this depends on how confidently one can identify clear inflection in a language. But there are cases where this seems fairly undisputed (e.g. agreement morphology), while others traditionally viewed as (contextually) inflectional appear to be more of an inherently inflectional or derivational kind (see Section 3). To conclude this section, a handful of examples are inspected to indicate how structures in different languages would possibly have to be (re-) assessed under the additional consideration of the new criterion in Table 3.

Starting with two instances classified as syntactic total reduplication (a construction type postulated to be situated between word-internal total reduplication and repetition) in the framework of Stolz, Stroh and Urdze (2011), now (10b) appears to be a case of clear repetition (involving the inflectional masculine-plural ending) and (10a) would equally well qualify as (word-internal total) reduplication given the fact that Bantu noun classes are much less inflectional (in

²⁴ To be sure, this is not the only conceivable addition to Gil's criteria. Another, phonological, one would be (optional) segmental deletion, which according to one reviewer speaks for the word-hood of Italian *fin fine* (from *fine* 'end'), for example, where the thematic vowel of the first reduplication member is elided.

also being used for derivational purposes; see Mufwene 1980) than their alleged counterpart of grammatical gender in languages like Sardinian:²⁵

(10) Swahili

- a. *Kuna n-chi n-dogo n-dogo*
 EXI CL5-country **CL5-small** **CL5-small**
zi-li-zo maskini
 CL5.PL-DEM-CL5.PL poor
 ‘There are small countries which are poor.’
 (Stolz, Stroh and Urdze 2011: 1)

Sardinian

- b. *Biviat unu Sennore, bezzu, chi iscribat*
 see:PST:3SG INDF:M gentleman old:M REL write:PST:3SG
libros mannos mannos.
 book:M:PL **big:M:PL** **big:M:PL**
 ‘He saw an old man who was writing **really/very huge** books.’
 (Stolz, Stroh and Urdze 2011: 28)

While the Imbabura Quechua example in (11) might also be viewed as syntactic total reduplication because it “looks like an instance of a syntagm consisting of two segmentally identical words” (Stolz, Stroh and Urdze 2011: 3), the original interpretation as word-internal total reduplication suggested by Cole (1982: 62–63) is now equally plausible because the infinitive is a well-known case of a non-prototypically inflectional (i.e. derivational-like) category (see Dressler 1989: 6).

(11) Imbabura Quechua

- kanda-y kanda-y shamu-rka-ni*
 sing-INF sing-INF come-PST-1
 ‘I came singing.’
 (Cole 1982: 62)

25 One reviewer raises serious doubts concerning the present treatment of (10a) in view of the fact that it involves an adjective and thus the reduplication of a seemingly indisputable inflectional prefix of agreement. Detailed argumentation is not possible here for spatial reasons, but a note of caution is in order before accepting such a conclusion: Observe that although the adjectival attribute is reduplicated including its class marker, semantically it is the referent of the whole noun phrase which is pluralized (see also Stolz, Stroh and Urdze 2011: 150, footnote 184), speaking for an altogether different status of Swahili adjectives and agreeing relations in comparison to the Sardinian situation exemplified in (10b).

Finally, example (12) shows how repeating a verb phrase marked for clearly inflectional person-number-gender-subject agreement supports the classification of this construction as repetition not only because it involves more than one copy (see Conrad and Wogiga 1991: 52) but also on account of the new criterion in Table 3:

(12) Bukiyip²⁶

| | | | |
|--------------------|------------------|----------------|----------------|
| ... <i>n-a-uli</i> | <i>nobag,</i> | <i>n-a-na</i> | <i>n-a-na</i> |
| 3SG.M.SBJ-R-hunt | dogs | 3SG.M.SBJ-R-go | 3SG.M.SBJ-R-go |
| <i>n-a-nak</i> | <i>n-a-nú</i> | <i>nobag.</i> | |
| 3SG.M.SBJ-R-go | 3SG.M.SBJ-R-with | dogs | |

‘... he went hunting with dogs and went and went and went a long way with the dogs.’
(Conrad and Wogiga 1991: 53)

5 Conclusions and outlook

Although the foregoing discussion has by and large reiterated the continuous nature of both the distinction between inflection and derivation as well as the one between repetition and reduplication, it nevertheless has shown that clear instances can be identified. As a matter of fact, after having carved out the essentially derivational nature of reduplication in Section 3, a further criterion for distinguishing between repetition and reduplication has been proposed in Section 4 which in some cases may add additional support for classifying an iterative linguistic structure as being of one or the other kind.

Open for future research is a more thorough modelling of reduplication as it has been envisaged here and the transitional zone between grammar and pragmatics in a maximally comprehensive manner when it comes to the relation holding among reduplicative forms and repetitive phenomena in language (see Finkbeiner, this volume, for a similar theoretical requirement and Schwaiger 2018 for a programmatic example).²⁷

²⁶ The same example is discussed under the alternate language name Arapesh by Schwaiger (2011: 124).

²⁷ Ultimately, this will also have to include a functional explanation for the observation, made by one reviewer, that on the derivational-inflectional-syntactic continuum established by Bybee (1985) iconicity connects derivation and repetition but seems weakest in intermediate inflection. Unfortunately, pursuing this interesting question further would exceed the limits of the present study.

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Part II: Exact Repetition in Grammar

Vadim Kimmelman

Reduplication and repetition in Russian Sign Language

Abstract: In this paper, I analyze three repetition-related phenomena in Russian Sign Language (RSL). First, following Burkova and Filimonova (2014), I discuss morphological reduplication in RSL which fits the prototypical definition of reduplication (Stolz et al. 2011) despite the presence of some modality effects, such as simultaneity and the use of space. Second, I discuss distributive reduplication which can apply on both morphological and syntactic levels thus questioning the morphological nature of reduplication. Finally, I discuss syntactic doubling of constituents which would not normally be analyzed as reduplication, but which has some features common with reduplication. By showing overlapping properties of the three phenomena in RSL, I question the existence of a clear boundary between reduplication and repetition, at least as applied to this language.

1 Introduction

The aim of this paper is to discuss how data from Russian Sign Language (RSL) can contribute to the debate around the notions of reduplication and repetition, and in particular, to the issue of finding the boundary between these two notions. I will discuss several phenomena from RSL that have to do with multiple copies of elements at different levels and attempt to classify them. Whether some or all of them could be analyzed as reduplication (or repetition) depends on the specific theory of reduplication that one is willing to accept.

The issue of delimiting reduplication and repetition is a long-standing one (Stolz et al. 2011; Stolz and Levkovych, this volume), and different researchers disagree on the answers to the following questions: what exactly falls under reduplication, and what is the relation between reduplication and repetition in general: is reduplication a special type of repetition, or are these two phenomena completely separate?¹

¹ Another interesting question is whether reduplication and repetition are diachronically related through grammaticalization (Fischer 2011; Stolz et al. 2011), but I will not address it here.

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In general, a common solution is to say that reduplication is a morphological operation and thus applies below the word level, and that repetition is a process that applies to words and larger units. However, in some cases of repetition of full words it is still possible to claim that the result is one word, so such cases would be classified as reduplication as well. In addition, reduplication being a part of the grammar is rule-governed, so it is obligatory in some contexts but impossible in others (Stolz and Levkovych, this volume). One such constraint on reduplication is the number of copies: reduplication only allows for two copies, while repetition is unconstrained in this respect. Finally, reduplication has to have a semantic (denotational) contribution, and usually marks verbal aspect, nominal plurality, distributivity, adjectival intensification, and also verb-noun derivation, while repetition only has pragmatic/emotional effects and thus falls outside grammar strictly speaking.

Stolz et al. (2011: 57–58) discussed a possible counterexample to some of the criteria above, from the Portuguese-based Creole Angolar, where reduplication can apply below word level, and has a clear semantics (intensification, distributive, and durative); however, it can produce more than two copies, cf. (1). Stolz and Levkovych (this volume) offered a solution to this puzzle: the three (or more) copies are the result of reduplication (which produces two copies and has a semantic contribution) combined with word-internal repetition (which produces an additional copy and has an emotional contribution).

(1) Angolar

Thô a ka foga-foga-foga até pomenha ka biri
 after s/he TAM dance-dance-dance until morning TAM open
 ‘Afterwards one dances on and on and on until the morning comes.’
 (Stolz, Stroh and Urdze 2011: 57)

This solution allows saving some of the criteria for distinguishing reduplication and repetition, but it is based on the assumption that repetition can apply word-internally and thus also opens the possibility that reduplication can apply outside morphology. The main criterion for distinguishing between repetition and reduplication is then semantics. Thus instances of total reduplication of fully inflected words as discussed in Stolz et al. (2011) can still be analyzed as reduplication as long as they have the appropriate meaning.

There is another formal criterion distinguishing repetition and reduplication that I have not discussed so far: adjacency. According to Stolz et al. (2011) the copies of the reduplicated unit have to be adjacent; a single syllable was the only element that was sometimes allowed to intervene between the copies.

However, some other researchers are more liberal in their definition and allow for non-adjacent copies without any special constraints (Inkelas and Zoll 2005). If one accepts non-adjacent copies and also accepts the idea that reduplication is not constrained to morphology, then instances of syntactic doubling (Kandybowicz 2007) seem to also fall under reduplication. Stolz et al. (2011) argue strongly against this view, and I will review some of their arguments when discussing the relevant RSL data.²

Although the discussion of reduplication is based on extensive typological data, sign languages are not discussed in any major theoretical works on reduplication (Stolz et al. 2011, Inkelas and Zoll 2005). However, sign languages belong to a different modality (Meier 2012), and it is very well possible that reduplication and repetition could work in a way different from what is typically found in spoken languages. For instance, Freywald and Finkbeiner (this volume), based on research by Pfau and Steinbach (2006), discussed one such difference: in German Sign Language morphological reduplication often produces at least three copies without any apparent stylistic effect. Another obvious difference between modalities is that sign languages allow simultaneous expression on many levels (Meier 2012), including simultaneous expression of morphemes, which means that simultaneous (in addition to progressive and regressive) reduplication is possible.³ It is thus beneficial to take sign language data into account in developing a universal theory of reduplication.

There exist some studies of reduplication in several sign languages. Pfau and Steinbach (2005, 2006) analyzed reduplication in German Sign Language, and discussed possible modality effects in this domain. Wilbur (2009) provided an overview of reduplication-related mechanisms in American Sign Language and demonstrated that reduplication in this language has a formal richness beyond

2 Inkelas and Zoll (2005) are also more liberal in another aspect of the definition of reduplication: according to them there is no requirement of formal relatedness between the copies as long as they are related semantically; synonym compounds can thus also be analyzed as reduplication. Although this could have some interesting consequences for RSL data (see Kimmelman 2014: chapter 5 for examples), I will not discuss it here for the sake of space.

3 An anonymous reviewer asked why I should even consider simultaneous repetition as a candidate reduplication construction. A simple answer is that a simple repetition (or reduplication) can logically apply sequentially or simultaneously, but that spoken language due to modality constraints only allows for sequential combinations of the copies. Since sign languages are not constrained this way, they also make use of the simultaneous option. This option thus has to be further analyzed in order to come to decide whether it is also functionally similar to sequential reduplication. As I show in Section 2, this seems to be the case.

what is attested in spoken languages. Burkova and Filimonova (2014) reported the results of a corpus-based analysis of different types of (morphological) reduplication in RSL. In this paper I also discuss data from RSL, but in addition to summarizing Burkova and Filimonova's results I also analyze some cases which put into question the rigidity of the boundary between reduplication and repetition, as well as look at some instances of doubling that might be analyzed as reduplication within certain frameworks.

RSL is a natural language used primarily by deaf people in the Russian Federation. According to the 2012 census, it is used by more than 120,000 people in Russia. In contrast to American and German Sign Languages, it is not well described by linguists, although in recent years several researchers have been actively investigating RSL (see Kimmelman 2014: chapter 1 for an overview), and in 2014 the first on-line corpus of RSL appeared (<http://rsl.nstu.ru/site/signlang/language/en>, Burkova 2015) which will hopefully facilitate further research.

In this paper I thus discuss reduplication and repetition in RSL. The paper consists of three main parts. In Section 2 I summarize the results of Burkova and Filimonova (2014) and discuss whether their data fall under the prototypical definition of reduplication. In Section 3 I discuss distributive reduplication in RSL based on novel data and again assess whether it has the properties of reduplication in spoken languages. Section 4 contains a brief discussion of syntactic doubling in RSL (previously reported in Kimmelman 2013, 2014) and its classification as reduplication or repetition. Section 5 presents an overall conclusion of the paper.

2 Reduplication

Burkova and Filimonova (2014) analyzed formal and functional properties of reduplication in RSL based on corpus data. They found that reduplication in RSL, similar to reduplication in other sign languages, has a variety of formal types, some of which have parallels in spoken languages, while others do not. They also found that reduplication has a number of functions, again showing a great deal of overlap with the functions of reduplication in spoken languages. Finally, they found a clear correlation between different formal types of reduplication and different functions, which, according to them, is a clear sign of the iconic nature of RSL reduplication.

The types of reduplication that Burkova and Filimonova (2014) found in RSL are simple manual reduplication, two-handed reduplication (simultaneous

and sequential), and non-manual reduplication. Simple manual reduplication is when the sign is repeated (one or more times). This type of reduplication is very similar to reduplication in spoken languages. Two-handed reduplication by definition involves two hands, so it is a modality-specific phenomenon. Two hands can be used simultaneously to produce a sign which would normally be one-handed. Another option is that two hands are used to produce the one-handed sign sequentially; in this case, the sign may be produced multiple times by each hand. Finally, manual reduplication is often accompanied with non-manual reduplication, that is, with repeated head or body movements (which can be forward–backward or sideward). Importantly, these non-manual reduplicated markers can also accompany a sign which does not contain manual reduplication, which makes it possible to isolate non-manual reduplication as a separate subtype.⁴

As for the meanings of reduplication in RSL, they appear to be very similar to the pool of meanings expressed by reduplication in spoken languages. Simple manual reduplication is applied to verbs to express different types as verbal plurality, such as iterative, habitual, and durative, cf. (2). These aspectual meanings are differentiated by the speed of movement. When it applies to nouns, reduplication expresses additive nominal plurality. In addition, it can be used (in combination with other prosodic modifications) to derive nouns from verbs (see also Kimmelman 2009).

Two-handed simultaneous reduplication is used to express nominal plurality, cf. (3),⁵ to derive indefinite pronouns from question words, and, when applied to signs with adjectival semantics, to express intensity. Two-handed sequential reduplication is primarily used to express different types of distributivity. For instance, in (4) the sign COME is marked with two-handed sequential reduplication to mark the fact that different people were coming at different times.

⁴ An anonymous reviewer also asked why I should consider non-manual repetition as a candidate reduplication construction. However, non-manual reduplication seems to follow a typical reduplication pattern: a linguistic unit (in this case, head or body movement), which has a clear form and function, undergoes repetition, which is meaningful. It is thus not clear why this should not be analyzed as reduplication, apart from the fact that no parallels seem to be found in spoken languages.

⁵ For simultaneous two-handed reduplication it is important to distinguish between signs that are lexically one- and two-handed, which is not always a simple matter. However, some signs such as BAG are clearly one-handed, and the meanings of the one-handed and two-handed usages are clearly different.

(2) RSL⁶

SPEECH.THERAPIST BRING+ PAST

'She was regularly bringing me to the speech therapist.'

<http://rsl.nstu.ru/data/view/id/230/t/442640/d/444570>)

(3) RSL

GO BAG-2r PLACE

'Leave the bags here!'

<http://rsl.nstu.ru/data/view/id/198/t/282565/d/283515>)

(4) RSL

THEN START PEOPLE COME-2rs LIVE

'Then people started coming to live there.'

<http://rsl.nstu.ru/data/view/id/224/t/60000/d/64410>)

(5) RSL

rbl+lbl

WALK

'He is walking around.'

6 Glossing conventions: signs are glossed in SMALL.CAPS. If a sign is translated with more than one word, the words are separated with a full stop. Fingerspelled words are glossed with dashes between letters: P-E-A-R-S. IX stands for index, that is, a pointing sign; 1 and 2 refer to the speaker and the addressee, and lowercase letters a, b, c etc. to locations in the signing space. Simple reduplication is marked as +; triplication and multiplication as ++, -2r means two-handed simultaneous reduplication, and -2rs – two-handed sequential reduplication, DISTR is the distributive marker (reduplication combined with sideward movement), PAST is past tense marker. Non-manuals are marked above the gloss line, and their scope is marked with underlining; rbl – right body lean, lbl – left body lean. Whenever the example is taken from the RSL corpus, a link to the relevant part of the corpus is given. Note that one needs to register to be able to access the corpus data. Some examples do not come from the corpus, but from my own data (examples elicited for a study of quantifiers in RSL); in this case no link is given.

Finally, non-manual reduplication is used to express intensive durative, usually in combination with simple manual reduplication, but also sometimes in isolation, cf. (5). As should be clear from this overview, different formal types of reduplication have different largely non-overlapping functions.

Burkova and Filimonova (2014) also showed that reduplication can be combined with other markers, such as sideward movement or modification of the amplitude or speed of the sign. They argue that these markers are independent of reduplication as they express isolatable meaning components. For instance, simple sideward movement without reduplication is used to express (collective) nominal plurality. When this movement is combined with reduplication, the meaning of distributive plurality emerges. I will discuss this type of marking further in the next section.

Let's consider the question whether reduplication in RSL follows the patterns of reduplication identified for spoken languages. First, reduplication clearly produces one prosodic word. Second, the meanings expressed by reduplication are very consistent with the ones found in spoken languages; the contribution of reduplication is semantic, not pragmatic or emotional. Third, with this type of reduplication the copies are adjacent (Burkova and Filimonova explicitly excluded non-adjacent reduplication from consideration). Finally, Burkova and Filimonova demonstrated that reduplication is phonologically restricted. For instance, simple reduplication expressing nominal plurality only applies to one-handed signs that have contact with the body or two-handed signs with contact between the hands. In contrast, two-handed simultaneous reduplication only applies to signs without contact with the body.⁷

In the previous section I discussed the fact that in some sign languages, such as German Sign Language, reduplication actually typically produces three copies (i.e., iterations) rather than two, so triplication is the default option (Pfau and Steinbach 2006). This is not compatible with the prototype of reduplication in Stolz et al. (2011). Pfau and Steinbach (2006: 156–158) hypothesize that the preference for triplication⁸ in German Sign Language might have a modality basis. They offer at least two reasons for triplication. First, triplication enhances the visual saliency of the sign, and this is beneficial due to the fact that visual attention

⁷ In addition, restrictions are different for verbal and nominal signs, so they are in fact morphophonological. For further details, see Burkova and Filimonova (2014).

⁸ In fact, Pfau and Steinbach (2006) discuss triplication together with the addition of sideward movement as a complex phenomenon of hyperdetermination, where the same semantic element (in this case, the plural meaning) is expressed by three separate formal elements (in this case: two times by triplication, and once by sideward movement).

of signers is focused on the face, rather than on the hands. Second, many signs contain intrinsic repetition of movement, which means that in order to distinguish morphological reduplication from lexical repetition of movement, triplication is necessary. In other words, since many signs contain lexical repetition, simple reduplication of signs without repetition creates forms that are formally similar to signs with lexical repetition, thus making repetition in general highly ambiguous.

However, the second argument is controversial. If a sign contains no lexical repetition, simple reduplication is clearly enough to distinguish the reduplicated form from the non-reduplicated form; it is less clear why it should matter that in other signs repetition might have different functions (such as being lexical). Neither is triplication necessary for signs with lexical repetition: if a nominal sign in its single form contains a repeated movement, and in its plural form it contains three movements of this kind, then only a part of the sign is actually reduplicated, and one can speak of partial reduplication, rather than triplication.

In fact, this is exactly what Burkova and Filimonova (2014) found in RSL. Signs with inherent repetition in their reduplicated form usually contained three repetitions of the movement which can be analyzed as partial reduplication. For instance, the verbal sign SICK has lexical repetition (i.e. two iterations of the movement), and the nominal sign SICKNESS has three iterations of the same movement, thus qualifying as partial reduplication. For signs without inherent repetition, reduplication rather than triplication has been found to be the most frequent option. Triplication is also attested, but it is usually associated with specific semantics. Consider (6), in which triplication is used to focus on a particularly large number of events (a similar effect is obtained with repetition in the English translation).

(6) RSL

DRIVE++

'They are driving and driving for a long time.'

(<http://rsl.nstu.ru/data/view/id/222/t/72326/d/74938>)

Such cases can be analyzed similar to Stolz and Levkovych's (this volume) analysis of Angular as a combination of reduplication and (word-internal) repetition. Reduplication would then produce the aspectual marking, while repetition would produce additional emphasis on the duration of the described event.

Thus, RSL seems to pattern with spoken languages in restricting the number of copies in reduplication proper. Of course, one should still offer an explanation for the fact that in German Sign Language triplication seems to be the default

option.⁹ However, such an explanation should not imply that triplication is default in all sign languages.

To sum up, reduplication in RSL as described by Burkova and Filimonova (2014) seems to fit perfectly with the definition of reduplication based on spoken languages. There are also obvious modality effects in this domain. Two-handed reduplication and non-manual reduplication do not have direct parallels in spoken languages. However, if I abstract away from the purely articulatory facts, these types of reduplication are also well-behaved. They express a semantics that is normally associated with reduplication, and they are formally restricted. In the next section I will consider a more complex case, which is also mentioned in Burkova and Filimonova (2014): distributive marking realized as a combination of reduplication and spatial localization.

3 Distributive marking

Distributivity in RSL, as mentioned in the previous section, can also be expressed with reduplication. One type of reduplication that applies to verbs to describe distributive events is two-handed reduplication, as in (4). However, a more typical form of reduplication that expresses distributivity is simple reduplication combined with sideward or arc movement.

In order to understand how distributive marking works in RSL, I need to briefly introduce the use of space in this language. RSL uses space to localize referents, to refer back to them with the help of pointing signs (pronouns, glossed as IX for index); space is also used for verbal agreement.¹⁰ For first and second person, the pointing to the signer (IX-1) and the addressee (IX-2) are used, as in (7a); other referents are assigned locations in the signing space, which I will gloss as *a*, *b*, etc., as in (7b).

- (7) RSL
- a. IX-1 IX-2 SEE-2 SELDOM
'I seldom see you.'
 - b. IX-a IX-b a-SEE-b
'He sees him.'
 - c. IX-1 IX-b LOVE
'I love him.'

⁹ A corpus-based investigation of German Sign Language might be useful to confirm this preference.

¹⁰ Not all researchers agree that verbal agreement in sign languages should be analyzed as agreement, but this is not crucial for this paper (see Lillo-Martin and Meier 2011 for a recent discussion).

Examples (7a) and (7b) also demonstrate that verbs can agree with these locations, which means that the verbal sign either moves from the location of the subject to the location of the object, or it is oriented towards the object. However, not all verbs are agreeing: plain verbs, such as the RSL sign LOVE, do not change the form depending on the locations associated with their arguments, cf. (7c).

Agreeing verbs can be marked specifically to express distribution of events over their arguments. In this case the verb moves towards several locations, so it is reduplicated, but the copies are not exact: each copy has a different movement and a different final location, cf. (8). Note that in (8) the number of locations does not exactly represent the number of objects or subjects: (8a) does not mean ‘I gave each of the four people a present’, but ‘I gave everyone a present’.

(8) RSL



a. 1-GIVE.PRESENT-DISTR

‘I gave everyone a present.’ (the hand moves to four locations, the pictures show three of the four locations)



b. DISTR-GIVE.PRESENT-1

‘Everyone gave me a present.’ (the hand moves from four locations to the signer, pictures show two of the four locations)

Interestingly, it is not just the verbs that can be marked this way to express distributivity. The same type of reduplication applies to numerals, cf. (9a), nouns, cf. (9b), pronouns, and even to the quantifier sign EVERY, cf. (9c). As (9b) shows, when this type of reduplication is applied to non-verbal signs, then the copies differ from each other in location, but not in movement.¹¹

(9) RSL

a. MAN BUY BEER ONE-DISTR

‘Every man bought a beer.’



b. 1-GIVE.PRESENT FLOWER-DISTR

‘I gave them one flower each as a present.’

c. EVERY-DISTR

‘each one’

In principle, expressing distributivity is one of the common functions of reduplication in spoken languages. For instance, in Hungarian, numerals are reduplicated to create distributivity, cf. (10).

(10) Hungarian

a gyerekek két-két majmot láttak
 the children two-two monkey.ACC saw.3PL
 ‘The children saw two monkeys each.’
 (Szabolcsi 2010: 138)

However, on the formal side, a problem emerges. Reduplication for distribution in RSL is in fact triplication or multiplication; my impression is that it

¹¹ The non-verbal signs that in RSL can be marked by distributive reduplication can thus be described as locatable signs in the terminology of de Beuzeville et al. (2009).

usually results in three or four iterations of the original sign. Moreover, an explanation similar to the one proposed for triplication in RSL in the previous section would not work: not only does there not seem to be an emotional/pragmatic effect associated with extra iterations, but simple reduplication producing just two iterations cannot have a general distributive meaning. It can only express dual semantics, that is, that the event is distributed over exactly two participants, cf. (11).

(11) RSL

MAN BUY BEER ONE+

‘The two men each bought a beer. *Every man bought a beer.’

So multiplication is necessary to avoid the interpretation in which the number of iterations is interpreted as exactly reflecting the number of repetitions of the event. Note that when distributive multiplication applies, as in examples (8) and (9) above, there is no direct relation between the number of iterations and the number of events.

This phenomenon seems to be a modality effect. Distributivity is expressed through the use of space. In addition, since points in space can be associated with specific referents, distributive marking that uses the same points in space can be interpreted iconically and directly, for instance, reflecting that the action has been applied to exactly two or three participants previously established in space. Therefore, the non-iconically interpreted distributive form has to contain more than two iterations. I do not think, though, that this modality effect excludes distributive marking in RSL from qualifying as grammatical reduplication. If I analyze examples like (8) and (9) as repetition, the quantificational meaning becomes unexpected.

However, there are some examples that are even more surprising if we are looking from the perspective of spoken languages. For instance, in an experiment to elicit quantificational strategies in RSL, Zajtseva (1987) found out that the distributive marking can apply to clauses. Consider the following example:

(12) RSL



SQUARE-a CIRCLE-a TWO-a / SQUARE-b CIRCLE-b TWO-b / SQUARE-c CIRCLE-c
TWO-c

‘There are a couple of circles in every square.’

(Zajtseva 1987: 10–11)¹²

The signer was describing the meaning ‘there are a couple of circles in every square’, and to express it she produced the statement SQUARE CIRCLE TWO in three different locations (a, b, and c), where the sign for CIRCLE was localized above the sign for SQUARE to reflect their relative positions. Note that the experimental procedure was such that the utterance could not have been used exactly, that is, to describe a situation in which there were exactly three squares with circles in them. The signers were not asked to describe one spatial arrangement, but instead to find a description that would be applicable to several different spatial arrangements, thus expressing a truly quantificational meaning similar to the meaning of the English translation in (12).

This example presents a serious puzzle. On the one hand, (12) is clearly related to the other examples discussed in this section. The meaning expressed in (12) is distributive quantification, and this meaning is achieved through the use of triplication and sideward movement, as in the other examples. However, this triplication and sideward movement is applied to a full clause consisting of three independent signs.

As I discussed in Section 1, the possibility of reduplication applying beyond morphology is already open according to most researchers. Thus, in principle, (12) does not defy any constraints on reduplication formulated above, except for the constraint on the number of copies (which I have already explained using modality effects). This leads us to conclude that (12) is indeed reduplication and that RSL data clearly show that reduplication can apply to entities larger than words, namely to full clauses. The question that I cannot answer at the moment is whether similar examples can be found in spoken languages, and if not, what prevents such examples from occurring.

4 Doubling

In the previous section I discussed distributive reduplication in RSL which is somewhat different from prototypical reduplication in spoken languages, but

¹² Zajtseva (1987) did not provide illustrations, so the pictures used above come from an example elicited by me to replicate Zajtseva’s findings. Only the sign CIRCLE in three locations is depicted.

still qualifies as such. In this section I discuss syntactic doubling that would not normally be analyzed as reduplication. After introducing the data, I address the question whether the boundary between reduplication and doubling is clear-cut.

Verbal doubling, whereby a verb appears twice in one sentence, is attested in many spoken languages (Kandybowicz 2007). It has also been shown that doubling is also attested in several sign languages, such as American, Brazilian, Hong Kong, Quebec, Croatian, Austrian, Polish Sign Language, and in RSL (Kimmelman 2013).

There are different syntactic analyses of doubling, some of which connect doubling to morphosyntactic restrictions (Fischer and Janis 1990), while others analyze doubling as a manifestation of the copy theory of movement, where the realization of two copies is triggered by emphasis (Nunes and de Quadros 2008). Most researchers of sign languages connect doubling to certain pragmatic functions, such as emphasis, or focus in general. Doubling attested in spoken languages is also often related to focus, emphasis, or affirmation.

In Kimmelman (2013, 2014), I demonstrated that doubling in RSL is a very common phenomenon. It turns out that doubling in RSL concerns not only verbal signs (13a), but also nouns (13b), adjectives, and other constituents. Furthermore, even full clauses can be repeated in a similar fashion, cf. (13c).

(13) RSL

a. LOOK P-E-A-R LOOK

‘He looks at the pears.’

(Kimmelman 2014: 139)

b. BOY OTHER BOY

‘Another boy ...’

(Kimmelman 2014: 139)

c. IX CARRY. COME.DOWN. CARRY

‘He comes down carrying [the cage].’

(Kimmelman 2014: 141)

In Kimmelman (2013, 2014) I argued that the function of doubling in RSL could not be emphasis because it is used in clearly non-emphatic contexts, but it could not be focus in general, because it is not used regularly enough. I suggested that the function of doubling might be foregrounding, that is, highlighting only a part of new information as being more relevant for the following discourse. This is confirmed by the fact that usually the doubled constituent is mentioned in the following discourse, while the constituent placed between the copies of the doubled one would not be mentioned. Furthermore, repetition of clauses (as in (13c)) might be a precursor to clause-internal doubling, as the function of the

former is to return to the main storyline after a digression that is related to the function of the latter, that is, foregrounding. Note that for these reasons I did not claim that repetition of clauses is doubling strictly speaking, but rather that it is a related construction.

Should we analyze doubling in RSL as an instance of reduplication? As discussed in Section 1, adjacency is often used as a criterion for reduplication, and only the smallest digressions from it are deemed acceptable (Stolz et al. 2011), while doubling is by definition non-adjacent. However, for other researchers (Inkelas and Zoll 2005) adjacency is not a necessary requirement. I therefore need to discuss other arguments for and against the reduplication analysis of doubling.

One argument in favour of analyzing doubling as reduplication rather than as repetition is that most researchers agree that doubling (in sign languages at least) is a grammatical phenomenon. For instance, Nunes and de Quadros (2008) provide an elaborate syntactic analysis of doubling in Brazilian Sign Language involving the copy theory of movement and the explicit rules of linearization and spell-out.

A grammatical analysis of doubling can be also applied to RSL. Doubling is very frequent (thus regular); however, it is also restricted. For instance, if I leave clause repetition out of the picture, in RSL, as in other sign languages, only single signs but not larger constituents can be doubled. Furthermore, sometimes doubling is non-identical, that is, the copies are different in morphological marking. In such cases, it is always the second copy that is more marked, cf. (14).

(14) RSL

CLOSE / **GO THERE GO-ASP:CONT**

‘He is going there now.’ Second copy marked with continuous aspect marker.
(Kimmelman 2014: 143)

Stolz et al. (2011) provide several arguments against analyzing syntactic doubling as reduplication. For instance, they discuss an example of syntactic doubling in Fongbe, cf. (15), after Inkelas and Zoll (2005), and argue that the sentence consists of two separate clauses to which the “copies” of the verb in fact belong. If one is to analyze this as reduplication, Stolz et al. warn, the notion of reduplication would disintegrate due to the lack of constraints. However, in the previous section we have seen that for RSL one should probably allow reduplication to apply to units as large as clauses; then maybe it is also acceptable to allow the intervening material for non-adjacent reduplication to be of any size, and not to limit it to syllables as Stolz et al. suggested. Furthermore, the claim that the copies of the verbs belong to different clauses might have some grounds in Fongbe, where there is

also a prosodic boundary separating the two copies. In RSL, however, quite often no prosodic boundary can be found between the copies, cf. (16).

(15) Fongbe

sí(sɔ) wɛ, Kɔkú **sísɔ**
 tremble it.is Koku tremble
 ‘It was tremble that Koku did.’
 (Stolz, Stroh & Urdze 2011: 48)

(16) RSL

LEAVE SHOP LEAVE
 ‘He left the shop.’
 (Kimmelman 2014: 147)

In addition, Stolz et al. (2011) claim that the two instances of the doubled verb in Fongbe did not form a construction *stricto sensu*. It seems unclear why this must be the case, unless we include adjacency in the definition of a construction.

Stolz et al. (2011) also discuss other phenomena that are somewhat similar to syntactic doubling that they did not want to analyze as reduplication. One such phenomenon is correlatives (such as Dutch *of X of Y* ‘either X or Y’). The reasons not to analyze those as reduplication are as threefold. First, the copies of the word are never adjacent; however, I have already discussed this issue. Second, correlatives show infinite recursion and can be extended to as many copies as necessary, unlike true reduplication. However, this does not at all apply to syntactic doubling in RSL, where more than two copies hardly ever appear (Kimmelman 2013, 2014). Finally, correlatives in general are optional, and the single instance of the conjunction can usually fulfill the same function. It is not exactly clear whether doubling is optional. On the one hand, turning an RSL sentence with doubling into a sentence without doubling is usually possible (but see some counterexamples for other sign languages discussed in Kimmelman 2014). On the other hand, the pragmatic function of foregrounding disappears if doubling is not used, so if optionality is assessed with respect to expressing the exact same semantics and pragmatics, then doubling is not optional.

The main argument against analyzing doubling as reduplication is its function. Doubling in RSL has a clearly pragmatic function: foregrounding, which is somewhat related to focus and emphasis. Stolz et al. (2011) together with many other researchers consider the semantics/pragmatics distinction crucial in differentiating between reduplication and repetition. One could question the major role of this criterion since pragmatic functions, such as marking topic and focus, can clearly also be fulfilled by grammatical (including morphological) markers in

some languages (Aboh 2010), and if so, it is not exactly clear why reduplication should be prohibited from having pragmatic functions. However, this issue is far beyond the scope of this paper, and data from RSL doubling, although interesting, are not unique, and thus cannot form a crucial argument one way or the other.

5 Conclusion

In this paper I discussed three phenomena in Russian Sign Language: reduplication, which generally conforms to the prototype of reduplication in spoken languages; distributive marking, which shows some surprising properties; and syntactic doubling, which may or may not be a related phenomenon. It seems that while each of these phenomena are more or less close to the prototype of reduplication, none of them can be characterized as classical repetition.

It seems that, in general, reduplication in RSL (and probably in some other sign languages) fits the patterns found in spoken languages rather well. Functionally, as demonstrated by Burkova and Filimonova (2014), reduplication in RSL has the same semantics as reduplication in many spoken languages: it is used to mark verbal aspect, nominal plurality, nominalization, intensity for adjectives, and distributive semantics. Formally, reduplication can sometimes take form of triplication or multiplication, but at least for RSL, outside of the domain of distributive marking, the preferred form is reduplication, so again RSL does not diverge from the prototype.

Another feature of RSL that does not look very different from phenomena found in spoken languages is syntactic doubling. It is used to convey a function related to Information Structure, namely, foregrounding. Similar constructions have been found in other sign languages, as well as in spoken languages, with similar functions. The question whether doubling in RSL can be analyzed as reduplication or repetition is very controversial, but the same question can be stated for verbal doubling in American Sign Language or in spoken languages like Fongbe, and the answer should probably be the same for all these languages.

I did observe some obvious modality differences between sign languages (which RSL is an example of) and spoken languages. Due to the presence of the second articulator (the second hand), reduplication in RSL can formally be realized as the involvement of this articulator. Furthermore, due to the fact that sign languages actively use non-manual signals simultaneously with manual signs, reduplication can also be realized through this channel. However, those are surface-level differences, which do not make reduplication in RSL special in any fundamental way.

A more serious modality effect can probably be observed in the domain of distributive marking. As I demonstrated, distributive reduplication (combined with sideward movement) is in fact triplication or multiplication, and it can apply to full clauses. Both these facts seem to blur the boundary between prototypical reduplication and repetition. It seems that in distributive contexts in RSL reduplication is not restricted to two copies (and no repetition-style analysis of it can be involved), and also that reduplication can apply to large syntactic units.

I argued that these facts might be modality effects, and that at least triplication might be explained with a reference to iconicity, but I do not have a crystal-clear analysis of why spoken languages could not use similar constructions as well. If this is a modality-specific phenomenon, then the significance of these findings for the theory of reduplication in spoken languages is not very high. However, if a cross-modal (= modality-independent) theory of reduplication is to be developed, these facts have to be addressed. In addition, one might also wonder whether some spoken languages have similar phenomena, and whether the strict definition of reduplication as distinct from repetition can be maintained.

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A brief overview of total reduplication in Modern Japanese

Abstract: In this paper I aim to give a brief overview of different types of total reduplication in Modern Japanese. I offer a number of examples based on primary language data from a large-scale web corpus. Some of these examples are frequently treated as total reduplication in the pertinent literature, while others have gained little or no attention in this context so far. In order to address whether these different examples constitute legitimate instances of reduplication, I examine their formal, functional, and semantic properties, as well as their productivity. Numerous phenomena in Modern Japanese formally and functionally fulfill the criteria of qualifying as total reduplication. However, many of these seem to exhibit limited or no potential for morphological innovation. Examples involving phrasal bases support the observation that total reduplication is not necessarily confined to the word-level. Furthermore, I argue that a constructional analysis of different types of reduplication seems highly promising.

1 Introduction

Total reduplication is considered a feature of Modern Japanese. It is listed in the *World Atlas of Language Structures Online* as a language exhibiting “full reduplication only” (Rubino 2013). The entry on Japanese in the *Graz Database on Reduplication* names the functions “pluralization, word class derivation, [and] lexical enrichment” (Hurch 2005). Unlike some European languages discussed in this volume,¹ Japanese is therefore not considered a ‘reduplication avoider’.

In this paper I aim to give a brief overview of different types of total reduplication in Modern Japanese on the basis of primary language data.² Beginning by

¹ Cf. Finkbeiner (this volume) and also Freywald (2015).

² Unless otherwise stated, the word forms given have been verified as occurring in *JpWaC* (Srdanović Erjavec, Erjavec, and Kilgarriff 2008), a web-based corpus of Japanese with ca. 400,000,000 tokens.

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listing some well-known examples in Section 2.1, I will go on to introduce some forms that are less frequently discussed in this context in Section 2.2. Section 3 aims to further illuminate the status of the examples by discussing their formal, functional, and semantic properties, as well as questions regarding their productivity.

In the following discussion, ‘repetition’ is used in a general sense as an umbrella term for multiple occurrences of linguistic material. Reduplication is defined functionally as being “equipped with fixed construction frames which are associated with meanings of their own and often are of a grammatical nature” (Stolz and Levkovych, this volume).³ To qualify as reduplication a type of repetition therefore has to exhibit a holistic meaning and/or function not entirely predictable from its constituents. The focus of this paper lies on total reduplication (the full reduplication of a base) since partial reduplication (the reduplication of only a part of a base) is usually not considered a feature of Modern Japanese.⁴ While non-reduplicative repetition phenomena are common in Japanese, they are beyond the scope of this paper.⁵

2 Data

2.1 Well-known cases of total reduplication

The types of total reduplication introduced in this section and exemplified in Table 1 below are tentatively grouped according to the word class of their respective bases,⁶ beginning with nominal bases in (1) and (2), followed by pronominal (3), verbal (4), adjectival (5), and non-Chinese loanword bases (6). (7) and (8) are

³ Similarly, Booij (2010: 39, 2013: 260–261) argues for a constructional analysis of reduplication. Inkelas and Zoll’s (2005) “Morphological Doubling Theory” is rooted in Construction Grammar as well.

⁴ Martin (1952: 65–66) highlights an exception here in describing forms involving partial reduplication, such as *fubuki* ‘snowstorm’ (< *fuku* ‘blow’), *tsuzuku* ‘continue’ (< *tsuku* ‘adhere’, ‘touch’). Due to their opacity these forms can perhaps be addressed more adequately from a diachronic perspective.

⁵ This refers to types of repetition that do not exhibit constructional meanings and are not grammatical in nature. The observation that “[s]peakers may repeat almost anything they want and whenever they want, whereas they cannot freely reduplicate units of their utterances or skip reduplicating them if they want to express certain grammatical categories” (Stolz and Levkovych, this volume) holds true for Japanese.

⁶ As discussed below, there is no agreed-upon method of categorization for the different types of total reduplication in Japanese, due to the many factors involved. This section roughly follows Shibasaki’s (2009) approach.

Table 1: Well-known cases of total reduplication.

| | | | |
|-----|--|--|---|
| (1) | a. <i>hito-bito</i> b. <i>kuni-guni</i> c. <i>yama-yama</i> d. <i>mura-mura</i> | person/s-person/s country/ies-country/ies mountain/s-mountain/s village/s-village/s | 'people' 'countries' 'mountains' 'villages' |
| (2) | a. <i>iro-iro</i> b. <i>toki-doki</i> c. <i>sama-zama</i> d. <i>moto-moto</i> | color/s-color/s time/s-time/s condition/s-condition/s origin/s-origin/s | 'various/ly' 'sometimes' 'diverse/ly' 'original/ly' |
| (3) | a. <i>ware-ware</i> b. <i>sore-zore</i> c. <i>kore-kore</i> | I/we-I/we that-that this-this | 'we' 'each' 'such and such' |
| (4) | a. <i>masu-masu</i> b. <i>naku-naku</i> c. <i>omoi-omoi</i> d. <i>kawaru-gawaru</i> e. <i>miru-miru</i> | increase-increase cry-cry think-think change-change look-look | 'increasingly' 'in tears' 'each according to his own fancy' 'one after another' 'very quickly' |
| (5) | a. <i>atsu-atsu</i> b. <i>samu-zamu</i> c. <i>karu-garu</i> | hot-hot cold-cold light-light | 'very hot' 'wintry', 'bleak' 'easily' |
| (6) | a. <i>rabu-rabu</i> b. <i>toraburu-toraburu</i> | (from Engl. 'love') trouble-trouble | 'lovey-dovey' 'troublesome' |
| (7) | a. <i>niko-niko</i> b. <i>ira-ira</i> c. <i>don-don</i> d. <i>wan-wan</i> e. <i>teku-teku</i> f. <i>mochi-mochi</i> | rice cake-rice cake | 'smiling cheerfully' 'irritated' 1. drumming or thumping sound; 2. 'rapidly' 'bow-wow' 'trudgingly' 'sticky and elastic in texture' [like a fresh rice-cake] |
| (8) | a. <i>mono-monoshii</i> b. <i>baka-bakashii</i> c. <i>samu-zamushii</i> d. <i>meka-mekashii</i> | object/s-object/s SFX fool/s-fool/s SFX cold-cold SFX mechanism/s-mechanism/s SFX | 'pompous' 'foolish' 'bleak' 'mechanical' |
| (9) | a. <i>ta-ta</i> b. <i>moku-moku</i> c. <i>en-en</i> d. <i>shin-shin</i> | many-many silent-silent prolong-prolong deep-deep | 'many' 'silently' 'on and on' 'very deep' |

exceptions: (7) shows mimetic expressions involving reduplication, not necessarily of mimetic bases; the examples in (8) are grouped together because they all involve the adjectivizing suffix *-shii*. Lastly, (9) shows Chinese-loanword based forms.

The examples in (1) involve nouns from the native stratum functioning as bases of collective nouns. Since plurality is usually unmarked in Japanese, base nouns such as *hito* (1a) are ambiguous in regard to number. The reduplicated forms, on the other hand, do not simply express plurality but collectivity.

The forms in (2) also involve total reduplication of nominal bases from the native stratum. However, their respective meanings cannot be derived as transparently as is the case with the examples in (1). As Iwasaki notes, this type of reduplication “creates adjectival and/or adverbial expressions” (Iwasaki 2013: 99). While this holds true for all examples in (2), (2d) seems to be the only example where it is the only major function. (2a, b, c) semantically share a sense of scatteredness and/or diversity. This sense can be more transparently derived from the meaning of the base for (2b, c) – e.g. ‘sometimes’ as scattered points of time and ‘diverse’ as many different conditions – but less so in the case of (2a), even though the link between ‘many different colors’ and ‘various’ does not appear entirely opaque either.

The examples in (3) involve total reduplication of pronominal bases from the native stratum. Semantically, there are similarities to some of the forms mentioned already: (3a) means ‘we’ in a collective sense and therefore resembles the forms in (1). The reduplicated medial demonstrative in (3b) has a distributive meaning that is somewhat similar to the sense of scatteredness in (2a, b, c). (3c) serves as a placeholder, a function that will be further addressed in connection with the examples in (12) below.

(4) shows reduplicative forms with verbal bases. They all express adverbial or adjectival meanings. While the meaning relationships between the respective base and reduplicated form seem rather transparent in (4a, b, c, d), there are differences: (4a, b) express continuity, (4c) has a distributive meaning reminiscent of (3b), and (4d) expresses iterative meaning. (4e) is considerably more opaque than the others.⁷

The bases of the forms in (7) are from the mimetic stratum.⁸ Japanese is known as a language with a comparatively rich mimetic system. Total reduplication is very common in this domain. Citing studies by Lu (2006) and Kadooka (2007), Akita

⁷ A relation of the concepts of ‘quickness’ and visual perception can also be found in other languages, however (e.g., English: *in a blink of an eye*, and German: *Augenblick*, lit. eye-glimpse ‘instant’).

⁸ Japanese mimetics are not easy to define as a word class (for an in-depth discussion and a prototype-based approach cf. Akita 2009: 96–136). However, the mimetic status of the bases in (7) is uncontroversial, to my knowledge.

points out that reduplicative forms make up over forty percent of the mimetic lexicon (Akita 2009: 34). The examples represent the three types of mimetic expressions⁹: phonomimes (7c1, d), phenomimes (7a, c2, e, f) and psychomimes (7b). Reduplicative mimetics often lack identifiable independently-occurring base forms (7b, e). There are also mimetic expressions with prosaic bases, i.e. base forms that do not belong to the mimetic stratum (7f).¹⁰ Various authors have made the observation that mimetic reduplication expresses aspectuality (e.g. Hamano 1998: 104–106; Lu 2006: 87, 94–96; Akita 2009).¹¹ This is illustrated by (7a): the reduplicated form *niko-niko* expresses imperfective, durative meaning while the non-reduplicative *nikori*¹² ‘smiling’ expresses perfective, semelfactive meaning.

The bases of the forms in (9) are bound morphemes from the Sino-Japanese stratum. While Shibasaki (2009) treats cases like these as reduplication, Nishimura (2013) calls the underlying morphological operation “root conjunction of Sino-Japanese morphemes”, which he deems to be “very similar” to mimetic reduplication (Nishimura 2013: 97). One reason for this may be that many of these forms were borrowed from Chinese already reduplicated.¹³

The above types of total reduplication (1)–(9) are commonly found in the literature on reduplication in Japanese (e.g. chapter 5, §2.4 in Iwasaki 2013; §11 in Martin 1952; chapter 2.4 in Nishimura 2013; Shibasaki 2009). There seems to be no consensus on the definitions of the different types of processes.¹⁴ Shibasaki (2009) categorizes by word class of the respective bases. Iwasaki mentions three types: firstly, reduplication “to indicate the plurality of a noun base” (Iwasaki 2009: 99), which applies to the forms in (1). Furthermore, he notes that mimetic

9 These are rather common terms in the linguistic literature on Japanese mimetics. Akita defines phonomimes as “sound-mimicking word[s]” (Akita 2009: 11) and states that “[p]henomimes represent visual or textural experiences, such as manner of motion and roughness of the skin. Psychomimes represent internal experiences – namely, bodily sensation and emotion” (Akita 2009: 11).

10 For a discussion of such forms cf. Tsujimura (2016).

11 For further discussions of the aspectuality of mimetic reduplication cf. Toratani (2007) and Tsujimura and Deguchi (2007).

12 Non-reduplicated mimetics often take mimetic suffixes; in this case *-ri*.

13 (9d) *shin-shin*, for example, is written with the characters ‘深深’. This form in Mandarin Chinese is discussed by Sui (this volume).

14 This lack of consensus does not necessarily result from disagreement among scholars, but may in large part be owed to the many different criteria that can play a role in categorizing the types of reduplication, such as word class, semantics, grammatical function, lexical properties, etc.

reduplication and the reduplication of nouns or noun equivalents¹⁵ “creates adjectival and/or adverbial expressions” (Iwasaki 2009: 99). This would apply to (2), (3b), (4c) and (5). Iwasaki’s third category is the reduplication of a verb’s nonpast form (Iwasaki 2009: 100), as shown in (4a, b, d, e).

Some authors prefer a binary classification of intensive/plural reduplication and mimetic reduplication (Ito and Mester 2003: 77; Nishimura 2013: 82). Intensive/plural reduplication expresses “plurality in nouns, intensity in adjectives, and repetition or duration in verbs” (Nishimura 2013: 82) and only applies to bases belonging to the native Japanese stratum (Nishimura 2013: 87). Intensive/plural reduplication also allows the voicing alternation known as *rendaku* to take place (Nishimura 2013: 93). Mimetic reduplication applies to mimetic, native, and non-Chinese loanword bases (Nishimura 2013: 97), and *rendaku* does not occur. Nishimura says that the semantic side of this class of reduplication “derives mimetic expression” (Nishimura 2013: 84). Vance (2014b: 37) views this binary classification as problematic, since “the semantic distinction between the two types is not as clear-cut as one would hope”.

The above section shows that the ‘well-known’ types of reduplication involve base forms from all strata and major word classes of Modern Japanese, and that these types of reduplication cover a broad range of meaning.

2.2 Other potential types of total reduplication

This section introduces some potential types of total reduplication (Table 2) that are not as well-documented in the literature as the examples mentioned above. The question of whether these forms should be considered legitimate instances of total reduplication will be addressed in Section 3.

The forms (10a–e) are examples from *A Japanese Salad-salad paper* (Oho and Yamada 2011) – a title referencing Ghomeshi et al.’s (2004) study of English contrastive focus reduplication. “NP-reduplication”, as Oho and Yamada (2011) call it, involves the repetition of a noun phrase followed by a form of the verb *suru* ‘do’.

Oho and Yamada (2011) point out that “[u]nlike English Contrastive Reduplication, a reduplicated NP no longer retains the syntactic nominal property and behaves as a degree predicate. It cannot be an argument of a verb, as shown in the ungrammatical example in [(10b)] in which the reduplicated noun is accusative

¹⁵ Iwasaki uses this term to describe nominalized verbal and adjectival bases (Iwasaki 2013: 90–92).

Table 2: Other potential types of total reduplication?

| | | |
|------|--|--|
| (10) | a. <i>Kono ryōri wa sugoku sakana-sakana shiteiru.</i> this dish TOP very fish-fish do:ASP; NONPAST 'This dish is very fishy.' (Oho and Yamada 2011) | |
| | b. * <i>Shigeto wa sakana-sakana o tabe ta.</i> Shigeto TOP fish-fish ACC eat:PAST Int. 'Shigeto ate fish (that was very fishy).'(Oho and Yamada 2011) | |
| | c. <i>Akafuku hodo Mie no omiyage-Mie no omiyage shiteiru mono wa nai.</i> Akafuku as much Mie GEN souvenir-Mie GEN souvenir do:ASP:NONPAST thing TOP doesn't exist:NONPAST 'There is nothing that is as typical a souvenir of Mie as Akafuku.' (Oho and Yamada 2011) | |
| | d. <i>Shigeto ga kaita bunshō-Shigeto ga kaita bunshō shiteiru.</i> Shigeto NOM write:PAST writing-Shigeto NOM write:PAST writing do:ASP:NONPAST 'This is a typical writing by Shigeto.' (Oho and Yamada 2011) | |
| | e. <i>Ni wa sanjūyon yori gūsū-gūsū shiteiru.</i> 2:TOP 34 more than even number-even number do:ASP:NONPAST '2 is more even-number-ish than 34.' (Oho and Yamada 2011) | |
| | f. <i>Aidoru-aidoru shita kakko.</i> aidoru-aidoru do:PAST appearance 'appearance which is typical of an aidoru' (JpWaC) | |
| (11) | a. <i>hitori-hitori</i> one person-one person 'each person' b. <i>kojin-kojin</i> individual/s-individual/s 'each individual' c. <i>chihō-chihō</i> region/s-region/s 'each region' d. <i>au hito-au hito</i> meet person/s-meet person/s 'each person one meets' | |
| (12) | a. <i>nani-nani</i> what-what 'such and such (a thing)' b. <i>dare-dare</i> who-who 'such and such (a person)' c. <i>doko-doko</i> where-where 'such and such (a place)' d. <i>itsu-itsu</i> when-when 'such and such (a time)' | |
| (13) | a. <i>mainichi-mainichi</i> every day-every day 'day after day' b. <i>maishū-maishū</i> every week-every week 'week after week' c. <i>maikai-maikai</i> every time-every time 'time after time' | |

(continued)

Table 2 (continued)

| | |
|------|--|
| (14) | a. <i>yonde mo-yonde mo hitokoto no henji mo kaesarenai</i> call:TE even-call:TE even one word GEN reply even return:PASS:NEG ‘no matter how many times I call, I get no answer’ (JpWaC) |
| | b. <i>aruite mo-aruite mo inshokuten ga mitsukaranakatta</i> walk even-walk even restaurant NOM find:NEG:PAST ‘no matter how far we walked, we could not find a restaurant’ (JpWaC) |
| (15) | a. <i>chichi</i> ‘breast’ b. <i>mimi</i> ‘ear’ c. <i>momo</i> ‘thigh’ d. <i>haha</i> ‘mother’ e. <i>chichi</i> ‘father’ |

marked” (Oho and Yamada 2011: 1). The authors illustrate the fact that this type of repetition targets phrases by providing examples (10c, d) where NPs including a genitive (10c) and even a relative clause (10d) are repeated.¹⁶ As to semantics, Oho and Yamada (2011) “claim that any degree expressions generated by the NP reduplication have the same scale, namely closeness to the norm” (Oho and Yamada 2011: 2). This type of repetition can involve native (10a), Sino-Japanese (10e), and loanword (10f)¹⁷ expressions.

The forms in (11) express distributive meanings. As the examples illustrate, this type of repetition can occur with native (11a) and Sino-Japanese (11b, c) bases. (11d) shows the repetition of a noun phrase. The fact that this type of repetition – like the one exemplified in (10) – seems to target noun phrases might be one reason why it does not usually come up when reduplication in Japanese is discussed, despite its being rather common.

The forms in (12) have indeterminate pronouns¹⁸ as bases and fulfill the function of a placeholder. The bases of the forms in (13) all include the quantifier *mai-*, which expresses the universal distribution of an event. The forms express

¹⁶ The acceptability of these examples, especially (10d), appears to be questionable to some native speakers and should perhaps be investigated further.

¹⁷ In Japanese pop culture the term *aidoru* – a loan from English ‘idol’ – refers to a specific type of entertainment personality.

¹⁸ As Shimoyama points out, indeterminate pronouns in Japanese “– although typically given English translations using *wh*-words – do not have interrogative meanings inherently” (Shimoyama 2008: 372). Depending on the particles they co-occur with, they can take on

a sense of indefinite repetition.¹⁹ The examples in (14) involve the repetition of verbs in the conjunctive *te*-form, the particle *mo*, and a negative form,²⁰ and share a sense of indefinite repetition with the forms in (13). Lastly, as Martin (1952) observes, some names of body parts (15a, b, c) and kinship terms (15d, e) sometimes involve repetition (Martin 1952: 66–67).

3 Discussion

The previous section provided examples to give a brief overview of different forms of repetition in Modern Japanese. Some of those have been discussed as total reduplication in the literature; others resemble total reduplication – at least superficially. In this section I want to discuss the questions of whether and how these should be treated as instances of total reduplication.

3.1 Form

Formally, the examples given above certainly ‘look like’ total reduplication, in that they contain immediately adjacent²¹ and – except for some predictable deviations due to *rendaku*²² – identical segments (cf. the discussion of completeness, exactness and contiguity in Stolz et al. 2011: 43–48).

interrogative, existential, or universal meanings, and can also be used as a negative polarity item or with a free choice meaning similar to ‘any’ in English (Shimoyama 2008: 373).

19 Interestingly, Müller (2011: 230) and Finkbeiner (2015) mention a syndetic reduplication pattern expressing very similar meanings in German: ‘*X für X*’. See also Jackendoff’s (2008) account of the NPN construction in English, instances of which are used in the translations of the examples.

20 There is also the repetition of verbs in the conditional form in combination with the archaic concessive particle *-domo* (e.g. *aruke domo-aruke domo* ‘no matter how far we walked’), perhaps representing an earlier form of this pattern.

21 There also exist “syndetic patterns” (Stolz 2009) in Japanese, such as *X to iu X* (\approx *X called X*) conveying the sense of ‘all *X*’ (*hon to iu hon* \approx *books called books* ‘all books’), which violate contiguity and are beyond the scope of this paper. For a discussion of similar forms in German cf. Finkbeiner (this volume).

22 Differences between base and reduplicant, such as in (1a) *hito-bito*, are predictable in the sense that the reduplicant undergoes the voicing alternation known as *rendaku*. The fact that it is not always predictable to which forms *rendaku* applies is by no means unique to the domain of reduplication (cf. Vance 2014a for a discussion of the nature of *rendaku*).

However, forms like *teku-teku* (7e) can be seen as problematic, since the supposed base form *teku* neither occurs independently nor expresses a discernible meaning as a bound morpheme. Schwaiger (2015) notes that this is not an uncommon situation cross-linguistically, and states: “[t]o incorporate the latter formation type in the present discussion obviously entails a deviation from most traditional definitions of reduplication [...] but it is nevertheless a common practice of many pertinent studies to discuss these sorts of patterns along with the more productive ones” (Schwaiger 2015: 475). One reason to do so, in the case of mimetic expressions lacking an identifiable base, is their close functional and formal similarity to mimetics with corresponding base forms; for example, *teku-teku* describing a manner of walking does share a durative sense with forms such as (7a) *niko-niko* ‘smiling cheerfully’. Akita (2009) takes a constructional approach to this problem. He identifies different templates of “bimoraic root-based” and “monomoraic root-based” accented and unaccented total-reduplicative mimetics, and reveals links between their respective forms and meanings (Akita 2009: 155–172). This analysis does not rely on the bases necessarily occurring independently, since meaning is assigned to the reduplicative templates ‘as such’.

The notion of the lexicon put forward by Jackendoff (2013) may provide a way to further accommodate the situation, and also seems compatible with Akita’s approach. In his model, a lexical item is not required to be a Saussurean sign – “a full triple of phonology, syntax and semantics” (Jackendoff 2013: 75). Therefore, *teku* could be treated as a lexical item that has phonological features, but no syntactical and semantic features. This item could then occupy both slots in a reduplicative construction with the meaning of ‘durativity’, in the same way that a base like *niko* that has phonological, syntactical, and semantic features.²³

The forms in (10) and (11) raise questions in relation to the ‘wordhood’ of the respective bases and resulting reduplicative forms. Phrasal bases appear to violate Schwaiger’s (2015) definition of total reduplication, which requires “repetition of words or parts of words” (Schwaiger 2015: 468). Furthermore, it is debatable whether the resulting expressions fulfill Gil’s criterion for the unit of output of reduplication to be “equal to or smaller than a word” (Gil 2005: 33). However, Stolz and Levkovych (this volume) note that reduplication does not have to be confined to the domain of the ‘word’, and – as mentioned in the introduction above – argue for a functional definition of reduplication as being “equipped

²³ Morphological Doubling Theory (Inkelas and Zoll 2005) – an approach rooted in Construction Grammar that is in many ways similar in spirit with Jackendoff’s theory – places reduplication firmly in the semantic domain and is therefore unable to capture this type of situation.

with fixed construction frames which are associated with meanings of their own and often are of a grammatical nature” (Stolz and Levkovych, this volume). This is clearly the case for the ‘reduplication + *suru*’ examples in (10): the formation of non-nominal degree expressions from noun phrases is a grammatical process, and the notion of “closeness to the norm” (Oho and Yamada 2011: 2)²⁴ can be seen as a constructional meaning that is not predictable from the bases alone. The distributive meaning of the forms in (11) also fulfills this criterion. Furthermore, the number of repetitions does not appear to be arbitrary, as the ungrammaticality of the following examples illustrates²⁵:

- (16) a. **kōjin-kōjin-kōjin*
 individual-individual-individual
 *‘each individual’
- b. **sakana-sakana-sakana shiteiru*
 fish-fish-fish do:NONPAST
 *‘to be very fishy’

This is yet another argument for the constructional status of the processes exemplified in (10) and (11). It therefore appears adequate to treat forms like these as legitimate instances of total reduplication in Stolz and Levkovych’s sense.

Kinship terms and names of body parts involving identical phonological segments – such as those in (15) – are well-attested cross-linguistically. Freywald (2015), for example, describes similar terms in German such as *Popo* ‘botty’, and *Mama* ‘mummy’, as “fossilised” word forms which are “semantically opaque” (Freywald 2015: 906, fn. 1). The same seems to be true for the forms in (15). Due to their high level of opacity and lack of systematicity (cf. Martin 1962: 66) it does not seem appropriate to treat them as instances of total reduplication.

3.2 Meaning and function

How do the Japanese examples (1)–(15) in Section 2 fit into the ‘cross-linguistically attested picture’ of total reduplication from a functional point of view? Many of the meanings expressed are familiar from the general discourse regard-

²⁴ As mentioned in Section 2.2., the authors view ‘closeness to the norm’ as the scale that these degree expressions refer to.

²⁵ Compare (11b) and (10a) for the ‘grammatical’ reduplicated variants of the same bases.

ing the semantics of reduplication²⁶: ‘plurality’ (1), (3a), ‘repetition’ (4d), (13), (14), ‘intensity’ (4e), (5), (6), (9c, d), (10), ‘distribution’ (2a, b, c), (3b), (4c), (11), as well as aspectual meaning (7). Word class derivation (e.g. (2), (4), and (11)) is also a well-attested function of reduplication (cf. Schwaiger 2015: 476). The placeholder-function witnessed in the reduplication of indeterminate pronouns (cf. (12)) has not been mentioned in the literature as a common function of reduplication.²⁷ It does, however, qualify as a ‘holistic’ function of this type of repetition which therefore fits the criteria for total reduplication given in the introduction. The same is true for the expression of ‘indefinite repetition’ by the forms in (13) and (14), although this is – as explained above – a very common function.

3.3 Productivity

While there exist a great number of types of reduplication in Modern Japanese, there is little information regarding the productivity of the underlying word formation patterns. One of the most frequently mentioned types of reduplication in Japanese is exemplified by the forms in (1). Although the creation of collective plural nouns from nominal bases is semantically highly transparent, it only applies to a rather limited number of native Japanese nominal bases and is considered to be “not very productive” by Iwasaki (2013: 99). In fact, almost all of the examples²⁸ given in Section 2.1 constituting the ‘well-known’ types of reduplication in Japanese occur rather frequently, and are most likely lexicalized in their respective meanings.²⁹

One pattern that is believed to be productive by Iwasaki (2013: 99) is reduplication in the mimetic vocabulary (cf. (7)). However, he does not specify his notion of productivity. In this context, it would be important to know whether

²⁶ This discourse can be traced all the way back to the observations of Pott (1862). More recent examples include Fischer (2011), Hurch (2005–), Rubino (2013), Schwaiger (2015), and Stolz et al. (2011).

²⁷ Interestingly, ‘such and such’, which is used in the glosses in (12), could perhaps be interpreted as a syndetic pattern of reduplication. The same is true for German *so und so* ‘so and so’, *das und das* ‘such and such’, *dann und dann* ‘then and then’, etc. It should be noted that these forms are perhaps not fully lexicalized and are stylistically constrained in their use.

²⁸ (8d) *meka-meka shii* is an exception. This form that possibly constitutes innovative usage is considerably more transparent semantically than the highly specific meaning of a form like (8a).

²⁹ This does of course not necessarily imply that the underlying patterns are unproductive.

this means that total reduplication leads to entirely new mimetic expressions, or that newly-coined mimetic forms are likely to also serve as bases for reduplicative forms. Tamori (2002) observes creative uses of mimetic verbs in the literary works of Kenji Miyazawa, who appears to invent new forms such as *monya-monya* for a manner of speaking which is reminiscent of the existing form *munya-munya* ‘mumbling’, and also uses prevalent mimetic forms in unexpected contexts to express non-standard meanings. Although these usages do not fall under most definitions of productivity, they perhaps hint at the potential for morphological innovation³⁰ that mimetic forms exhibit.³¹ Furthermore, they illustrate how an innovative reduplicative form such as *monya-monya* could come into being without a corresponding base form.

Moving on to the forms in Section 2.2, Oho and Yamada (2011) find the pattern they call NP-reduplication to be “quite productive” (Oho and Yamada 2011: 1). The examples they give (10a–e) are not very frequent, highly transparent, and unlikely to be lexicalized, which could be an indication of them indeed being examples of productive usage. Other instances of this type of reduplication can be found in the *JpWaC* corpus, as illustrated by (10f). The distributive expressions in (11) are more frequent, especially (11a). (17a) is a less frequent example³² and (17b) shows another example for NP-reduplication + *suru*:

- (17) a. *Au onna no ko-onna no ko ni denwa bangō o kiite, dēto no yakusoku o shite mo suppokasarete bakari da*
 meet girl-girl DAT phone number ACC ask:TE date GEN appointment
 do:TE:even neglect:PSS:TE only COP
 ‘Even though I asked **each girl** I met for her phone number and set up a date I was always getting stood up.’
- b. *Onna no ko-onna no ko shiteiru fuku*
 girl-girl do:TE:NONPAST clothes
 ‘very girlish clothes’
 (JpWaC)

³⁰ Bauer (2001) suggests ‘innovation’ as a hypernym for morphological productivity and creativity.

³¹ As Natsuko Tsujimura pointed out to me, it is important to note in this context that the CVCV-CVCV template is the most common mimetic pattern and therefore plays a significant role in the creation of these innovative forms by giving rise to analogy (or representing the constructional pattern).

³² A corpus search for *hitori-hitori* (11a) yields more than six thousand hits while the token frequency of the forms in (17) is in the single-digit range.

Although both examples share the same base form, they express very different meanings. It does not seem plausible to derive the meaning of *onna no ko-onna no ko suru* ‘girlish’ (17b) from the meaning of *onna no ko-onna no ko* ‘each girl’ (17a). Again, the fact that these examples are highly transparent and unlikely to be lexicalized indicates that these might indeed be instances of innovative uses. This further illustrates the construction status of both types of reduplication.

The pattern exemplified by the forms in (12) cannot be used productively due to a lack of potential bases: indeterminate pronouns are a very small closed class. Similarly, the pattern in (13) also applies only to a rather limited set of bases containing the quantifier *mai-*.

- (18) a. *Kotoshi ichinen haiken suru kikai ga okatta desu ga maisutēji-maisutēji tanoshii kōen ni tenshon agarimashita!*³³
 this-year one-year watch do opportunity NOM many:PAST COP:POL but
each performance-each performance entertaining performance DAT
 rise:POL:PAST
 ‘Over the course of this year I had the opportunity to watch you many times and was still excited by your entertaining performance **again and again!**’
- b. *Mata, maisutēji-maisutēji minasan kara ‘ganbare!’ to iu kotoba o moratte sarani enerugī ga minagirimashita.*³⁴
 also, **each performance-each performance** everyone from ‘try-your-best:IMP!’ QUOT say word ACC receive:TE moreover energy NOM
 be-full:POL:PAST
 ‘Also, **performance after performance** everyone told me to try my best which energized me even further.’

However, these do not form a closed class, and less frequent potential bases exist. One such example is *maisutēji-maisutēji*³⁵ ‘performance after performance’. While this form does not occur in the corpus, a web search yields several results like those in (18), which indicate that this type of reduplication may indeed show some potential for innovation. The pattern exemplified in (14), on the other hand, occurs with a large number of verbal bases and is intuitively recognized as productive by native speakers.

³³ Source: https://twitter.com/kitamura_aoi/status/285697526361882625 (accessed 14 December 2017).

³⁴ Source: <http://ameblo.jp/uji-kiyotaka/entry-11973728895.html> (accessed 14 December 2017).

³⁵ *Sutēji* ‘performance’ is a loan from English *stage*.

4 Conclusion and outlook

It was my aim in this paper to provide a brief overview of different types of total reduplication in Modern Japanese. Section 2 introduced a number of examples, some of which are frequently discussed as instances of total reduplication in Japanese, and some of which have gained little or no attention in this context so far. Section 3 discussed the formal and functional properties, as well as the productivity of these different examples, in order to address the question of whether these constitute legitimate instances of reduplication.

This has revealed a somewhat mixed picture of total reduplication in Japanese. On the one hand, there is a great range of examples that formally and functionally fulfill the criteria of qualifying as total reduplication. On the other hand, many types of reduplication – especially some of the better-known ones – seem to exhibit little to no potential for morphological innovation. This combination of unproductive well-known cases of reduplication, and productive – or innovative – ‘pockets’ in other domains, is similar in some ways to Freywald’s (2015) findings regarding total reduplication in German.

Two types of total reduplication apparently involving phrasal bases were shown to support Stolz and Levkovych’s observation that reduplication is not necessarily confined to the word-level (Stolz and Levkovych, this volume). Furthermore, I have argued (along with Stolz and Levkovych, this volume; Booij 2010, 2013; Jackendoff 2013) that an analysis of different types of reduplication as constructions seems highly promising. This type of analysis would provide a more systematic categorization of the different types of reduplication according to their functional properties, perhaps in a similar vein to Akita’s (2009) treatment of mimetic expressions.

Lastly, I hope to have shown that Modern Japanese – while not as clear-cut a case of a ‘reduplication-affine’ language as might have been expected – offers a wealth of fascinating questions for researchers interested in reduplication.

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Affixation or compounding? Reduplication in Standard Chinese

Abstract: This paper describes the morphological and phonological properties of three types of reduplication in Standard Chinese, including diminutive, intensifying and delimitative reduplication. It shows that the three types of reduplication exhibit distinct morphological and tonal patterns. In order to account for the distributional and semantic constraints on reduplication, the paper adopts the syntactic analyses proposed by Zhang (2015) for intensifying reduplication and by Arcodia et al. (2014) and Basciano and Melloni (2017) for delimitative reduplication to represent the reduplicant and the base in different syntactic positions. In addition, it argues that extrasyntactic operations are necessary in order to explain the distinct tonal patterns in reduplication. In particular, diminutive reduplication is derivational affixation, intensifying reduplication is compounding, and delimitative reduplication is inflectional affixation. Affixation triggers tone deletion in the reduplicant. Meanwhile, the morphosyntactic processes are subject to phonological constraints. This paper also distinguishes between reduplication and repetition.

1 Introduction

This paper describes certain important patterns of reduplication in Standard Chinese (SC, Duanmu 2007 [2000]). In reduplication, the reduplicative morpheme (reduplicant) has no independent phonological form, but assumes total or partial identity with the base (Inkelas and Downing 2015; Downing and Inkelas 2015). Reduplication has been argued to be either a form of affixation (Marantz

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1982) or of compounding (Inkelas and Zoll 2005). This paper argues that depending on the phonological and morphological properties of specific reduplicants, reduplication can instantiate either of these processes, at least in SC.

SC reduplication affects several word classes, including nouns, verbs, adjectives, adverbs, and measure words, and it expresses grammatical categories such as diminutivity, aspect, intensification, collectivity, and distributivity, which often correspond to distinct morphophonological patterns. For example, Arcodia et al. (2014, 2015) observe a form and function correspondence regarding the semantics and the morphological patterns of reduplication in SC – the ABAB pattern has a diminishing meaning, whereas the AABB pattern has an increasing meaning. The former applies to verbs, and the latter applies to all major word classes.

This paper describes diminutive, intensifying, and delimitative aspect reduplication, which mainly affects nouns, adjectives, and verbs, respectively. Based on the distinct morphological and phonological properties of each type, it proposes that diminutive reduplication is derivational affixation, delimitative aspect reduplication is inflectional affixation, and intensifying reduplication is compounding.

2 Diminutive reduplication

The cross-linguistic category of diminutive expresses a variety of meanings. Aside from indicating ‘child’ or ‘small’, it can express feelings of affection or contempt and notions of approximation, being a member-of, being related-to, among others (Jurafsky 1996). One of the morphological devices used in SC to express the diminutive is reduplication. Diminutive reduplication is mainly observed with kinship terms, with names of children, animals, insects, and other objects, and in child-directed speech. (1) lists reduplicative terms concerning kinship.¹

- | | |
|--|-------------------------------------|
| (1) a. <i>bà ba</i> ‘father’ 爸爸 | <i>mā ma</i> ‘mother’ 妈妈 |
| b. <i>gē ge</i> ‘older brother’ 哥哥 | <i>jiě jie</i> ‘older sister’ 姐姐 |
| c. <i>dì dì</i> ‘younger brother’ 弟弟 | <i>mèi mei</i> ‘younger sister’ 妹妹 |
| d. <i>nǎi nai</i> ‘fathernal grandma’ 奶奶 | <i>yé ye</i> ‘fathernal grandpa’ 爷爷 |
| e. <i>lǎo lao</i> ‘maternal grandma’ 姥姥 | |

¹ Chao (1968: 210) lists two further reduplicative address terms, *tài tai* ‘Mrs., wife’ 太太 and *shào nǎi nai* ‘young Mrs.’ 少奶奶. They are not much used in Modern Chinese; the latter has become obsolete.

- f. *gōng gong* ‘father-in-law’ 公公 *pó po* ‘mother-in-law’ 婆婆
 g. *jiù jiu* ‘mother’s brother’ 舅舅 *gū gu* ‘father’s sister’ 姑姑
 h. *bó bo* ‘father’s older brother’ 伯伯
 i. *shū shu* ‘father’s younger brother’ 叔叔
 j. *shěn shen* ‘wife of *shū shu*’ 婶婶

The base of reduplication can be free or bound. For example, *bà* ‘father’ 爸 and *mā* ‘mother’ 妈 are free morphemes, whereas *jiù* ‘mother’s brother’ 舅 and *yé* ‘grandpa’ 爷 are bound in SC. (2) are reduplicative names for children and pets. In addition to a legal name that a child will use at school, he or she often has a private name at home addressed by parents and others who are close to and usually older than the child. Many children’s private names consist of reduplication, (2a, b), which can sometimes be formed by reduplicating the last syllable of his or her given name, (2c–d). Starting in the 1970s, it is a popular practice to form a girl’s given name itself by reduplication, hence the private name and given name are identical, (2e), and whereby reduplication no longer appears exclusively in children’s names.

- (2) a. *lì lì*
 beautiful-RED²
 ‘girl’s name’ 丽丽
- b. *zhuàng zhuang*
 strong-RED
 ‘boy’s name’ 壮壮
- c. *nǚ rui*
 pistil-RED
 ‘girl’s name’ 蕊蕊 < *guō ruǐ* ‘Family name-Given name’ 郭蕊
- d. *chāo chao*
 overcome-RED
 ‘boy’s name’ 超超 < *yún chāo* ‘cloud-overcome, a boy’s given name’ 云超
- e. *yán yan*
 pretty-RED
 ‘girl’s name’ 妍妍 < *súi yán yan* ‘Family name-Given name, girl’s name’ 隋妍妍

2 Abbreviations used in this paper include: 1 first person, 2 second person, 3 third person, AFX affix, ASP aspect, DIM diminutive, DUR durative, INCH inchoative, NOM nominal, PFV perfective, PL plural, POSS possessive, PROG progressive, PRT particle, RED reduplicant, SG singular, SUCC successive.

- f. *bǎo bao*
treasure-RED
'dog's name' 宝宝
- g. *hǔ hu*
tiger-RED
'cat's name' 虎虎

(3) contains designations for animals (3a) and insects (3b). Since the unreduplicated forms of these words do not appear on their own or in other words, these reduplications are assumed to be monomorphemic.

- (3) a. *xīng xīng* 'orangutan' 猩猩 *fèi fèi* 'baboon' 狒狒
b. *guō guo* 'katydid' 蝈蝈³ *qū qu* 'cricket' 蚱蚱

Monomorphemic reduplication is productive in Old Chinese (Li 2013), but much less so in Modern Chinese. (4) gives reduplicative names for other objects. In contrast to the monomorphemic reduplication for animals and insects, these reduplications all have free or bound roots, and meanwhile express diminutive meanings.

- (4) a. *xīng xīng* 'star' 星星
star-RED
- b. *dòu dou* 'pimple' 痘痘
pimple-RED
- c. *wá wa* 'child' 娃娃
child-RED
- d. *diào diao* 'tune' 调调
tune-RED
- e. *dōu dou* 'pocket' 兜兜
pocket-RED

(5) illustrates reduplications used in child-directed speech to refer to objects (5a) or activities (5b) in a child's daily life.

³ Some nominal reduplications may further undergo *-er* 儿 suffixation, e.g., (3b), (4d) and (4e).

- (5) a. *gǒu*
 dog
 ‘dog’ 狗 > ***gǒu gou*** ‘doggy’ 狗狗
- wà zi*
 socks-AFX
 ‘socks’ 袜子 > ***wà wa*** ‘socks (child-directed speech)’ 袜袜
- b. *chuān xié*
 to put on-shoes
 ‘to put on shoes’ 穿鞋 > ***chuān xié xié*** ‘to put on shoes’ 穿鞋鞋
- chī fàn*
 to eat-meal
 ‘to eat meal’ 吃饭 > ***chī fàn fàn*** ‘to eat meal’ 吃饭饭
- shuì jiào*
 sleep, v.-sleep, n.
 ‘to sleep’ 睡觉 > ***shuì jiào jiao*** ‘to sleep’ 睡觉觉

It is worth noting that in Verb-Object constructions, it is the object that is reduplicated.

Apart from the special case of monomorphemic reduplication in animal and insect names, the other listed examples of reduplication are diminutive, and this paper claims that diminutive reduplication is derivational affixation. Evidence for this claim comes from two sources. First, the reduplication may have a different grammatical category or meaning from the unreduplicated form. In (6), the unreduplicated base is adjectival, but the reduplications are nominal, with distinct meanings from intensifying reduplications, cf., *guāi guāi* ‘very well-behaved, obediently’ 乖乖, *huài huài* ‘very naughtily’ 坏坏.

- (6) a. *yǎng* ‘itchy’ 痒 > ***yǎng yang*** ‘itch, n.’ 痒痒
 b. *guāi* ‘well-behaved, obedient’ 乖 > ***guāi guai*** ‘baby’ 乖乖
 c. *huài* ‘naughty’ 坏 > ***huài huai*** ‘naughty person’ 坏坏

Second, the reduplicant is toneless, which is typical of canonical suffixes⁴ in SC, e.g., *-zi* in *piàn zi* ‘to cheat-NOM, liar’ 骗子, *luàn zi* ‘messy-NOM, trouble’

⁴ Canonical suffixes in SC are toneless (Chao 1968; Zhu 1982), including both derivational and inflectional suffixes, for example, *-zi* ‘-NOM.’ 子, *-er* ‘-DIM’ 儿, *-tou* ‘-NOM’ 头, *-ba* ‘-NOM’ 巴, *-men* ‘-PL’ 们, *-le* ‘-PFV. ASP’ 了 and *-zhe* ‘-DUR. ASP’ 着. New suffixes, which often have foreign affix counterparts, have tones (Chao 1968: 225), e.g., nominal suffixes *-xìng* ‘-ness, -ity’ 性, *-zhě* ‘-er’

乱子, and *-tou* in *pàn tou* ‘to expect-NOM, expectation’ 盼头, *tián tou* ‘sweet-NOM, benefit’ 甜头, whereas a root must have tone.

As expected, if diminutive reduplication is derivational, the output may undergo further affixation or compounding, as shown in (7).

- (7) a. *wá wa men* ‘children’ 娃娃们
child-RED-PL
bù wá wa ‘cloth doll’ 布娃娃
cloth-child-RED
- b. *dōu dou kù* ‘sunsuit’ 兜兜裤
pocket-RED-pants
- c. *yǎng yang náo* ‘scratcher’ 痒痒挠
itchy-RED-to scratch

Also, as expected, nominal reduplication is not productive in general, and some reduplicated forms appear only as components of compounds, as in (8).

- (8) a. *bàng bang táng* ‘lollipop’ 棒棒糖
stick-RED-candy
- b. *niǎn nian zhuàn* ‘teetotum’ 捻捻转
twist-RED-turn
- c. *xiǎo hùn hun* ‘hoodlum’ 小混混
little-muddle, v.-RED

The spellout of the diminutive affix involves partial copying of the base. In particular, only the segmental content of the root morpheme is copied, without

者, *-xué* ‘-ology, -ics’ 学, *-jiā* ‘-ist’ 家, *-lùn* ‘-ism’ 论, and the verbal suffix *-huà* ‘-ize’ 化 which attaches to a nominal or an adjective and yields a verb, *chéngshì-huà* ‘city-ize, urbanize’ 城市化, *xiàndai-huà* ‘modern-ize, modernize’ 现代化. However, scholars do not agree on the affix status of these morphemes. For instance, Zhu (1982: 29) argues that *-xìng* ‘-ness, -ity’ 性 is not a suffix but a bound root, because its position in word is not fixed, i.e., it can appear as the first morpheme of a compound, e.g., *xìng zhì* ‘property-quality, characteristics’ 性质, *xìng zhuàng* ‘property-shape, shape and properties’ 性状, *xìng néng* ‘property-function, capacity’ 性能. And Chao (1968: 221) analyzes *-zhě* ‘-er’ 者 as an example of versatile end morpheme in compounds. The criteria for distinguishing between affixes and bound roots are still being worked out (Chao 1968; Zhu 1982; Dai 1992; Packard 2000; Liao 2014). Pan et al. (2004: 64–95) provide a detailed literature review of the introduction of the concept of affixation to the analysis of SC.

tone (Li and Sui 2009). Relevant evidence comes from the so-called third tone sandhi rule,⁵ which changes the first of two adjacent Low tones into a Rising tone (see Shih 1997 for details concerning the rule's local domain). For example, *měi* 'pretty' 美 + *hǎo* 'good' 好 yields *měi hǎo* 'happy' 美好. In diminutive reduplication, the reduplicant has no Low tone (due to partial copying), and so third tone sandhi fails to apply, as we see in examples like *bǎo bao* 'baby' 宝宝 or *yǎng yang* 'itch, n.' 痒痒.

3 Intensifying reduplication

Intensifying reduplication is a productive process that applies to adjectives and adverbs. It has what has been called a vivifying effect (Chao 1968; Li and Thompson 1981; Tsao 2001), and the output refers to a perceptible state related to the property denoted by the base adjective (Zhu 2003; Liu 2013). The reduplicated forms have a restricted syntactic distribution compared to their unreduplicated counterparts. In particular, they cannot co-occur with degree words such as *hěn* 'very' 很 or *tài* 'too' 太, appear in comparative or superlative constructions, or be negated with *bù* 'not' 不 (Chao 1968: 209).

Intensifying reduplication exhibits the two basic patterns of XX and XXYY, as shown in (9) and (10), respectively.

- (9) a. *shēn* 'deep' *shēn shēn* 'very deep' 深深
 b. *hóng* 'red' *hóng hóng* 'very red' 红红
 c. *qiǎn* 'shallow' *qiǎn qiǎn* 'very shallow' 浅浅
 d. *pàng* 'plump' *pàng pàng* 'very plump' 胖胖
- (10) a. *jiǎn dān* 'simple' *jiǎn jiǎn dān dān* 'very simple' 简简单单
 b. *máng lù* 'busy' *máng máng lù lù* 'very busy' 忙忙碌碌
 c. **qín kěn* *qín qín kén kěn* 'very diligent' 勤勤恳恳
 d. **gū líng* *gū gū líng líng* 'very lonely' 孤零零零

The base of XX reduplication is usually free, but the XY base in XXYY reduplication does not always exist as an independent word, as shown in (10c,d).

5 SC has four tones, High-level, Rising, Low, and Falling, which are traditionally referred to as 1st, 2nd, 3rd, and 4th tone respectively. As is well known, tones distinguish word meanings in SC, e.g., *mā* 'mother' 妈, *má* 'hemp' 麻, *mǎ* 'horse' 马, *mà* 'scold' 骂.

The reduplicant in intensifying reduplication is identical to the base and includes the tone of the base. Therefore, if the base contains a Low tone, the consecutive Low tones in the base and the reduplicant trigger third tone sandhi, as we see in (9c) and (10a,c).

3.1 Semantic and morphological constraints

Intensifying reduplication is subject to semantic and morphological constraints. It has been observed that base adjectives must be gradable to undergo reduplication (Chao 1968; Lü et al. 1980; Tang 1988; Zhu 2003; Liu 2013). Non-gradable adjectives, such as *zhēn* ‘real, true’ 真 and *cuò* ‘wrong’ 错, and adjectives denoting an extreme degree, such as *guì* ‘expensive’ 贵, *kuáng* ‘presumptuous’ 狂, *shē chǐ* ‘extravagant’ 奢侈, *wěi dà* ‘great’ 伟大, usually do not undergo reduplication (Zhu 2003: 10; Liu 2013). In addition, adjectives denoting an easily perceptible attribute are more likely to reduplicate than those that do not, and the reduplicated form itself also denotes a perceptible state (Tang 1988; Zhu 2003; Liu 2013).⁶ Based on Chao’s (1968) observation that reduplicated adjectives tend to have a favorable connotation even if the base is derogative, Zhu (2003) and Liu (2013) propose that the reduplication of derogative adjectives is felicitous only when the manner or the result of the event is intended by the subject.

Intensifying reduplication is also sensitive to the morphological structure of the base. Of the five types of compounds in SC based on the relations Subject-Predicate, Modifier-Head, Verb-Object, Verb-Result and coordinateness, coordinative compounds are the most amenable to XXYY reduplication (Tang 1988; Liu 2013). Non-coordinative compounds that reduplicate in the XXYY pattern are mostly exocentric. The Modifier-Head and Verb-Object compounds undergoing XXYY reduplication in (11a) are of this type, given that the category of the compound differs from that of the head.⁷ (11b) gives examples of XXYY reduplication targeting monomorphemic words.

⁶ Liu (2013) comments that the perceptibility requirement explains two other observations by Tang (1988): (i) adjectives denoting concrete properties are more likely to reduplicate than those denoting abstract properties, and (ii) adjectives used in colloquial and informal speech are more likely to reduplicate than those used in literary or formal speech.

⁷ Further examples of non-coordinative compounds that undergo XXYY reduplication include *zì rán* ‘self-so, natural’ 自然, *zì zì rán rán* ‘naturally’ 自自然然, *kè qì* ‘guest-air, polite’ 客气, *kè kè qì qì* ‘very politely’ 客客气气, *hé qì* ‘harmony-air, agreeable’ 和气, *hé hé qì qì* ‘agreeably’ 和和气气, *xiù qì* ‘pretty-air, delicate’ 秀气, *xiù xiù qì qì* ‘very good-looking’ 秀秀气气. In these examples,

- (11) a. *gōng dao* ‘fair-reason, fair’ 公道 *gōng gōng dào dào* ‘fairly’ 公公道道
tè yì ‘special-intention, go out of one’s way, deliberately’ 特意 *tè tè yì yì* ‘deliberately’ 特特意意
ān xīn ‘to settle-heart, relieved’ 安心 *ān ān xīn xīn* ‘at ease’ 安安心心
suí biàn ‘to follow-convenience, do at one’s will, unrestrained, not careful’ 随便 *suí suí biàn biàn* ‘casually’ 随随便便
- b. *yóu yù* ‘hesitate’ 犹豫 *yóu yóu yù yù* ‘hesitating’ 犹犹豫豫
huǎng hu ‘trancelike’ 恍惚 *huǎng huǎng hū hū* ‘trancelike’ 恍恍惚惚
lā ta ‘slovenly’ 邋遢 *lā lā tā tā* ‘slovenly’ 邋邋遢遢

Intensifying reduplication has two other variants, XYY and XliXY, which we discuss in turn. XYY is assumed to be morphologically composed of X and the reduplicated form YY, even if some XYY forms happen to have free-standing XY or YX counterparts (Lü et al. 1980). Examples are shown in (12)–(14).

- (12) a. *xǐ* *yáng yáng* 喜洋洋
happy to describe the state of being extremely joyful
‘exuberant’
- b. *chén* *diān diān* 沉甸甸
heavy to describe heaviness
‘very heavy’
- c. *shī* *lù lù* 湿漉漉
wet to describe wetness
‘wet’
- d. *bái* *ái ái* 白皑皑
white to describe the whiteness (of snow)
‘white (of snow)’
- (13) a. *lěng* *qīng* *qīng* 冷清清 *lěng qīng* 冷清 (XY)
cold clear RED
‘desolate’

the second morpheme of the disyllabic compound, such as *ran* in *zì ran* and *qī* in *kè qī*, has become like an affix, with its lexical meaning weakened and its underlying tone deleted.

- | | | | | | | | |
|------|----|---------------------|-------------|------------------------------------|-----|-------------------|---------|
| | b. | <i>liàng</i> | <i>táng</i> | <i>táng</i> (or <i>tāng tāng</i>) | 亮堂堂 | <i>liàng tang</i> | 亮堂 |
| | | bright | hall | RED | | | |
| | | 'very brightly lit' | | | | | |
| | c. | <i>jǐn</i> | <i>bā</i> | <i>bā</i> | 紧巴巴 | <i>jǐn ba</i> | 紧巴 |
| | | tight | AFX | RED | | | |
| | | 'very tight' | | | | | |
| (14) | a. | <i>hēi</i> | <i>yóu</i> | <i>yǒu</i> | 黑黝黝 | <i>yǒu hēi</i> | 黝黑 (YX) |
| | | black | dark | RED | | | |
| | | 'shiny black' | | | | | |
| | b. | <i>lěng</i> | <i>bīng</i> | <i>bīng</i> | 冷冰冰 | <i>bīng lěng</i> | 冰冷 |
| | | cold | ice | RED | | | |
| | | 'icy cold' | | | | | |
| | c. | <i>lǜ</i> | <i>yóu</i> | <i>yóu</i> | 绿油油 | <i>yóu lǜ</i> | 油绿 |
| | | green | oil | RED | | | |
| | | 'shining green' | | | | | |

In XYY constructions, the reduplicated YY semantically selects X (Li 2003: 237). For example, in (12b), *diān diān* 'to describe heaviness' 甸甸 only attaches to *chén* 'heavy' 沉, in (12d), *ái ái* 'to describe whiteness (of snow)' 皑皑 selects *bái* 'white' 白, and in (14a), *yǒu yǒu* 'to describe blackness' only attaches to *hēi* 'dark' 黑.⁸

Moreover, as Li (2003: 237) observes, the selectivity of YY on X varies. Certain reduplicated YY forms such as *hū hū* 乎乎, *bā bā* 巴巴, and *liū liū* 溜溜, which lack concrete meanings of their own, but contribute to the description of characteristics specified by X, have a wider distribution and can combine with a range of stems. For instance, *hū hū* 乎乎 can attach to monosyllabic adjectives including *hēi* 'black' 黑, *cháo* 'humid' 潮, *shī* 'wet' 湿, *chóu* 'thick' 稠, *máo* 'hair' 毛, *làn* 'over-cooked' 烂, and *ruǎn* 'soft' 软, etc., to express an unfavorable state, which suggests that it is somewhat productive in forming new words.

These relatively productive reduplicated forms cannot stand independently, but must attach to a stem, and their positions are fixed to the right of the stem,

⁸ As regards the semantic selectivity of YY on X, some XXYY reduplications seem to be constructed from XYY by analogy with reference to the XXYY template, as exemplified below.

| | | |
|-----|---|---|
| (i) | <i>bìng wāi wāi</i> 'weak (from illness)' 病歪歪 | <i>bìng bìng wāi wāi</i> 'very weak' 病病歪歪 |
| | <i>xiū dā dā</i> 'bashful' 羞答答 | <i>xiū xiū dā dā</i> 'very bashful' 羞羞答答 |
| | <i>xì liū liū</i> 'slim' 细溜溜 | <i>xì xì liū liū</i> 'very slim' 细细溜溜 |
| | <i>rè hū hū</i> 'warm' 热乎乎 | <i>rè rè hū hū</i> 'very warm' 热热乎乎 |

e.g., *nián hū hū* ‘sticky’ 黏乎乎, *zhòu bā bā* ‘creased’ 皱巴巴, and *huá liū liū* ‘slippery’ 滑溜溜. The result of attaching the reduplicated form to the adjective is itself an adjective.

Given these properties, the reduplicated forms behave like suffixes. In fact, they are identified as adjective suffixes in Beijing Mandarin by Zhou (1998: 117–123), who also treats the nonreduplicated forms of *hu* 乎 and *ba* 巴 as adjective suffixes, e.g., *rè hu* ‘warm’ 热乎, *xuán hu* ‘unreliable’ 玄乎, *yún hu* ‘even’ 匀乎, *jǐn ba* ‘tight’ 紧巴, *gān ba* ‘dry’ 干巴 and *zhòu ba* ‘creased’ 皱巴.⁹

The XliXY reduplication pattern has negative connotations, and the base is usually restricted to pejorative adjectives (Chao 1968). Morphologically, the base can be monomorphemic, as in (15a,b), derived (15c), or a compound (15d,e).

- | | | | |
|---------|-----------------------|----------------------------------|--------------------------|
| (15) a. | <i>lā ta</i> 邋遢 | <i>lā li lā tā</i> | ‘disordered, messy’ 邋里邋遢 |
| b. | <i>hú tu</i> 糊涂 | <i>hú li hú tū</i> ¹⁰ | ‘muddle-headed’ 糊里糊涂 |
| c. | <i>jiāo qì</i> 娇气 | <i>jiāo li jiāo qì</i> | ‘very effeminate’ 娇里娇气 |
| d. | <i>gǔ guài</i> 古怪 | <i>gǔ li gǔ guài</i> | ‘odd, weird’ 古里古怪 |
| e. | <i>huāng zhāng</i> 慌张 | <i>huāng li huāng zhāng</i> | ‘panicking’ 慌里慌张 |

The XliXY pattern has a long history. Based on its diachronic development (Shi 2010; Li 2013), it can be analyzed as a partial reduplication of the base XY by copying only the first syllable X and filling the second syllable with *-li-*. A tentative answer to the obvious question of why the second syllable assumes the invariant form as it does is that the open syllable *-li-* is a relatively unmarked phonological constituent (Yip 1992), and the second syllable in XliXY occupies an unstressed position (Sui 2013).

3.2 Syntactic distribution

Zhang (2015) shows that the syntactic distribution of intensifying reduplication overlaps that of the degree word *hěn* ‘very’ 很. Whereas overt degree morphemes like *hěn* ‘very’ 很, *jí* ‘extremely’ 极, *shí fēn* ‘exceedingly’ 十分, *fēi cháng*

⁹ Although Zhou (1998) does not include the unreduplicated form *-liu* 溜 as an adjective suffix, it has properties very similar to those of *-ba* 巴 and *-hu* 乎 (though it is not as commonly used). Examples include *huá liú* ‘slippery’ 滑溜, *guāng liú* ‘smooth’ 光溜, *zhí liú* ‘straight’ 直溜, *yún liú* ‘even’ 匀溜. The meaning of *liú* 溜 is more abstract in the last two examples, where the meaning of the whole is not obviously related to the suffix.

¹⁰ *hú tu* and *hú li hú tū* are sometimes pronounced as *hú du* and *hú li hú dū*, which involves deaspiration.

‘extraordinarily’ 非常, and *duó me* ‘so’ 多么 can modify gradable adjectives, they cannot co-occur with reduplicated adjectives, *hěn gāo* ‘very-tall’ 很高 versus **hěn gāo gāo* ‘very-tall-RED’ 很高高 (Chao 1968; Lü et al. 1980; Zhang 2015). Moreover, neither *hěn* ‘very’ 很 nor intensifying reduplication can occur in comparative or superlative constructions, which are marked by *gèng* ‘more’ 更, *bǐ jiǎo* ‘relatively’ 比较, *zuì* ‘most’ 最, among others (Chao 1968; Zhang 2015), or in positions restricted to nominals, such as the post-*ba* position (Zhang 2015).

Based on the overlapping syntactic distribution of the degree morpheme *hěn* ‘very’ 很 and intensifying reduplication as well as their shared semantics (both denote a degree that exceeds a contextual standard, and both require their complement to be a gradable adjective), Zhang (2015) proposes that *hěn* and the intensifying reduplicant RED both realize the functional feature *Degree*, which projects a Degree Phrase (DegP) and semantically selects a gradable adjective phrase as its complement. From this, it follows that the two morphemes cannot co-occur. The extension of Zhang’s proposal to other degree morphemes is trivial, and so the incompatibility of intensifying reduplication with other degree morphemes like the comparative and superlative follows straightforwardly.

3.3 Morphological analysis

We propose that the morphological operation that integrates RED and the base in intensifying reduplication is compounding. The base does not need to be a word, as it is well established that the components of a compound in SC can be either free or bound roots (Chao 1968; Li and Thompson 1981; Dai 1992; Liao 2014).¹¹ The pattern XXYY functions as a template for the spellout of the compound [XY + RED].

The compounding hypothesis is supported by tonal phonology. First, intensifying reduplication exhibits third tone sandhi (as expected given that the reduplicant is a total copy of the base, including tone). Second, the tone association conforms to the general pattern observed in compounds. In disyllabic XX intensifying reduplications, the second tone may undergo phonetic reduction, but is always recoverable in slower speech. In quadrisyllabic XXYY reduplications, the

¹¹ An alternative analysis assumes that when XY does not exist as an independent word, XXYY reduplication is the compounding of XX and YY (Guo 1987), e.g., *xíng xíng sè sè* ‘shape-color, various’ 形形色色, **xíng se*; *huā huā lǜ lǜ* ‘flower-green, colorful’ 花花绿绿, **huā lǜ*; *mì mì má má* ‘thick-sesame, dense’ 密密麻麻, **mì má*.

third and fourth syllables are associated with tones, even if Y is toneless in XY.¹² Examples are shown in (16).

- | | |
|--|---|
| (16) a. <i>mǎ hu</i> ‘careless’ 马虎 <i>huǎng hu</i> ‘trancelike’ 恍惚 <i>lā ta</i> ‘slovenly’ 邋遢 | <i>má mǎ hū hū</i> ‘very careless’ 马马虎虎 <i>huáng huǎng hū hū</i> ‘trancelike’ 恍恍惚惚 <i>lā lā tā tā</i> ‘slovenly’ 邋邋遢遢 |
| b. <i>jiē ba</i> ‘stutter’ 结巴 <i>rè hu</i> ‘warm’ 热乎 <i>huá liú</i> ‘smooth’ 滑溜 | <i>jiē jiē bā bā</i> ‘stuttering’ 结结巴巴 <i>rè rè hū hū</i> ‘very warm’ 热热乎乎 <i>huá liū liū</i> ‘very smooth’ 滑溜溜 |
| c. <i>biè niù</i> /niǔ/ ‘awkward’ 别扭 <i>guī jù</i> /jǔ/ ‘rule’ 规矩 ¹³ <i>rè nao</i> /nào/ ‘boisterous’ 热闹 | <i>biè biè niū niū</i> ‘very awkward’ 别别扭扭 <i>guī guī jū jū</i> ‘well-behaved’ 规规矩矩 <i>rè rè nāo nāo</i> ‘boisterous’ 热热闹闹 |
| d. <i>sī wen</i> /wén/ ‘elegant’ 斯文 <i>tā shì</i> /shí/ ‘unpretentious’ 踏实 <i>piào liang</i> /liàng/ ‘pretty’ 漂亮 | <i>sī sī wén wén</i> ‘very elegant’ 斯斯文文 <i>tā tā shí shí</i> ‘unpretentious’ 踏踏实实 <i>piào piào liàng liàng</i> ‘very pretty’ 漂漂亮亮 |

(16a) are reduplications of disyllabic monomorphemes whose second syllable is toneless. In the reduplicational output, the syllable is associated with a High-level tone. The base in (16b) contains a toneless suffix, i.e., *-ba* 巴, *-hu* 乎, *-liu* 溜. But the suffix surfaces with a High-level tone when reduplicated. (16c,d) are reduplications of disyllabic compounds whose second tone is either deleted and lexicalized, (16c), or optionally deleted, (16d). In reduplication, the former surfaces with a High-level tone, while the latter maintains its underlying tone.

¹² Sui (2013) proposes that tonal phonology is closely related to metrical structure in SC. Stressed syllables are associated with tones, and toneless syllables are restricted to unstressed positions. A disyllabic word forms a syllabic trochee, so if a disyllabic word contains a toneless syllable, it is always the second syllable that is toneless. Reduplication of a disyllabic base creates two syllabic trochees, [(‘σ)(σ)], hence the third syllable in a stressed position requires a tone. The fourth syllable shares the same tone as the base in the output as a result of reduplication.

¹³ The Low tone of the morpheme *jǔ* ‘square’ 矩 in *guī jù* /jǔ/ ‘compass-square, rule’ 规矩 is preserved in words such as *zhōng guī zhōng jǔ* ‘match-compass-match-square, proper (by not breaking rules or conventions)’ 中规中矩 and *xún guī dǎo jǔ* ‘obey-compass-follow-square, too observant of conventional rules and standards’ 循规蹈矩.

4 Delimitative reduplication

In SC, verbs can reduplicate to denote delimitative aspect (Li and Thompson 1981: 29; Tsao 2001; Xiao and McEnery 2004), meaning to do an activity for a short period of time, a few times, or to a small extent, often associated with interpretations of tentativeness, casualness or mildness (Xiao and McEnery 2004: 149–159, and references therein). Xiao and McEnery (2004) argue that the central meaning of verb reduplication is delimitativeness, and all other meanings are pragmatic extensions of delimitativeness in context. To express delimitative aspect, the whole verb is reduplicated. (17) and (18) show the delimitative reduplication of monosyllabic and disyllabic verbs.

- | | |
|---|--|
| (17) a. <i>cháng-chang</i> 尝尝 to taste-RED 'to have a taste' | b. <i>kàn-kan</i> 看看 to look-RED 'to have a look' |
| c. <i>zǒu (/zǒu/)-zou</i> 走走 to walk-RED 'to take a walk' | d. <i>xiǎng (/xiǎng/)-xiang</i> 想想 to consider-RED 'to consider (for a while)' |
| (18) a. <i>kǎo lǚ-kǎo lǚ</i> 考虑考虑 to consider-RED 'to consider (for a while)' | b. <i>guān chá-guān chá</i> 观察观察 to observe-RED 'to observe a little' |

With monosyllabic verbs, the reduplicant is toneless. Moreover, if the base has an underlying Low tone such as in (17c,d), whose underlying representations are *zǒu* and *xiǎng* respectively shown in slashes, the Low tone undergoes third tone sandhi and becomes a Rising tone. With disyllabic verbs, the reduplicant has the same phonological representation as the base, cf. (18).

If the base is a Verb-Object compound whose component morphemes are separable, only the verb is reduplicated (Li and Thompson 1981), as shown in (19).

- | | |
|--|--|
| (19) a. <i>sàn-xīn</i> 散心 to disperse-heart 'to relax' | <i>sàn-san-xīn</i> 散散心 to disperse-RED-heart 'to relax a little' |
| b. <i>shuō-huà</i> 说话 to speak-words 'to talk' | <i>shuō-shuo-huà</i> 说说话 to speak-RED-words 'to talk a little' |

- | | |
|---|---|
| c. <i>bāng-máng</i> 帮忙 to help-busy 'to help' | <i>bāng-bang-máng</i> 帮帮忙 to help-RED-busy 'to help a little' |
| d. <i>lǐ-fā</i> 理发 to cut-hair 'to have one's hair cut' | <i>lǐ-li-fā</i> 理理发 to cut-RED-hair 'to have a haircut' |

Verb reduplication is incompatible with the progressive (PROG) aspect marker *zài* 在 and the durative (DUR) aspect marker *zhe* 着, but is fully compatible with the perfective (PFV) aspect marker *le* 了, which intervenes between the base and the reduplicant, as shown in (20). According to Xiao and McEnery (2014: 151), verb reduplication in the perfective aspect expresses “a complex viewpoint – a hierarchical combination of the actual aspect and the delimitative aspect, conveying a transitory event which has been actualised”.

- | | |
|--|---|
| (20) a. <i>cháng-le-cháng</i> 尝了尝 taste-PFV-RED 'have tasted a little' | b. <i>shì-le-shì</i> 试了试 try-PFV-RED 'have had a try' |
| c. <i>xiǎng-le-xiǎng</i> 想了想 think-PFV-RED 'have thought a little' | d. <i>kàn-le-kàn</i> 看了看 look-PFV-RED 'have taken a look' |

The perfective aspect marker *-le* can also occur with reduplication of disyllabic verbs, as shown in (21), but reduplication is used much less often in this case than is the measure phrase *yí xià* 'a-bit, a little' 一下, where *xià* 下 is a general verbal classifier.

- | | |
|---|--|
| (21) a. <i>kǎolǜ-le-kǎolǜ</i> 考虑了考虑 consider-PFV-RED 'have considered a little' | <i>kǎolǜ-le-yí-xià</i> 考虑了一下 consider-PFV-one-bit 'have considered a little' |
| b. <i>kǎochá-le-kǎochá</i> 考察了考察 inspect-PFV-RED 'have inspected a little' | <i>kǎochá-le-yí-xià</i> 考察了一下 inspect-PFV-one-bit 'have inspected a little' |
| c. <i>guānchá-le-guānchá</i> 观察了观察 observe-PFV-RED 'have observed a little' | <i>guānchá-le-yí-xià</i> 观察了一下 observe-PFV-one-bit 'have observed a little' |

The verbal classifier phrase *yí xià* ‘a little’ 一下 can combine with both monosyllabic and disyllabic verbs to express similar grammatical meanings as delimitative reduplication, as exemplified in (22).

- (22) a. *cháng-yí-xià* 尝一下
to taste-one-bit
‘have a taste’
- b. *shì-yí-xià* 试一下
to try-one-bit
‘have a try’
- c. *kǎolǜ-yí-xià* 考虑一下
to consider-one-bit
‘consider a little’
- d. *guānchá-yí-xià* 观察一下
to observe-one-bit
‘observe a little’

Besides *yí xià* ‘a little’ 一下, there are other verbal classifier phrases that denote delimitative meanings. These expressions consist of quantifiers such as *liǎng* ‘two, some’ 两 and *jǐ* ‘several, some’ 几 (cf. Paris 2013), and verbal classifiers such as *huìr* ‘while’ 会儿, *zhèn* ‘while’ 阵, *cì* ‘time’ 次, *tàng* ‘time’ 趟, *biàn* ‘time’ 遍, *dùn* ‘spell’ 顿, denoting the interval or frequency of an activity. The classifiers can also be borrowed from body parts related to the action, e.g., *yǎo yī¹⁴ kǒu* ‘bite-one-mouth, bite a mouthful’ 咬一口, *kàn yì yǎn* ‘look-one-eye, take a look’ 看一眼, *tī yì jiǎo* ‘kick-one-foot, make a kick’, or from tools used, e.g., *chōu yì biānzi* ‘lash-one-whip’ 抽一鞭子, *zhā yì zhēn* ‘puncture-one-needle, have an acupuncture’ 扎一针 (Chao 1968: 615–619). But crucially, these delimitative phrasal expressions do not co-occur with reduplication, as shown in (23c,d). Moreover, in place of a verbal classifier, a reduplicant may serve the same purpose, (23e), comparable to the English cognate object construction such as *laugh a laugh* and *dance a dance* (cf. Eitelmann and Mondorf, this volume). Chao (1968: 312) has analyzed the verbal reduplicant as well as the above-mentioned verbal classifiers as the cognate object of the base verb, since Chao defines cognate objects as expressions for the number of times of an action, its duration and extent, and the course of locomotion or its destination.

- (23) a. *cháng-(yí)-xià* 尝(一)下
to taste-one-bit
‘taste a little’
- b. *cháng-(yì)-kǒu* 尝(一)口
to taste-one-mouthful
‘taste a mouthful’
- c. **cháng-chang-yí-xià* 尝尝一下
to taste-RED-one-bit
- d. **cháng-chang-yì-kǒu* 尝尝一口
to taste-RED-one-mouthful

14 SC has four morphemes that have tone alternations depending on tonal environment, *yī* ‘one’ 一, *bù* ‘not’ 不, *qī* ‘seven’ 七, *bā* ‘eight’ 八. They are in the High-level tone before pause, in the Rising tone before a Falling tone, and in the Falling tone before other tones (Chao 1968: 45).

- e. *cháng-(yì)-cháng* 尝(一)尝
to taste-one-RED
'have a taste'

The reduplicative construction with the numeral *yī* 'one' between the base and the reduplicant is usually confined to monosyllabic verbs in Modern Chinese,¹⁵ although a few instances are observed for disyllabic verbs, as shown in (24). The situation resembles that of the infrequent occurrence of the perfective aspect marker *-le* with reduplications of disyllabic verbs, exemplified in (21). The bias in distribution may be due to prosodic reasons.

- (24) a. *guānchá-yì-guānchá* 观察一观察 b. *kǎolǜ-yì-kǎolǜ* 考虑一考虑
to observe-one-RED to consider-one-RED
'observe a little' 'consider a little'

Not all verbs may undergo delimitative reduplication. Li and Thompson (1981: 232–236) propose that (a) the verb must be an action verb, denoting physical or mental action or implying an activity, (b) the verb must be volitional,¹⁶ that

¹⁵ Zhang (2000) shows that in the Yuan (1271–1368) and Ming (1368–1644) dynasties, disyllabic verbs exhibit V-yi-V patterns, e.g., *zhěng lǐ yi zhěng lǐ* 'to sort out a little' 整理一整理, *dǎ tīng yi dǎ tīng* 'to ask about a little' 打听一打听.

¹⁶ Zhu (1998: 380) observes that some non-volitional verbs may also reduplicate to denote delimitative aspect, but only under restricted conditions, including (a) in causative sentences containing causative markers such as *ràng* 'let' 让 or *jiào* 'cause' 叫, which cause malefactive results on the part of the causee, (b) verbs that denote changes that cannot be controlled by the subject, and (c) some adjective predicates that describe psychological or mental states. Examples are shown below in (i), (ii) and (iii) respectively.

- (i) *jiào tā diū-diū miànzi*
let 3SG lose-RED face
'Let him lose face a little.'
叫他丢丢面子。
(Zhu 1998: 380, ex. (23))
- (ii) *ràng gōu-lǐ de shuǐ wǎng wài liú-liú.*
let ditch-inside POSS water toward out run-RED
'Let the water in the ditch run out a little.'
让沟里的水往外流。
(Zhu 1998: 380, ex. (26))
- (iii) *qīng sōng* 'relaxed' 轻松
rè nào 'bustling' 热闹
shū fú 'comfortable' 舒服
tòng kuài 'contented' 痛快

is, the subject has some control over the event, and (c) resultative verb compounds cannot undergo reduplication due to semantic incompatibility. Xiao and McEnery (2004) argue that only [-result] action verbs can be reduplicated, and that accomplishment and achievement verbs are incompatible with the delimitative aspect since both encode a result, while delimitative aspect can only interact with dynamic situations encoding no result.

4.1 Syntactic analyses

Arcodia et al. (2014) put forward a syntactic account that derives the semantics of verb reduplication from the syntax of the verb's event structure. The syntactic account for delimitative reduplication is based on the following considerations. (1) Reduplication is sensitive to the aspectual structure of the base verb. Only verbs that lack an inherent result state may undergo delimitative reduplication. Moreover, delimitative reduplication is incompatible with progressive and durative aspects. Since aspect is syntactically represented, the aspectual constraints on delimitative aspect must be formulated with reference to syntactic structure. (2) The base and the reduplicant can be interrupted by *yī* 'one' and the perfective aspect marker *-le*, which is inconsistent with the Lexical Integrity Hypothesis (Jackendoff 1972; Huang 1984; Selkirk 1986), according to which the internal structure of words is inaccessible to syntactic rules. (3) Historically, the verb and the reduplicant could be separated by an intervening object.

Arcodia et al.'s syntactic analysis is within the constructionist framework advanced by Ramchand (2008), where the event structure is broken down into three subevents: the causative, the process, and the result. Each subevent is represented in its own phrase, and these phrases are hierarchically embedded: the causative head introduces the initiator and the process subevent; the process head introduces the undergoer of the process and the result subevent; and the result head introduces the resultee and the result state.

According to Arcodia et al. (2014), telicity in this framework is derived either from the lexical marking of the result state or compositionally from a bounded path (incremental theme) in the complement position of the process head.

xīāo sǎ 'unrestrained' 潇洒
qīng jìng 'quiet' 清静
liáng kuài 'cool' 凉快
 (Zhu 1998: 382)

Accomplishment and achievement verbs are lexically marked with a [result] feature, which projects a result phrase in the complement of the process head. The reduplicant occupies the same syntactic position as the ResultP, i.e., the complement of the process head. Therefore, it follows directly that inherently telic verbs cannot undergo reduplication.

Assuming that delimitative aspect reduplication delimits the event encoded by the base verb correctly predicts that a reduplicated verb cannot take a quantified object, since both reduplication and the quantified object serve to bound the event expressed by the base verb. For example, in (25), the verb *hē* ‘drink’ 喝 can either take a quantified object with a measure phrase, (*yì*) *bēi* ‘(a) cup (of)’ (一)杯, as in (25a), or reduplicate and take a non-quantified object *chá* ‘tea’ 茶, as in (25b), but not both at the same time, as shown in (25c).

- (25) a. *hē (yì) bēi chá* 喝 (一) 杯茶
 drink-(a)-cup-tea
 ‘have a cup of tea’
- b. *hē he chá* 喝喝茶
 drink-RED-tea
 ‘have some tea’
- c. **hē he (yì) bēi chá* *喝喝 (一) 杯茶
 drink-RED-(a)-cup-tea

Intransitive verbs exhibit an analogous incompatibility between delimitative aspect and measure phrases, as we have observed in (23). For instance, intransitive verbs like *zuò* ‘sit’ 坐 or *kū* ‘cry’ 哭 can take a measure phrase to indicate the interval or frequency of the action, but the reduplicated forms cannot, cf. (26).

- (26) a. *zuò-(yí)-huìr* 坐一会儿 **zuò-zuo-(yí)-huìr* 坐坐一会儿
 sit-one-moment sit-RED-one-moment
 ‘sit for a moment’
- b. *kū-liǎng-huí* 哭两回 **kū-ku-liǎng-huí* 哭哭两回
 cry-two-time cry-RED-two-time
 ‘cry several times’

Since *yì* can be omitted before a classifier, Arcodia et al. (2014) argue that reduplications with or without *yì* are of the same phenomenon, sharing not only the same semantics, but also the same syntactic structure. Regarding the status of the reduplicant, Basciano and Melloni (2017) show that delimitative reduplicants

have properties of weak verbal classifiers (Paris 2013),¹⁷ which bound the predication by delimiting a sub-interval, and that *yi* is an indefinite marker rather than a cardinal number. Structurally, the reduplicant occupies the same syntactic position as a verbal classifier, i.e., the complement position of ProcessP, providing a bounded temporal path to the unbounded event encoded by the base verb.

The hypothesis that the delimitative reduplicant is semantically equivalent to a verbal classifier is also supported by the historical development of verb reduplication. According to Zhang (2000), in the late Tang (Tang: 618–907) and the Five Dynasties (907–960) period, some action verbs were borrowed to function as a verbal classifier in the construction of lightVerb-*yi*-V, where the light verb could be *yǔ* ‘give’ 与, *zuò* ‘make’ 作 or *dǎ* ‘do’ 打, and the numeral *yi* ‘one’ expressed its cardinal value, indicating that an action is performed once. In the Song (960–1279) and the Jin (1115–1234) period, the cognate construction V-*yi*-V appeared and developed quickly, in which the reduplicant behaved as a cognate object of the base verb, and *yi* retained its cardinal value, although the infinitive usage started to emerge, indicating the short interval of an action or few times of occurrence. Not until the end of the twelfth century was delimitative reduplication as in Modern Chinese fully developed. With the infinitive usage of *yi*, in Yuan (1271–1368) and Ming (1368–1644) dynasties, reduplication without *yi* occurred increasingly, and disyllabic verbs could also undergo delimitative reduplication, both with and without *yi*.

4.2 The spell-out of delimitative reduplication

In the spell-out of delimitative reduplication, two issues need to be addressed. One is concerned with the position of the reduplicant compared to the semantically equivalent verbal classifiers, and the other is about the tonal properties of delimitative reduplication.

Although the delimitative reduplicant and verbal classifiers are both analyzed as cognate objects of the verb (Chao 1968), in a double object construction

¹⁷ Paris (2013) posits a distinction between strong and weak verbal classifiers. Strong verbal classifiers allow cardinal number readings of the quantifier to indicate the number of times that an event occurs, have broad scope and may occur in *lian ... ye/dou* preverbal construction, whereas weak verbal classifiers only allow an indefinite reading of the quantifier, have narrow scope, hence cannot occur in *lian ... ye/dou* preverbal construction. Moreover, Paris points out that verbal classifiers have broader distribution than reduplication, because they are semantically less constrained.

containing a cognate object and a NP, Hong (1999) observes that if the cognate object is a reduplicant, the reduplicant precedes the NP, whether the NP is a pronoun or not, but if the cognate object is not a reduplicant such as a verbal classifier, it can either precede the NP or follow it, except that when the NP is a pronoun, the pronoun cliticizes to the verb.

Hong adopts Larson's (1988) treatment of double object constructions, and proposes that the theme/patient object occupies the specifier position of the VP, and the cognate object is the complement. The surface linear order arises from scrambling the cognate object. However, for the order in which the reduplicant precedes NP, Hong suggests a lexical analysis – the reduplicant is not a phrase, but forms V^0 with the verb, and *yi* is an affix inserted to reduplication.¹⁸

The lexical treatment of delimitative reduplication is not alone, Packard (1998) and Xu (2001) are representative endeavours to account for the tonal properties of reduplication from the perspective of Lexical Phonology and Morphology (Kiparsky 1982; Mohanan 1982, 1986). The widely observed tonal phenomenon in delimitative reduplication is concerned with the occurrence of third tone sandhi in the monosyllabic verb base with an underlying Low tone, while the reduplicant is toneless. For example, *zou* (/zǒu/) -*zou* 'to walk-RED, take a walk' 走走, *xiǎng* (/xiǎng/) -*xiǎng* 'to consider-RED, to consider (for a while)' 想想. The sandhi Rising tone in the verb base suggests the existence of a Low tone in the reduplicant, which triggers tone sandhi before it is deleted in the surface representation. This is in contrast to diminutive reduplication, e.g. *jiě jie* 'sister' 姐姐, whose reduplicant is also toneless, but tone sandhi does not occur in the base either.

Xu (2001) proposes to account for the tonal properties of delimitative reduplication by ordering the two phonological rules of tone sandhi and tone deletion differently depending on the level of word formation. Mandarin word formation processes are divided into two levels. Level one includes suffixation 1 and reduplication 1, Level two includes prefixation, suffixation 2, compounding and reduplication 2. Reduplication 1 creates new words, diminutive reduplication belongs to this type, whereas reduplication 2 is the reduplication of words, including verbs, adjectives, adverbs and measure words. In Level one, tone deletion applies before tone sandhi, hence blocks tone sandhi, whereas in Level two, tone sandhi precedes tone deletion, therefore, in delimitative reduplication tone sandhi applies to the

¹⁸ Paris (2013) made a similar analysis that verb reduplication with or without *yi* constitutes only one single constituent of V^0 , considering that the verbal classifier is a free form but the reduplicant is bound.

Low tone in the base before the conditioning Low tone in the reduplicant is deleted, which gives rise to the opacity of the application of tone sandhi in the base.

However, a purely lexical analysis of verb reduplication is not sufficient to account for the shared distributional and semantic constraints of verb reduplication and verbal classifier constructions. In addition, except delimitative reduplication, other Level II word-formation processes, including the reduplications of adjectives, adverbs and measure words, do not undergo tone deletion. Tone deletion has to be restricted to apply to delimitative reduplication only. On the other hand, a syntactic proposal such as put forth by Basciano and Melloni (2017) to place delimitative reduplicant in the same syntactic position as weak verbal classifiers without further operation cannot account for the different order of the reduplicant from the verbal classifier with respect to the NP in a double-object construction observed by Hong (1999).

Based on the above considerations, this paper claims that more than syntax or morphology is involved in order to account for the distributional and tonal properties of reduplication. We adopt the syntactic analysis proposed by Arcodia et al. (2014) and refined by Basciano and Melloni (2017) to place the delimitative reduplicant and the verbal classifier in the same syntactic position that denotes the result of an action. Thus it follows that resultative verbs cannot undergo delimitative reduplication. In addition, to explain the ordering difference of the reduplicant from the verbal classifier, Hong's (1999) proposal of scrambling to explain the precedence of the verbal classifier over NP can be extended to the delimitative reduplicant. Here we follow Basciano and Melloni's (2017) assumption that verb reduplication with or without *yi* is the same phenomenon, at least semantically and syntactically. It is true that the scrambling analysis for the adjacency of the base and the reduplicant needs to answer the question why scrambling is optional for the verbal classifier phrase but seems to be obligatory for delimitative reduplication. The difference between the verbal classifier phrase and the delimitative reduplicant lies in the dependence of the reduplicant on the verb base to realize its phonological representation. So it is possible that the obligatory scrambling of the reduplicant is phonologically motivated.

Moreover, this paper proposes that when the reduplicant and the verb base are adjacent without any intervening element such as *yi* or the perfective aspect marker *le*, the reduplicant is suffixed to the verb base if the base is monosyllabic, and the tone of the reduplicant is deleted. That is, tone deletion is a later phonological process triggered by affixation, and affixation is sensitive to the length of the base. This phonologically conditioned affixation is similar to English comparative and superlative formation, where the suffix *-er* or *-est* is attached to an adjective only if the adjective contains no more than two syllables, and otherwise, an analytic form of *more* or *most* is adopted. As expected, when the base and

the reduplicant are not immediately adjacent, the tone in the reduplicant is preserved, as in *xiǎng le xiǎng* ‘think-PFV-RED, have thought a little’ 想了想 or *xiǎng yi xiǎng* ‘think-one-RED, think a little’ 想一想. When the base is bisyllabic, the reduplicant has the same phonological representation as the base.

As for the morphological status of the disyllabic reduplicant, Li and Sui (2009) claim that it is an affix, Hu (2013, 2017) claims that it has the same status as the verb base, and verb reduplication is compounding in nature, whereas Arcodia et al. (2014) and Basciano and Melloni (2017) propose that it might be due to a general prosodic constraint of Mandarin, forbidding two consecutive toneless syllables, so that a disyllabic reduplicant does not undergo tone deletion. Disyllabic suffixes are not many in SC. The few examples include the inchoative (INCH) aspect marker *-qi lai* 起来 and the successive (SUCC) aspect marker *-xia qu* 下去 (Chao 1968: 251), as in *kū -qi lai* ‘cry-INCH, start to cry’ 哭起来 and *zuò -xia qu* ‘do-SUCC, go on doing’ 做下去. Both are toneless when they attach to a monosyllabic verb, but retain the underlying tones when attaching to a disyllabic base such as *gāo xìng -qi lai* ‘happy-INCH, become happy’ 高兴起来 and *jiān chí -xià qu* ‘persist-SUCC, persist on’ 坚持下去. The variation of tone in *-qi lai* 起来 and *-xia qu* 下去 depending on the length of the base suggests they are not the same type of suffixes as those canonical ones that are underlyingly toneless. However, it constitutes a similar case as delimitative aspect reduplication, where the reduplicant varies its tone according to the length of the verb base. It seems that the tonal variation in both circumstances is to abide by the prosodic constraint of SC, although it may not be due to the prohibition on two consecutive toneless syllables, since Mandarin does allow a sequence of toneless syllables, for example, *dà ren-men-de* ‘adult-PL-PRT, of adults’ 大人們的, *zhuó mo-zhe-ne* ‘consider-DUR-PRT, is considering’ 琢磨着呢. A more plausible analysis is concerned with metrical stress. Stressed syllables are associated with tones in SC, and toneless syllables are restricted to unstressed positions (Sui 2016). When the base is monosyllabic, the reduplicant forms a foot (i.e., syllabic trochee) with the base, and the reduplicant is in an unstressed position. Whereas for a disyllabic base, the base forms a foot in itself, so is the reduplicant, hence tone is maintained in the reduplicant, at least on the stressed position.

According to an analysis proposed by Hu (2013, 2017), delimitative aspect reduplication is compounding, but phonological considerations militate against this hypothesis. Except for a few compounds with lexicalized tone deletion, SC disyllabic compounds have tone on the second syllable. The compounding analysis of delimitative reduplication therefore violates Occam’s razor by requiring an otherwise unmotivated tone deletion rule to account for the toneless reduplicant with monosyllabic bases. Moreover, when disyllabic verbs reduplicate, the second and fourth syllables tend to be equally reduced. By contrast, the general

pattern for quadrisyllabic compounds with binary branching structure is that the second syllable is the most reduced one. The last syllable, as claimed in many observations such as by Chao (1968:35), has the strongest perceptual stress.¹⁹ Furthermore, if the verb base contains a toneless syllable, that syllable remains toneless in delimitative aspect reduplication. It differs from the pattern in intensifying reduplication, which does instantiate compounding according to the analysis in Section 3 of this paper. The contrasts are illustrated in (27).

- (27) a. *lè he* ‘happy’ 乐呵
 lè he lè he ‘to have some fun’ 乐呵乐呵
 lè lè hē hē ‘very happy’ 乐乐呵呵
- b. *liū da* ‘to stroll’ 溜达
 liū da liū da ‘to stroll a little’ 溜达溜达
 liū liū dā dā ‘strolling’ 溜溜达达

The two examples given in (27) each contain a toneless syllable in the disyllabic base. The syllable remains toneless in delimitative reduplication, but has a High-level tone inserted in intensifying reduplication, which assumes an XXYY pattern. The different tonal properties correspond to the morphological distinction of affixation and compounding.

Our analysis implies that verb reduplications with or without *yi* are not completely parallel. Morphologically speaking, VV is realized as inflectional affixation, but V-*yi*-V remains a phrase, although semantically and syntactically they are equivalent as argued by Basciano and Melloni (2017). One piece of evidence for this hypothesis comes from V-*yi*-V constructions where pronominal objects, particles and adverbs are observed to intervene between the base and the reduplicant, as shown in (28a), (28b) and (28c) respectively, but they cannot appear within VV reduplications.

- (28) a. *kǎo nǐ yì kǎo* 考你一考 b. *zuò shàng yí zuò* 坐上一坐
 test-2SG-one-test sit-PRT-one-sit
 ‘to give you a small test’ ‘to sit a little while’
- c. *tí nàme yì tí* 提那么一提
 to mention-so-one-mention
 ‘to only mention (it)’
 (Li 1964: 255)

¹⁹ Sui (2013) argues that the perceptually strong stress in the last syllable of a compound in isolation is due to the final lengthening effect on perception rather than metrical stress.

In (28a), the intervening pronoun is a clitic that cliticizes to the base verb, following the analysis by Hong (1999). In (28b), the verb particle *shang* 上 similarly cliticizes to the base verb. In (28c), *nàme* is an adverb. That none of them may appear within VV suggests the difference between VV and V-yi-V constructions.

5 Other types of reduplication in Standard Chinese

In addition to expressing delimitative aspect, verb reduplication can express other grammatical meanings, such as continuative aspect, as shown in (29).

- (29) a. **dāo* ‘talk repetitively’ 叨 *dāo dao* ‘talk non-stop’ 叨叨
 b. *hēng* ‘make a nasal sound; hum’ 哼 *hēng heng* ‘groan; hum (a tune)’
 哼哼
 c. *rǎng* ‘shout’ 嚷 *rǎng rang* ‘shout noisily; make
 widely known’ 嚷嚷

In contrast to delimitative reduplication, the verb base in this type of reduplication can be bound, as shown in (29a). Continuative aspect reduplication is not productive, with the results having meanings that are lexicalized to the point of being unpredictable. For instance, in (29c), *rǎng rang* 嚷嚷 means ‘make widely known (referring to something that should not be known)’ in addition to ‘shout noisily’. Note also that *rǎng rang* has a different tone than its monosyllabic base *rǎng* ‘shout’ 嚷, which suggests a greater extent of lexicalization. Finally, the reduplicant in continuative aspect reduplication is toneless. All of these properties point to the reduplicant being an affix. In other words, continuative aspect reduplication has the same morphological status as diminutive reduplication, though with different semantics, of course.

Another type of verb reduplication resembles intensifying reduplication. The resulting forms are adjectives or adverbs, describing a state related to the action of the base verb, and the reduplicant has the same tone as the stem (apart from third tone sandhi). Two examples are shown in (30).

- (30) a. *shǎn* ‘to sparkle’ 闪 *shǎn shǎn* ‘sparkling’ 闪闪
 b. *tōu* ‘to steal’ 偷 *tōu tōu* ‘secretly’ 偷偷

Some reduplicated forms are bound and occur only as components of complex compounds, as in (31).

- | | |
|---------------------------------------|----------------------------|
| (31) a. * <i>zhēng</i> ‘open (eye)’ 睁 | <i>yǎn zhēng zhēng</i> 眼睁睁 |
| | eye-open-RED |
| | ‘helplessly’ |
| b. * <i>téng</i> ‘to rise’ 腾 | <i>rè téng téng</i> 热腾腾 |
| | hot-rise-RED |
| | ‘steaming hot’ |

The reduplication of disyllabic bases surfaces as XXYY. The base in this case is usually a coordinative compound, as in (32), though not necessarily a free word, as shown in (33). (As usual, we assume that the components of compounds in SC can be bound.)

- | | |
|---|--|
| (32) a. <i>còu he /hé/</i> ‘gather-combine, to make do’ 凑合 | <i>còu còu hē hē</i> ‘barely satisfying’ 凑凑合合 |
| b. <i>mó ceng /cèng/</i> ‘grind-rub, to dawdle’ 磨蹭 | <i>mó mó cèng cèng</i> ‘dawdling’ 磨磨蹭蹭 |
| c. <i>tiāo jiǎn</i> ‘select-choose, to pick’ 挑拣 | <i>tiāo tiāo jiǎn jiǎn</i> ‘picky’ 挑挑拣拣 |
| (33) a. * <i>kū tí</i> ‘cry-sob’ 哭啼 | <i>kū kū tí tí</i> ‘with sobs and tears’ 哭哭啼啼 |
| b. * <i>tōu mō</i> ‘steal-pilfer’ 偷摸 | <i>tōu tōu mō mō</i> ‘stealthily’ 偷偷摸摸 |

XXYY reduplication is also possible with disyllabic verbs that are monomorphemic, as in (34).

- | | |
|-----------------------------------|---------------------------------------|
| (34) <i>liū da</i> ‘to stroll’ 溜达 | <i>liū liū dā dā</i> ‘strolling’ 溜溜达达 |
|-----------------------------------|---------------------------------------|

The reduplicant shares the same tone as the stem, but when the base contains a toneless syllable, whether due to tone deletion or underlyingly, the syllable assumes a High-level tone or maintains its underlying tone, as in (32a,b) and (34).

We analyze this type of verb reduplication as compounding. The reduplication of a disyllabic base [XY+RED] is linearized in the templatic order of XXYY.

Some nominal reduplications show similar compounding properties. In (35), reduplication changes the grammatical category, and the reduplicated forms become adjectives.

- (35) a. *gē da* ‘lump’ 疙瘩 *gē gē dā dā* ‘not smooth’ 疙疙瘩瘩
 b. **kēng wā* ‘bump-hollow’ 坑洼 *kēng kēng wā wā* ‘bumpy, rough’ 坑坑洼洼
 c. **guǐ suì* ‘ghost-evil spirit’ 鬼祟 *guí guǐ suì suì* ‘furtive’ 鬼鬼祟祟
 d. **pó mā* ‘old woman-mother’ 婆婆 *pó pó mā mā* ‘sentimental’ 婆婆妈妈

In (36), the reduplications retain the syntactic category of the base, but have derived meanings.

- (36) a. **tiáo kuàng* ‘item-frame’ 条框 *tiáo tiáo kuàng kuàng* ‘restrictions and fetters’ 条条框框
 b. **tán guàn* ‘pot-jar’ 坛罐 *tán tán guàn guàn* ‘household goods’ 坛坛罐罐

(37) shows reduplicated forms with collective meaning.

- (37) a. *jiǎo luò* ‘corner-whereabout’ 角落 *jiáo jiǎo luò luò* ‘every corner, from cellar to rafter’ 角角落落
 b. *rì yè* ‘day-night’ 日夜 *rì rì yè yè* ‘every day and night’ 日日夜夜
 c. *tóu nǎo* ‘head-brain, leader’ 头脑 *tóu tóu nǎo nǎo* ‘all leaders’ 头头脑脑

Toneless syllables in the base assume a High-level tone after reduplication, as shown in (35a). As is typical of compounding reduplications, the base tends to be a (possibly bound) coordinative compound, but monomorphemic bases are also possible.

The cases discussed in this section reinforce the conclusion from Sections 2–4 – namely, that reduplication in SC can be either affixation or compounding, depending on the morphological and phonological properties of each specific reduplicant.

We make a distinction between reduplication and repetition. Regarding the distinguishing criteria, Forza (2016) proposes that reduplication is a morphological process that may cause change of grammatical category, produce non-compositional meanings, and modify inflectional features such as plurality, tense, or aspect. By contrast, repetition is purely syntactic. Gil (2005) in addition proposes

that reduplication yields as its output a single intonational group, in contrast to repetition, which is not so constrained; moreover, repetition may have more than two identical components, but reduplication usually has two.

By these criteria, the reduplication of non-gradable adjectives is repetition. For example, *xuě bái* ‘snow-white’ 雪白, *xuě bái xuě bái* 雪白雪白, and *qī hēi* ‘pitch-dark’ 漆黑, *qī hēi qī hēi* 漆黑漆黑. Unlike (intensifying) reduplication, repetition does not modify the degree of the adjective, but conveys the speaker’s emotional emphasis. Sometimes, in order to exaggerate and create a special rhetorical effect, a word can be repeated more than once, e.g., *xuě bái xuě bái xuě bái* 雪白雪白雪白, and *qī hēi qī hēi qī hēi* 漆黑漆黑漆黑. In contrast, multiple repetition of the base is forbidden for SC reduplication.

The target of repetition is a syntactic constituent, so repetition does not create new words or word forms, nor does it change the grammatical category, lexical meaning or phonological representation of its target. Repetition adds pragmatic meanings and emotional colors to the expression, which may be characterized prosodically by intonational grouping or an optional pause between each copy. Such prosodic features are more salient at the phrasal level. For example, *kàn zhe* ‘watch-DUR’ 看着 > *kàn zhe kàn zhe* ‘while watching’ 看着看着 and *zǒu a* ‘walk-PRT’ 走啊 > *zǒu a zǒu a* ‘walk and walk (non-stop)’ 走啊走啊 are repetitions of phrases, which contain a durative aspect marker *-zhe* 着 and a sentential particle *a* 啊 respectively. Each copy of the repetition may form an intonational group, and an optional pause may appear between the copies. For rhetorical purposes, repetition may even target an entire clause.

Although delimitative aspect reduplication with disyllabic verbs copies the base verb as a whole in a way that superficially resembles repetition of non-gradable adjectives, it is in fact reduplication rather than repetition. Because it creates new word forms encoding aspectual meaning and serving inflectional functions, it is a morphological rather than a purely syntactic process. This is consistent with the base not being able to be repeated more than once and the reduplication having to be contained within a single intonational domain, and in contrast to the corresponding facts for the repetition of non-gradable adjectives.

6 Conclusion

This paper has mainly described three types of reduplication in SC – diminutive, intensifying, and delimitative aspect reduplication. Based on the morphological and phonological properties of the reduplicated forms, the paper discusses the morphological status of the reduplicants, arguing that diminutive reduplication

is derivational affixation, intensifying reduplication is compounding, and delimitative aspect reduplication is inflectional affixation.

In addition, the paper adopts the syntactic structural representations for intensifying and delimitative aspect reduplication proposed by Zhang (2015) and Arcodia et al. (2014). It claims that morphology contributes to the linearization of the hierarchical structure output of syntax in reduplication by means of affixation and compounding.

Phonology interfaces with morphology in reduplication in a transparent way, faithfully reflecting the morphological differences in various types of reduplication by maintaining distinct phonological patterns in the reduplication output.

Finally, the paper distinguishes between reduplication and repetition.

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Anke Lensch

***Fixer-uppers*. Reduplication in the derivation of phrasal verbs**

Abstract: Generally, it has been assumed that repetition and reduplication are largely absent from the morphological systems of British and American English. However, as the results of a large-scale corpus analysis presented in this paper show, *-er* nominalizations of phrasal verbs, which involve the two-fold attachment of the derivational suffix, are more pervasive than previously expected (Chapman 2008: 265). Indeed, the verb-*er*+particle-*er* pattern, as exemplified in *cheerer-upper* (The Guardian 1999) or *filler-inner* (Detroit Free Press 1993), is accounted for in a wide array of phrasal verb nominalizations. Thus, this study shows that English does allow for an “affix reduplication phenomenon” (McIntyre 2013: 44). Furthermore, the data points to a noteworthy difference between British and American English in that the former displays a larger number of hapax legomena but has a lower token frequency of the pattern. In the American English data, by contrast, the token frequency of the pattern is higher, which suggests that it is more established in this variety.

1 Introduction

Previous research on derivational patterns in English has shown that the verb-nominalizing suffix *-er* belongs to one of the most productive suffixes, attaching to a wide range of verbs to form agentive nouns such as *ride* > *rider* (cf. Ryder 1999: 269). A related albeit more marginal phenomenon concerns *-er*-nominalizations that are based on phrasal verbs, deriving so-called *doubler-upper* nouns (Cappelle 2010: 335). With these relatively recent formations, the bases are phrasal or particle verbs and, as the name already implies, the *-er*-suffix attaches to both parts of the complex base, i.e. both the verbal base and the particle or preposition.¹ For example, the nominalization of *fix up* ‘to mend’ results in

¹ The classification of the particle or preposition accompanying the verb is problematic. While Bußmann (1996: 352) considers all indeclinable word-classes as particles, Thim (2012: 27)

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fixer-upper, a noun that denotes either the person performing the action of fixing up or, in a more lexicalized sense, the entity being fixed up, often a ‘house in a dilapidated state’ (OED 2015).

- | | | | |
|-----|--------------|---|----------------------|
| (1) | verbal base | + | particle/preposition |
| | <i>fix</i> | | <i>up</i> |
| | <i>fixer</i> | - | <i>upper</i> |

The observation that the derivational affix *-er* attaches twice to the phrasal verb base raises the question to what extent this formation constitutes a reduplication phenomenon in English.² This question is particularly noteworthy in that it casts doubt on the common view that “productive reduplication of whatever kind seems to be rare” (Schwaiger 2015: 478) in European languages and “such formations are almost always onomatopoeic or evaluative/expressive in character” (Spencer 2015: 305). Providing corpus data from contemporary British and American English, this paper aims to show in an explorative analysis that nominalized phrasal verbs have indeed emerged as a regular and systematic reduplicative pattern.

So far, *doubler-upper* nouns have either been regarded as “elusive” (Chapman 2008: 265) or they have been of interest for theoretical considerations concerning their structural properties such as headedness (cf. McIntyre 2013). The first large-scale empirical study of this extraordinary word-formation pattern has been conducted by Cappelle (2010), based on the British National Corpus (BNC) and the Corpus of Contemporary American English (COCA). Still, with a word-formation

suggests a series of tests to distinguish between phrasal and prepositional verbs. Due to the highly lexicalized status of some of the *doubler-upper* nouns it is difficult to determine whether the base of the nominalization was a prepositional or a phrasal verb. Both kinds of verbs may serve as bases for *doubler-upper* nouns (see examples (11) *cheerer-upper* ‘someone or something enlightening someone else’s spirits’ derived from the phrasal verb *cheer up* and (12) *walker-outer* ‘someone who habitually leaves uncomfortable situations’ derived from the prepositional verb *walk out* (see Section 5)). Thus each and every individual case of *doubler-upper* nouns as well as its base would have to be tested individually in order to determine whether we are dealing with a phrasal or a prepositional verb, an analysis that cannot be accommodated within the scope of the present paper.

² It is important to emphasize that *-er* simultaneously attaches to verb and particle/preposition in the case of *doubler-upper* nouns. This means that *doubler-upper* nouns are not a case of compounding in which a nominalized verb combines with a nominalized particle/preposition. After all, *-er* nominalizations of particles have occurred in English before (e.g. *inner*, *downer*, *upper*) bearing the status of free lexemes. However, they have lexicalized meanings, with *upper* denoting a stimulating substance, an *inner* is a person reclaiming land, while *downer* denotes either a tranquilizing drug or a negative experience, person or encounter (cf. OED 2016).

pattern as rare as *doubler-upper* nouns, many questions regarding the productivity and systematicity of particle or prepositional verb nominalizations have remained unanswered.

By drawing on a 2,708,613,406 word corpus of British and American newspaper data, which is part of the Mainz Corpus Collection, we are now in a position to extend the database even further and to extract a larger number of *doubler-upper* nouns for both a quantitative and qualitative analysis. The emergent insight is that these double-marked derivatives are by no means idiosyncratic nonce-formations. Each of them is the realization of a systematic word-formation pattern that is available in both varieties of English. Thus, by providing the most extensive in-depth corpus analysis of the phenomenon to date, this paper can now shed more light on the form, function, frequency and distribution of particle-verb nominalizations.

The paper is structured as follows. Section 2 gives an overview of repetition and reduplication phenomena in English, while Section 3 summarizes previous research on *doubler-upper* nouns and their connection to reduplication. The data and methodology used for retrieving *doubler-upper* nouns are presented in Section 4. Section 5 then analyses phonological and morphological properties of *doubler-upper* nouns showing that they constitute an established derivational pattern in English. Finally, Section 6 summarizes and discusses the results of the empirical study.

2 Reduplication and repetition in English

The distinction between reduplication and repetition is somewhat blurry (cf. Schwaiger 2015: 468). According to Finkbeiner (this volume) both processes have in common that they involve relatively close syntactic proximity (see also Stolz et al. 2011: 51). While it is clear that *fixer-upper* contains double-marking, clear-cut criteria for reduplication and repetition would be required to categorize this phenomenon as either one or the other. According to Schwaiger (2015: 468) “‘reduplication’ is the systematically and productively employed repetition of words or parts of words for the expression of a variety of lexical and grammatical functions”. The two processes have been considered to be the two end-points of a continuum (Stolz 2007: 49).

In line with Stolz (2007: 57), the present paper assumes that while repetition triggers a change in expressive or interpersonal meaning, reduplication is accompanied by changes in descriptive meaning. Thus, the repetition of a qualifying adjective such as *lovely*, as in example (2), reinforces the meaning of the utterance (cf. Quirk et al. 1985: 1441) or more specifically the adjective.

(2) *A lovely, lovely chrysanthemum.*

(Quirk et al. 1985: 1441)

The repetition of *lovely* does not entail any traces of lexicalization, no change of word-class is involved and the repetition is not syntactically required. Without the repeated element, the sentence would still be grammatical. Furthermore, a repetition as in (2) is not regarded as witty or stylistically distinguished. Rather, the repetition reinforces the propositional content. Similarly, cognate objects as in (3) are a case of repetition.

(3) *She smiled the queerest smile.*

(OED: 1862 Lady Audley's Secret, M. E. Braddon)

Their usage is not obligatory and does not change the meaning of the parts involved, but it results in a repetitive impression, which is greater the less morphological material there is between the verb and the object (cf. Eitelmann and Mondorf, this volume). It thus has an effect on the pragmatic level as is typical of repetition phenomena in general (cf. Stolz 2007: 57).

In contrast to cases of repetition, reduplication processes may involve categorical as well as semantic changes. Therefore, after the reduplication process, “the doubled structure conveys a meaning that is not reducible to the meaning of its constituents” (Booij 2010: 39) in that it is not compositional, or at least considerably less so than in (2). The English lexemes listed in (4) all exemplify reduplication befitting this definition. Each of them encodes a different set of meaning changes in connection with the reduplicational process.

(4) a. *tick-tock, ha-ha*b. *seesaw, ping-pong*c. *hocus-pocus, dilly-dally*d. *teeny-weeny, tip-top*

(Quirk et al. 1985: 1579f.)

A word such as *tick-tock* in (4a) is onomatopoeic and, due to the vowel change in the copy, it is generally classified as a case of partial reduplication (cf. Quirk et al. 1987: 1580). Both elements involved also occur in isolation as free lexemes (cf. OED 2015). *Tick* has various meanings not related to the repetitive sound of a clock or watch (cf. OED 2015). *Tock* denotes a ‘hollow sound’ (OED 2015). Only when the two elements are combined, the sense of iteration is emphasized.³

³ Compare also *tock-tock* (cf. OED 2015).

Ha-ha in (4a) is also onomatopoeic and this is a case of total reduplication, as the second element is the exact copy of the first. It is the onomatopoeic realization of the sound of laughter⁴ (cf. OED 2015; Quirk et al. 1985: 1579). Lexemes such as *seesaw* and *ping-pong* in (4b) are reduplications indicating alternating movement and involving vowel alternation similar to ablaut (cf. Bauer et al. 2013: 412). Both *hocus-pocus* and *dilly-dally* as in (4c) have negative connotations. And finally reduplicative forms such as *teeny-weeny* and *tip-top* in (4d) are used as qualifiers and denote the extreme ends of a scale, e.g. ‘extremely small’ and ‘the very best’ or ‘very good’. In contrast to the case of repetition in (2), the reduplicated elements in (4) are obligatory as without them, the meaning of the lexeme would be completely different from the meaning of its parts and they do not occur by themselves. In English, either both or one of the elements of lexemes involving partial reduplication (*-oly* in *roly-poly* or *-oity* in *hoity-toity*) are cranberry morphs.

- (5) *Roly-poly, hoity-toity, easy peasy*
(Bauer et al. 2013: 412)

This is in line with Bauer et al. (2013: 411) stating that in English there is a number of reduplication processes that appear to be attitudinal, only having the function to create new words but not marking them for e.g. case or constituting a paradigm of their own. The effect of the reduplicational processes above on the specific meanings of the lexemes is not predictable and fairly idiosyncratic. Furthermore, it is not possible to predict which parts of the lexemes will undergo reduplication.

Lexical clones such as in (6) often pose borderline cases of repetition or reduplication phenomena.⁵ According to Horn (1993: 48) the lexical clone “singles out a member or subset of the extension of the noun that represents a true, real, default, or prototype instance” specifying the original, repeated lexeme. Both elements need to be in immediate adjacency to one another. This pattern is productive for various word-classes and it may contain one or more elements that are reduplicated. Due to the semantic change involved, example (6) is a case of reduplication (cf. Horn, this volume).

- (6) *We have muffins, and we have **DESSERT** desserts.*
(Horn 1993: 49)

⁴ In another, more lexicalized and allegedly etymologically related sense, it denotes a garden feature, e.g.: “*The walks are terminated by Ha-hah’s, over which you see*” (OED 2015: Gardening 1895).

⁵ Lexical clones have also been termed cases of contrastive reduplication (Ghameshi et al. 2004).

The first stressed *dessert* in (6) clarifies that the speaker does not consider muffins to be a true or proper dessert. However, if there is no pragmatic difference when using a lexical clone to achieve the same meaning, then this example would have to be classified as a repetition. All in all, regarding the proximity of reduplicated items, it seems that the cases of English reduplication discussed so far are more or less in direct adjacency, i.e. they occur within the same lexeme and do not span phrase boundaries. As yet, descriptions of reduplicational processes in English have not taken *doubler-upper* nouns into consideration. Compared to the examples listed in (2) to (4d), due to their paradigmatic properties, *doubler-upper* nouns constitute an additional systematic pattern to the classes of reduplicatives in English, which becomes evident in the following sections.

3 Previous findings on *doubler-upper* nouns

So far, the *doubler-upper* noun pattern deriving nouns from phrasal or prepositional verbs has received comparatively little attention. If it is mentioned at all, scholars tend to disagree on its morphological status. As regards their formal and functional features, McIntyre (2013: 44) considers them to be an “affix reduplication phenomenon” and he explains the double marking by the left-headed status of phrasal verbs (cf. McIntyre 2013: 42).

In English there have been few attestations of non-sequential two-fold attachment of identical derivational suffixes in two parts of one lexeme, *doubler-upper* nouns are different in comparison to the reduplicational cases discussed so far. Agentivizing suffix *-er*⁶ attaching to the base as well as to the particle or preposition is structurally remarkable for English. Focussing on the structure of the emerging lexemes, Chapman (2008) and Cappelle (2010) agree that the two-fold derivation in *doubler-upper* nouns occurs because of a “tension between [...] two principles” (Cappelle 2010: 360) making the speaker want to place “the suffix both in the right place and on the right word” (Chapman 2008: 79). According to Dixon (2015: 307) *-er* is “prototypically added to a verb and then derives an agentive nominalization, describing a person who initiates and/or controls the activity described by the verb”. This motivates the attachment of *-er* to the verb. According to Cappelle (2010: 362) the two lexical items constituting a phrasal or prepositional verb can be considered of a single syntactic “word” with the

⁶ The suffix *-er* is of West Germanic inheritance (cf. OED) but presents us with an etymological jumble (Dixon 2015: 306) as there are several homophonous variants in English.

particle situated on the right-hand margin of the lexical unit. This motivates the attachment of *-er* to the particle.

Chapman (2008: 279) furthermore suggests that the two-fold derivational marking in *doubler-upper* nouns manifests a transitional stage in the externalization of *-er* in nominalizations of phrasal verbs. Moreover, he argues that the existence of particles marked with a derivational suffix in *doubler-upper* nouns gives “further evidence of grammaticalization of multi-word verbs” (Chapman 2008: 277). Furthermore, Cappelle suggests that the speakers readily attach *-er* to particles since this suffix is “generally available for many types of bases” (Chapman 2008: 277).

As regards the etymology, there is some degree of consensus amongst scholars discussing the phenomenon that first occurrences date back to the first part of the twentieth century (cf. Chapman 2008: 279; Wentworth 1936: 369; OED 2015). The earliest attestation of the pattern, *picker-upper*, is reported for an edition of the *Chicago Sunday Tribune* in 1913 (cf. OED 2015), which is in line with Wentworth’s (1936: 369) assumption that *doubler-upper* nouns are “journalistic in origin”. An early prescriptive publication by Wentworth (1936: 370) on *doubler-upper* nouns has branded them “grotesque” and the outcome of the “evil genius of slang”. More descriptive analyses simply consider them as features of colloquial styles (cf. Bauer 1983: 288, Chapman 2008: 269, Wentworth 1936: 369). According to McIntyre (2013: 44) the pattern is merely found in a few speakers’ idiolects. Bauer (1983: 89) states they are “very rare”. Thus, the pattern has mainly been considered a feature of spoken language or “less conventional writings” (Chapman 2008: 269). Following this reasoning, *doubler-upper* nouns would have to be absent from more conventional registers such as newspaper texts. While Chapman (2008: 265) outlines that *doubler-upper* nouns have so far been “elusive in standard corpora of historical and contemporary English”, this observation requires qualification in the light of the research findings introduced by Cappelle (2010) as well as those of the present study. All in all, while previous observations on *doubler-upper* nouns suggest interesting avenues for research, many still await more empirical validation.

4 Data and methodology

In a sizable corpus collection of British English and American English newspapers used as the data basis for the present study, a number of *doubler-upper* nouns can be observed to occur in both national varieties. As Wentworth, an early scholar commenting on the *doubler-upper* pattern, observed it to be “journalistic

in origin” (1936: 369), a corpus consisting of current editions of British and American newspapers has been selected. Therefore, the factor genre is kept fairly consistent in the present study as the corpora analysed only consist of newspaper language (cf. Mondorf and Schneider 2016). Within the genre of newspaper texts, tabloids are likely to adapt substandard forms more readily than, for instance, national broadsheets. Compared to academic texts or fiction, newspaper data is a genre considered more receptive to change (cf. Hundt and Mair 1999: 236). Nevertheless, journalistic texts constitute a genre of their own and as such, they have evolved conventions of their own (cf. Mondorf 2009: 185). Editing is conducted in line with guidelines set up by an editing board as part of their in-house style. Different kinds of newspapers ranging from mid-market tabloids, such as the *The Daily Mail*, to broadsheets, such as *The Times*, constitute the data analysed in the present study. The newspapers contributing to the present analysis range from the years 1990 to 2006 and thus give an impression of the status of *doubler-upper* nouns in contemporary written English in British and American newspapers. Despite the stylistic differences, *doubler-upper* nouns occurred in each of the newspapers analysed (see Table 1).

Table 1: List of newspapers for the present study.

| British English | Number of words | American English | Number of words |
|--|-----------------|--|-----------------|
| <i>The Times (and The Sunday Times)</i> 1990–2004 | 725,253,296 | <i>The Detroit Free Press</i> 1992–1995 | 160,000,000 |
| <i>The Guardian (and The Observer)</i> 1990–2003 | 640,007,468 | <i>The Los Angeles Times</i> 1992–1999 | 320,016,163 |
| <i>The Daily Telegraph (and The Sunday Telegraph)</i> 1991–2000, 2002, 2004 | 370,506,131 | <i>The Washington Times (and Insight on the News)</i> 1990–1992 | 94,000,000 |
| <i>The Daily Mail (and The Mail on Sunday)</i> 1993–2000 | 206,762,406 | <i>The Denver Post</i> 2005–2006 | 32,067,942 |
| <i>The Independent</i> 1992–1994, 2002–2005 | 160,000,000 | | |
| TOTAL | 2,102,529,301 | TOTAL | 606,084,105 |

The texts in the British newspapers amount to a total of 2,102,529,301 words, while the number of words in the American English data adding up to a total of 606,084,105 words. In comparison, the American data makes up only a third of

the British data. Hence the frequencies resulting from the difference in corpus size have been normalized by computing pmw ratios.

Based on the *doubler-upper* nouns mentioned and listed in Wentworth (1936), Chapman (2008), Cappelle (2010) and McIntyre (2013), each newspaper was searched by means of the concordance software WordSmith. The search strings used to detect *doubler-upper* nouns in the corpus are provided in Table 2. As the asterisk serves as a wild card, potential verbal bases of *doubler-upper* nouns were not predetermined by the choice of the search string. Some of the search strings produced a big amount of noise such as example (7), *lower-upper* being an adjective marked for the comparative. This noise had to be eliminated from the tally.

- (7) *by federal standards you might even be considered upper class, or lower-upper or some other gradation that makes Americans wince.*
(The Washington Times, 1992)

The search of the total of 2,708,613,406 words yielded 818 *doubler-upper* noun tokens to be investigated, making it the most extensive corpus study of the phenomenon of *doubler-upper* nouns to date.⁷

Table 2: Search strings.

| | | | |
|-------------------|--------------------|-------------------|------------------------------|
| <i>*er*upper*</i> | <i>*er*offer*</i> | <i>*er*inner*</i> | <i>*er*over*⁷</i> |
| <i>*er*outer*</i> | <i>*er*downer*</i> | <i>*er*onner*</i> | |

5 Results

In line with Cappelle (2010: 341), the data used in the present study indicates that *doubler-upper* nouns are more frequent in American English than in British English. The total of the American English data contains 450 *doubler-upper* noun tokens, corresponding to a ratio of 0.74 per million words (pmw), comprising only 47 types, the total of the British newspapers includes 120 types and 368 tokens (ratio 0.18 pmw) (cf. Figures 1 and 2). Thus, the higher token frequency per million words in American English shows that the pattern is more frequent in the American English data.

⁷ Additionally, **er*througher**, **er*atter** and **er*byer** have been searched for but there were no hits in the corpora.

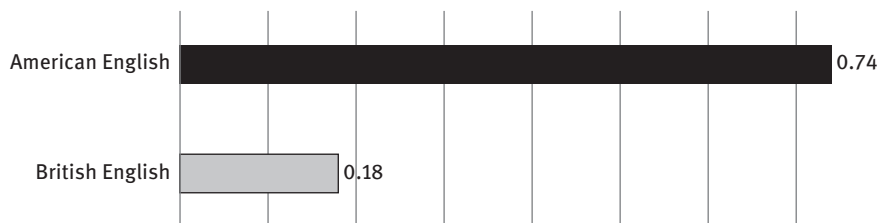


Figure 1: Frequencies of the *doubler-upper* pattern per million words.

Only 47 different phrasal verbs serve as the base of the *doubler-upper* pattern in the US data, while in the British data 120 types were used to form *doubler-upper* nominalizations, as can be observed in Figure 2. Some of the phrasal verbs were used for derivation only once forming a hapax legomenon, while other derivations were found more frequently, which explains the differing token frequencies also shown in Figure 2.⁸

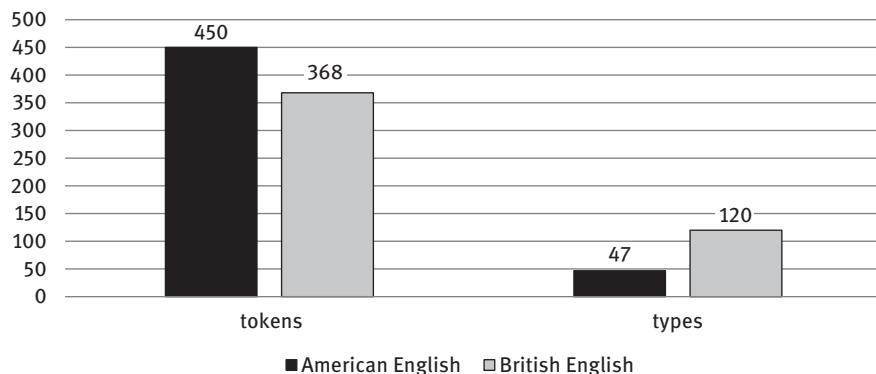


Figure 2: Type and token frequencies of *doubler-upper* nouns in the data.

In the American English data, *doubler-upper* noun types end in *-upper*, *-outer*, *-offer*, *-inner*, and *-onner*. In addition the British English data also hosts *-downer*, *-aboutner* and *-overer* as illustrated in Figure 3, which provides the token

⁸ The British amount of data is three times as large as the amount of American data so that it is highly suggestive that the large number of different types in British English is correlated with corpus size. As mentioned in Table 1, the British English Corpora contain 2,102,529,301 tokens as opposed to 606,084,105 tokens in the American English Corpora.

frequencies of the different types found in each variety. The different nominalized particles listed in the figures and tables always represent several different *doubler-upper* noun types that ended in *-upper*, *-outer*, *-inner*, *-onner*, *-downer*, *-overer*. The different particles occur with several bases in the corpora. Thus the *-upper* bar represents all *doubler-upper* pattern nominalizations of phrasal verbs in *up* found in the data. In both varieties, *doubler-upper* nouns in *-upper* constitute the most frequent type.

In American English, *fixer-upper* with a frequency of 349 out of 450 tokens is the most frequent *doubler-upper* noun, while in British English, *washer-upper* scores highest with 49 hits out of a total of 305 *doubler-upper* nouns in *-upper*.⁹ However, it has to be noted that the lexeme *fixer-upper* has lexicalized and may now denote ‘someone with the ability to fix something’ as well as ‘a house in a dilapidated state that is more likely to return a healthy profit being sold after renovation’ (cf. OED 2016). Because of its high frequency and lexicalized status, *fixer-upper* may be regarded as an outlier.

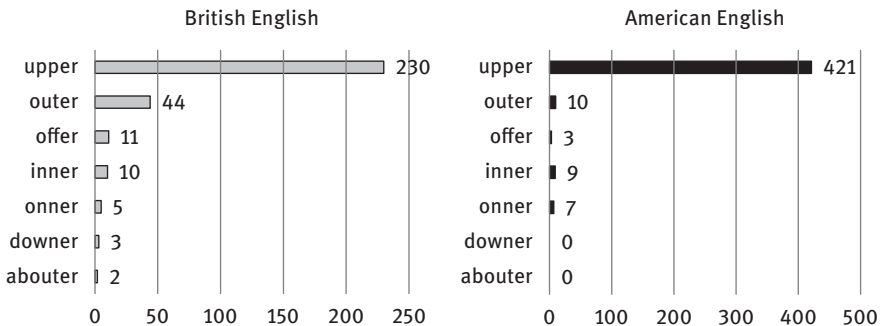


Figure 3: Token frequencies of *doubler-upper* nouns in British English and American English.

Figure 3 illustrates the varying frequencies of derivations based on the different particles. In both varieties, the particle most frequently carrying *-er* is *up*. In the American data, there were no *doubler-upper* nouns in *-abouter* or *-downer*. In the British data, there were more *doubler-upper* nouns in *-outer*, *-offer* and *-inner*, while the number of *doubler-upper* nouns in *-onner* in the American data

⁹ Recall that the notion of *doubler-upper* noun is used, as mentioned in Section 1, as a cover term for all kinds of verb-particle combinations that attach an *-er* morpheme on both elements (see also Section 1).

surpasses the number of nominalizations in the British data. Since the numbers in Figure 3 are only raw frequencies and as the American data analysed amounts only to a third of the British English data, comparing raw frequencies of types leads to a distorted picture. Gauging frequency per million words per type of nominalized adjective provides the pattern in Table 3.¹⁰

Table 3: Frequency pmw per type of nominalization.

| | British | American |
|----------|---------|----------|
| -abouter | 0.001 | 0 |
| -downer | 0.001 | 0 |
| -onner | 0.002 | 0.01 |
| -inner | 0.005 | 0.01 |
| -offer | 0.005 | 0.005 |
| -outer | 0.02 | 0.02 |
| -upper | 0.11 | 0.69 |

Interestingly, the frequency counts for nominalizations in *-upper* are the highest, although the ratio is higher for the American data than it is for the British data. The ratios for nominalizations in *-offer* and *-outer* in both varieties do not differ, while nominalizations in *-onner* and *-inner* are more frequent in the American than in the British English data. The ratios for nominalizations in *-downer* and *-abouter* give evidence to their scarceness in the data. Summarizing, it appears that *doubler-upper* nouns are more frequent in American English because of the high frequency of *-upper* nominalizations. Nevertheless, the abundance of types is higher in the British data than it is in the American data as illustrated in Figure 4.

As illustrated in Figure 4, out of the 115 different *doubler-upper* noun types in the British data 81 are hapax legomena, while in the American data, 28 out of the 47 different types found only occur once. It is striking that there is a higher percentage of hapax legomena in the British data. This might be indicative of a

¹⁰ WordSmith has the function to list all lexemes occurring in a data set according to their frequencies. Comparing the frequencies of the different particles/prepositions that can be part of *doubler-upper* nouns revealed that *up* is less frequent than *by*, *in* and *on*. It seems that the frequencies of the particles/prepositions do not have an influence on the likelihood of them becoming part of a *doubler-upper* noun.

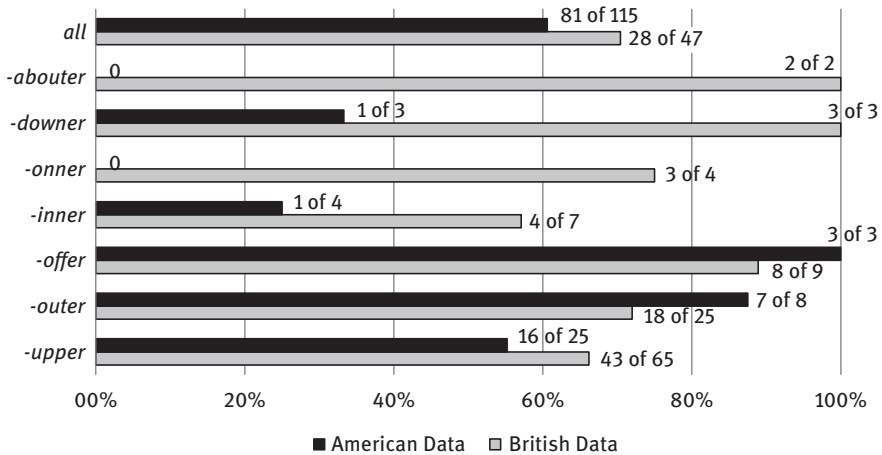


Figure 4: Share of hapax legomena in the two datasets.

higher productivity in British English (cf. Plag 2006: 123).¹¹ The next section discusses properties of the doubler-upper nouns found in both varieties.

6 Discussion

6.1 Morphological features of *doubler-upper* nouns

All *doubler-upper* nouns found in the data are derivations of phrasal or prepositional verbs consisting of a verbal base and a particle or preposition, whereby the derivational *-er* suffix attaches to both the verbal part as well as the particle forming a complex base. Thus *cheer up* becomes a *cheerer-upper* as in (8) and *walk out* becomes a *walker-outer* as in (9).

- (8) ... is brilliant as a ***cheerer-upper*** of players.
(*The Daily Mail*, 1991)

¹¹ Note that hapax legomena are just one of various measures of productivity. Based on the data analysed for the phenomenon of *doubler-upper* nouns so far, it is not possible to determine whether high type frequency of singular lexemes may have triggered the emergence of new tokens in the two varieties (cf. Cappelle 2010: 347).

- (9) ... but in the end I walked out. I'm a **walker-outer**.
(*The Daily Telegraph*, 1997)

A *cheerer-upper* could be glossed as ‘a person or device with the ability to lift other people’s spirits’, while a *walker-outer* denotes ‘someone who prefers to run away from situations in order to avoid uncomfortable or challenging situations’. As can be seen in Figures 5 and 6, etymologically, the component parts of this most prototypical type of *doubler-upper* noun have undergone several stages that can be traced in the OED.

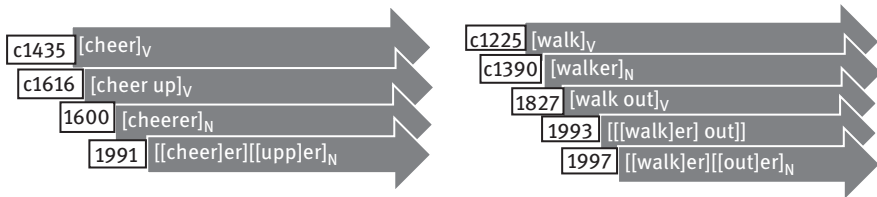


Figure 5: Etymological predecessors of *walker-outer* and *cheerer-upper*.

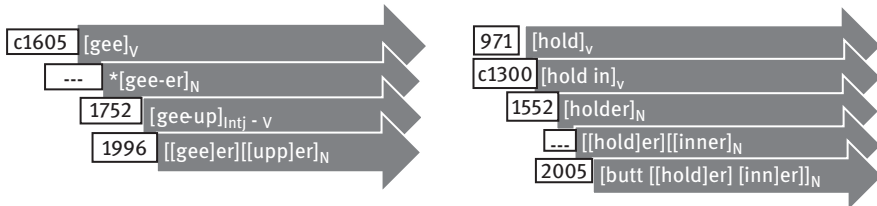


Figure 6: Etymological predecessors of *geer-upper* and *butt holder-inner*.

For some *doubler-upper* nouns, a derivation of the verbal base alone is documented, e.g. *walker* denotes ‘a person moving about on foot’ (cf. OED 2015), first attested in about 1390 (cf. OED 2015). *Walker-outer* is not documented in the OED but present in *The Daily Telegraph* 1997 analysed for the present study as well as another type of nominalization involving the attachment of *-er* only to the verbal base, attested in *The Guardian* in 1993.¹²

¹² The search strings used for the detection of *doubler-upper* nouns in the present paper will not find nominalizations such as *walker-out* (*The Guardian* 1993). Further research is needed to determine the nature of variation between these two different types of nominalizations of phrasal or prepositional verbs in English.

However, some of the *doubler-upper* nouns encountered in the present paper do not have a freely derived predecessor of the first element such as *gee-er upper* (*The Guardian* 1996) denoting ‘someone who has the ability to cheer up other people’. **Gee-er* is neither attested in the OED nor in the data analysed for the present study. This indicates that apparently, for language users, the base of a *doubler-upper* noun is the whole phrase. Consequently, an agentive derivation of the verb alone is not required to form new types of *doubler-upper* nouns, which makes this word-formation process available to speakers regardless of etymologically related earlier forms.

The pattern applies to structures that fit the phonological and morphological requirements, as can also be seen in (10).

- (10) *Hair gel, hair spray, hair serum, hair mousse, hair de-frizzer. **Hair calmer-downer, hair bigger-upper.** Then there’s make up.*
(<http://beckysaysthings.com/tag/beauty>, 23/09/2015)¹³

In both, *hair calmer-downer* as well as *hair bigger-upper*, the first element in its underived form (e.g. *calm* and *big*) may also be used as an adjective. When *bigger* appears on its own, in English, it is usually an adjective marked for the comparative. According to the OED, a *big-up* denotes ‘a person of great wealth’ and there is no listing of a phrasal verb *big up* in the OED. By comparison, *calm down* is listed as a phrasal verb in the OED and as *bigger-upper* and *calmer-downer* occur in close proximity, *bigger-upper* may have been formed as an analogy with *calmer-downer*. Nevertheless, both nominalizations comply with the *doubler-upper* pattern. Example (10) underlines that the pattern of *doubler-upper* nouns is applicable to a wide array of bases and illustrates that some *doubler-upper* nouns used in the data serve as the second element of a compound such as *holder-inner* as in “*butt holder-inner*” (*The Guardian* 1993) denoting ‘a device with the ability to advert one’s behind to take on unfavourable shapes’ as in (11).

- (11) *A bra, a stomach-flattener, a **butt holder-inner.***
(*The Guardian*, 2005)

While there is an attestation of *hold* used as a verb dating back to 971 and of the phrasal verb *hold in* (OED 2016), there is no attestation of a free *holder-inner* in the OED or the data analysed for this study. Thus *butt holder-inner* illustrates

¹³ I would like to thank Laurence Horn (p.c.) for bringing this example to my attention.

that language users seem to be able to form new compounds involving a *doubler-upper* noun they have not come across before.

The corpora also yielded an additional type of nominalization, where the *doubler-upper* noun is part of a unverbated phrase as in example (12).

- (12) *Memo-sending conveyor belts. **Other-people's-lives-gobbler-uppers.**
Nothing more.
(The Daily Telegraph, 1994)*

These types demonstrate that *doubler-upper* nouns may be part of phrasal compounds, just like other nouns ending in *-er*.¹⁴ Dixon (2015: 310) notes that

[...] indeed, [...] the possibilities of adding *-er* to a sequence of words are limited only by the imagination (and prosodic tolerance) – *he's always been an every-person-for-themself-er, while she's a do-as-you-would-be-done-by-er.*

According to Meibauer (2007: 257) ad hoc phrasal compounds are right-headed (2007: 236) and they serve to fill lexical gaps so that language users readily form new *doubler-upper* nouns, constrained by prosody and individual creativity.

In the data, there is also a hapax legomenon of a *doubler-upper* noun that not only consists of a verbal base with a particle or preposition but that has incorporated a third element. *Putter-upper-with* as in (13) is the only representative of this type in the data.

- (13) *Jude, who was, arguably, more of a **putter-upper-with** than a lover of anything.
(The Guardian, 2003)*

With *putter-upper-with* we can now fill an apparent gap in Dixon's *doubler-upper* noun paradigm (cf. Dixon 2015: 310). Dixon (2015: 310) describes this type as a nominalization of a phrasal verb with the structure of a verb combined with two prepositions and a noun. Interestingly, *with* is not marked with *-er*. Indeed, so far no *doubler-upper* nouns ending in *-wither* have been recorded in the data.

Moreover, there is another type of *-er* nominalization present in the data analysed involving even more elements carrying derivational *-er* shown in (14), which supports the hypothesis of increased coherence in line with derivational marking.

¹⁴ Note that in this case, plural *-s* only attaches at the very end of the nominalization.

- (14) *Yesterday, though, he looked like a **stayer-onner-for-nower**. This, in politics, is not to be undervalued.*
(*The Times*, 2003)

Interestingly, *stayer-onner-for-nower* involves not only a particle carrying derivational *-er* but also a time adverbial marked in the very same way. The hyphenation as well as the three-fold attachment of *-er* emphasize the link between all elements of the lexeme.¹⁵ As it is in the syntactic object slot and embedded into an NP with an indefinite article, the whole construct is clearly a noun. The only element not marked with derivational *-er* and thus interrupting the succession is the preposition *for*. Thus, it is different from all other *doubler-upper* noun types discussed before.

Similar morphological processes signalling cohesiveness are documented in other languages. Stolz (2007: 63) observes that in Finnish, there is a similar phenomenon marking noun phrases for adessive case.

- (15) *Ja mitä nii-llä viide-llä-kymmene-llä-kolme-lla*
and was:PART these-ADE five-ADE-ten-ADE-three-ADE
minnuuti-lla tehdään?
minute-ADE make:PASS
'And what will be done **with** these 53 minutes?'
(adapted from Stolz 2007: 63)

According to Stolz (2007: 63), the agreement morphemes in Finnish are not in direct adjacency but separated by their bases, which is also true for *doubler-upper* nouns in general and for *stayer-onner-for-nower* in particular. In Finnish, the multiple attachment of a suffix does not induce any intensification or increased emphasis (cf. Stolz 2007: 63). It only serves the morphosyntactic function of signalling coherence and it does not have an effect on the semantic level (cf. Stolz 2007: 63). Similarly, the multiple *-er* derivation in *doubler-upper* nouns creates an impression of coherence of several lexemes. However, based on the single occurrence of this type of three-fold marking of a nominalization, it is difficult to determine whether there are semantic changes compared to the type marked only in a two-fold way. In contrast to the Finnish phenomenon, the multiple attachment of the suffix *-er* to phrasal-verb bases is additionally accompanied by semantic changes, as will be discussed in Section 6.3.

¹⁵ Note that this process seems to resemble the parallelism found in vowel harmony, only that we are now dealing with morphological harmony.

Plural affixation of *doubler-upper* nouns found in the present study indeed suggests that they are one lexical unit. Despite *-er* attaching to *doubler-upper* nouns on the verbal base as well as on the particle, the present analysis reveals that there is a clear preference for plural *-s* attaching only to the right-hand word boundary of *doubler-upper* nouns. All of the 96 *doubler-upper* noun tokens in the British data marked for plural have the same *-s* morpheme only at the right-hand boundary as in example (16):

- (16) But the ***weeder-outers*** are ruthless.
(*The Times*, 1999)

In the American data, out of 83 tokens marked for plural, all (98,8%) but one of the lexemes is marked in the same way. The only exception is *shackers-uppers* in (17), where plural *-s* attaches to both agentivizing suffixes:

- (17) *But the domestic partners bill recognizes not only heterosexual **shackers-uppers**, but also homosexual ones.*
(*The Washington Times*, 1992)

This is in line with Cappelle's (2010: 362) statement that language users perceive phrasal verbs as one lexical unit. Similarly the data analysed suggests that language users perceive *doubler-upper* nouns as one unit.

6.2 Phonological properties of *doubler-upper* nouns

The vast majority of the *doubler-upper* nouns found in both British English and American English share some fundamental phonological characteristics. In line with Cappelle (2010: 342), the data in the present paper leads us to assume that phrasal verbs serving as bases for *doubler-upper* nouns are mostly disyllabic, as in e.g.: *put on*, *fix up*, *fill in* etc. As can be observed in Table 4, after the two-fold attachment of derivational *-er*, the resulting structure consists of two trochaic feet and four syllables, in line with the Principle of Rhythmic Alternation (cf. Selkirk 1984: 39; Schläuter 2005: 17). There are only a few exceptions to this phonological pattern found in the data. In *flóppèr-àbòutèr* (*The Times* 2003) and *pláyèr-àbòutèr* (*The Times* 2001) the second element is trisyllabic with the main stress on the second syllable, thus violating a strict pattern of alternating stressed and unstressed syllables. While the Principle of Rhythmic Alternation predicts that stress clashes and lapses tend to be avoided, it sometimes defines lapses as two and sometimes as three sequential unstressed syllables (cf. Schläuter 2004: 20).

The same is true for *sóftènèr-úppèr* (*The Telegraph* 1999) starting in an element with three syllables with initial stress. *Smóothèr-óvèrèr* (*The Times* 1998) and *Tázò-knóckèr-óvèrèr*¹⁶ (*The Guardian* 1997) diverge from the original pattern as the second element has three syllables with initial stress. The *doubler-upper* nouns in *-overer* are noteworthy, since they end in /əɾə/, which is described as “fairly rare” (Bauer 1983: 290) in English.¹⁷ Moreover, their rareness can be linked to the *Horror Aequi* Principle (cf. Rohdenburg 2003, Vosberg 2003): If the double marking in *doubler-upper* nouns is considered a mere repetition of grammatical material, it represents a violation of the *Horror Aequi* Principle (Rohdenburg 2003: 236).¹⁸ The rarity of this pattern is confirmed by the data. Thus, out of 151 different *doubler-upper* nouns derived from 151 verbal bases in the data sets, only six (~ 4%) do not comply to the phonological pattern of two trochaic feet described in Table 4.

Since Received Pronunciation is generally considered non-rhotic as opposed to General American, the two *-er* suffixes are not necessarily realized in the same way. Both their phonological conditioning and the lexeme following the *doubler-upper* noun can influence the realization of <er>. Depending on the phonological environment, in British English the derived noun may end in [ə] rather than [ər], which does not have an effect on the stress pattern.

Table 4: Phonological properties of *doubler-upper* nouns.

| <i>fixer-upper</i> | | | |
|--|--|------|--|
| British English transcription [ˈfiksəˈɹəpə] | American English transcription [ˈfiksəˈəpə] | | |
| C-V skeleton | CVCCVC | CVVC | |
| syllabic skeleton | σ σ | σ σ | |

Although “a desire to rhyme” (Cappelle 2010: 348) is not relevant in most morphological processes in English, it does play a role in many other lexemes involving reduplication, as exemplified in (7) and (9), and should hence be taken into

¹⁶ *Tazos* are small disks made of plastic used in a game designed for children.

¹⁷ A corresponding strategy to avoid *-erer* sequences for comparatives is described in Eitelmann and Mondorf (this volume) and Mondorf (2009: 26).

¹⁸ “The *Horror Aequi* principle involves the widespread (and presumably universal) tendency to avoid the use of formally (near-) identical and (near-)adjacent (non-coordinate) grammatical elements or structures” (Rohdenburg 2003: 236, cf. also Vosberg 2003).

consideration when discussing *doubler-upper* nouns. *Doubler-upper* nouns do not rhyme, but nevertheless end in the same suffix and sound sequence.

These deviations from the otherwise preferred prototypical phonological pattern give evidence for the successful establishment of the two-fold derivational nominalization of phrasal verbs. The next section discusses the semantic structure of *doubler-upper* nouns.

6.3 Semantic features of *doubler-upper* nouns

In English, derivational *-er* is used to derive nouns from verbs and it does not place “any particular semantic conditions on its argument” (Booij and Lieber 2004: 353). The suffix *-er* is the most frequent suffix deriving agentive nouns from verbs (cf. Baayen and Lieber 1991: 819) but it also attaches to verbs to form instrumentals (cf. Baayen and Lieber 1991: 841; Dixon 2015: 306). Among the types of nouns that are the outcome of the derivational operation involving *-er* in Present Day English, a range of meanings can be found. According to Booij and Lieber (2004: 329) they may be subject-oriented nominalizations denoting agents (e.g. *rider*) (cf. also Dixon 2015: 307), instruments (e.g. *lighter*), experiencers (e.g. *listener*) and stimuli (e.g. *pleaser*), while others are object-oriented denoting patients/themes (e.g. *cooker*), locations (e.g. *diner*) and means (e.g. *marker*).

The semantic properties of *doubler-upper* nouns are very similar. Examples for subject-oriented *doubler-upper* nouns in the data are *joiner-inner*, ‘a person with the ability to adapt to groups with ease’ (*The Times* 1994). There are object-oriented derivatives such as *cake-cutter-upper* (*The Daily Telegraph* 1994), denoting ‘a device for cutting cake’, which are usually applied to “inanimate object[s] facilitating an activity” (Dixon 2015: 308) and not for people. In these cases they denote an “affected object (the thing impinged upon by the action) rather than an effected object (the thing created by the action)” (Booij and Lieber 2004: 330). Thus, they refer to objects serving as aids to achieve the result of a certain activity, but they do not denote the result itself. Wentworth (1936: 369) acknowledges that the phenomenon is “economical in expression of ideas” as it avoids the sequential listing of several noun phrases with *of*-constructions. However, in order to determine the meaning of the individual *doubler-upper* nouns, a close study of their context is necessary for each occurrence.

The repeated sound sequence of *-er* as discussed in the previous section may have a “trivializing” (Huddleston and Pullum 2002: 1666) effect. Because of prosodic aspects concerning rhythmic alternation, the latter have been claimed to involve a “ludic element” (Bauer et al. 2013: 413), to “feel self-consciously

creative” (Chapman 2008: 269) and hence to be memorable. While mnemonic advantages of rhymes have been confirmed in psycholinguistic studies (cf. Slowiczek et al. 2000), the other two parameters, the ludic element and creativity still await scientific treatment.

In contrast to cases of repetition, reduplication processes may involve categorical as well as semantic changes. Therefore, after the reduplication process, “the doubled structure conveys a meaning that is not reducible to the meaning of its constituents” (Booji 2010: 39). Furthermore, *doubler-upper* nouns have been considered creative and playful (cf. Chapman 2008: 269 and Bauer et al. 2013: 43) with a humorous effect.¹⁹ As opposed to derivatives such as, e.g., *passer-by*, only marked once by derivational *-er*, when denoting human beings, *doubler-upper* nouns appear to be more agentive than their singly-marked counterparts (cf. Lensch 2016). A *passer-by* (*The Guardian* 2005) denotes ‘a person who only happens to pass the scene of an accident’ while a *walker-outer* (*The Daily Telegraph* 1997) is ‘a person who actively walks out on situations that are uncomfortable for them’. Thus, it is a *newspaper hander-outer’s* (*The Guardian* 1996) job to distribute newspapers to people, which demands volition as well as agency. In contrast to this, a *runner-up* is probably not fulfilling this function out of his/her own will as they would most probably rather be a winner of a race than only being placed second or third. Interestingly, for *runner-up*, *hanger-on*, *looker-on*, *passer-by*,²⁰ there are no attestations of double-marked nominalizations in the data. As argued in Lensch (2016) both types of derivations denote agents, but there is a tendency for *doubler-upper* nouns to denote volitional agents or instruments that are used purposefully and not by accident or chance.

The two-fold addition of derivational *-er* in *doubler-upper* nouns does not merely serve the preservation of a trochaic prosodic structure. Rather, the reduplicational process may also involve a slight change in meaning (cf. Lensch 2016). Further research is needed to determine the exact nature of the semantic differences between the two types of nominalizations triggered by the reduplicative marking.

¹⁹ According to Norrick (2006: 425), wordplays constitute one aspect of verbal humour.

²⁰ Initially, the search string **er*up** was used to detect nominalizations of phrasal verbs in the corpora, which resulted in a number of nominalizations such as *runner-up*, *passer-by*, *hanger-on*, etc. as well as *doubler-upper* nouns. As the focus of this paper are *doubler-upper* nouns, the type of nominalizations of phrasal verbs with only one *-er* attaching to the verbal base is not given more attention in the present paper.

7 Conclusion and summary

Despite the general scarcity of productive reduplication in English (cf. Schwaiger 2015: 478; Spencer 2015: 305), the quantitative and qualitative analysis of large-sized newspaper corpora presented here establishes that English has a reduplicational pattern that allows for the formation of agentive or instrumental nouns (e.g. *messer-upper*, *putter-onner*) from phrasal and particle verbs (*to mess up*, *to dumb down*) by the two-fold attachment of *-er*.

Crucially, *doubler-upper* nouns are the only derivational “affix reduplication phenomenon” (McIntyre 2013: 44) in English constituting a paradigm of their own. Previous claims that the pattern is “too colloquial” (Chapman 2008: 269) to be found in corpora comprised of written English, and more specifically in contemporary edited newspaper data, can clearly be refuted based on the large number of *doubler-upper* types and tokens found in the present analysis (cf. also Cappelle 2010). So far, entries in the OED concerned with *doubler-upper* nouns are not uniform, but they suggest that *doubler-upper* nouns have emerged in the early twentieth century (cf. Cappelle 2010). However, the vast majority of *doubler-upper* nouns that form the basis for the present paper is not listed in the OED (March 2016).

In summary, *doubler-upper* nouns appear as free lexemes, as heads of compounds and also in phrasal compounds consisting of three or more lexical elements. They denote agents as well as instruments. Prototypically, *doubler-upper* nouns have four syllables and alternating stress and they are not onomatopoeic. Since most of the tokens of *doubler-upper* nouns found in the data share morphological and phonological characteristics, they constitute a derivational pattern in English. Hence, *doubler-upper* nouns constitute a new class of *-er* derivations with “surprisingly stable grammatical properties” (Cappelle 2010: 368). The lexicalization of some *doubler-upper* nouns and the regularities observed in previous studies as well as in the present paper suggest that this derivational schema is available for speakers of English (cf. Hohenhaus 2004: 298). Furthermore, the lexemes diverging from the prototype phonologically and morphologically, their frequency of occurrence in British English and American English and the number of hapaxes give evidence to the diversity and the productivity of the pattern.

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Betül Erbaşı

Turkish doubled verbs as doubled TPs

Abstract: This paper argues that Inflected Doubled Verbs (DVs) in Turkish are formed via TP reduplication based on evidence from data showing that phrase levels below TP can be overtly realized, and that those above TP are not present in DVs. As TPs are intermediary levels between words (the copying of which is called “reduplication”) and sentences (the copying of which is called “repetition”), the copying of them to form a reduplication structure is a challenge for attempts at making a distinction between repetition and reduplication based on size. Rather, reduplication and repetition may both result from copying complements, triggered by a [+copy] feature. What differentiates them are the properties of lexically-determined complements.

1 Introduction and aims

Reduplication and repetition have posed intriguing questions and problems for language studies due to the similarity of their overt realizations. The main challenge has been to account for their overwhelming similarities with consideration of their differences as well. This has led to a lack of consensus among linguists about the definitions of repetition and reduplication, which is the issue this paper addresses. So far, the main distinction drawn between these two concepts has been the difference in the sizes of units they target. Copying units bigger than words (e.g. phrases, sentences) is proposed to be repetition (Gil 2005) while copying of word-level units (including segments and syllables) is referred to as reduplication (Haspelmath and Sims 2010; Inkelas 2014). Copying of mid-sized structures can be argued to be both.

Note that ‘reduplication’ and ‘doubling’ is used interchangeably throughout the paper. The abbreviations used are: ABIL: Abilitative, ABL: Ablative, ACC: Accusative, AOR: Aorist, DAT: Dative, LOC: Locative, NEG: Negation, NOM: Nominalizer, PAST: Past, PL: Plural, POSS: Possessive, PRES: Present, PROG: Imperfective/Progressive, Q: Question marker, SG: Singular.

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This paper argues that Inflected Doubled Verbs (DVs)¹ in Turkish are such mid-sized structures, formed by copying a Tense Phrase (TP). Two contradictory points emerge from the DV data: (i) TPs are syntactic phrases, hence intermediate phrase levels between words and sentences, and (ii) DVs are reduplication forms, though expected to be categorized as repetition based on the definition given above.

Section 2 introduces the data and Section 3 presents the proposal and analysis. Section 4 discusses the implications of the analysis. Section 5 concludes the paper.

2 Data

In DVs, a finite verb stem, with a root, tense-aspect marker and subject agreement marker, is copied once.² The following are examples of DVs, which are in bold:

- (1) a. *Kıtab-ı* ***oku-du-lar*** ***oku-du-lar*** *bitir-e-me-di-ler.*
 book-ACC read-PAST-3PL read-PAST-3PL finish-ABIL-NEG-PAST-3PL
 ‘They kept reading the book (but still) they could not finish (it).’
- b. ***Ye-m-iyor-um*** ***ye-m-iyor-um*** *kilo* *al-ıyor-um.*
 eat-NEG-PROG-1SG eat-NEG-PROG-1SG weight gain-PROG-1SG
 ‘I keep not eating (but still) I put on weight.’
- c. ***Oku-ma-dı-n*** ***oku-ma-dı-n*** *anla-ma-dı-n.*
 read-NEG-PAST-2SG read-NEG-PAST-2SG understand-NEG-PAST-2SG
 ‘You kept not reading (and thus) you did not understand it.’

1 The data include my own data and grammaticality judgment test data collected in 2014–2015, where 30 undergraduate and graduate students gave grammaticality judgments on 71 audio texts where the targeted items were given in a context (here, the target items will be given without the context). There were 23 test items, which included DVs, 46 fillers and 2 trial items. The results are given next to or below the relevant example in brackets. ‘Y’ and ‘N’ stand for ‘Yes (acceptable)’ and ‘No (unacceptable)’, respectively. ‘M’ is ‘Maybe (I am not sure)’. Percentages at and over 50% are interpreted to indicate (un)acceptability. But dialect variation should be acknowledged. If an item has more ‘No’s, the ‘Maybe’ sayers are considered closer to ‘No’. ‘Maybe’s in an item with more ‘Yes’ answers are considered closer to ‘Yes’. See Erbaşı (2015) for details.

2 I take the first verb stem in DVs as the base and the second as the reduplicant due to the head-finality of Turkish. This point will be clearer in the analysis when I introduce the syntactic structure of DVs.

In reduplication, “part of the base or the complete base is copied and attached to the base (either preceding or following it)” (Haspelmath and Sims 2010: 38). Thus, if DVs exhibit adjacency, identity and the two-items-only requirements, they should be categorized as DVs and they show these requirements. For adjacency, see (2) and (3), which show that scrambling and particles are not allowed in DVs, respectively:

- (2) **Oku-du-m kitab-ı bugün oku-du-m bitir-e-me-di-m.*
 read-PAST-1SG book-ACC today read-PAST-1SG finish-ABIL-NEG-PAST-1SG
 Intended: ‘I kept reading the book (but still) I could not finish it.’
- (3) **Kitab-ı oku-du-m da/bile oku-du-m bitir-e-me-di-m.*³
 book-ACC read-PAST-1SG too/even read-PAST-1SG finish-ABIL-NEG-PAST-1SG
 ‘I kept reading the book (but still) I could not finish (it).’

Example (4) shows that the members of a DV have to be identical:

- (4) **Kitab-ı oku-du-m oku-yor-um bitir-e-m-iyor-um.*
 book-ACC read-PAST-1SG read-PROG-1SG finish-ABIL-NEG-PROG-1SG
 ‘I kept reading the book (but still) I could not finish it.’

Lastly, it is not possible to keep the steep pitch rise at the right edge of DVs (last syllable of second verb) while simultaneously maintaining more than two verbs.

Having established DVs as a reduplicative unit, let us consider their position in a sentence. The example in (5a) shows that a verbal stem like *okudum* ‘I read’ can be the main verb of a clause while (5b) shows that it can no longer function as a main verb when it is doubled to form a DV. (5c) shows that DVs depend on the non-doubled verb, which is the main verb of the clause:

³ Some elements appear between copied verbs as in (a). Then, the identical verbs can be a main verb as in (b) (Yıldız 2014), unlike DVs (Example (5)). Thus, they are structurally different from DVs:

- a. *Kitab-ı oku-du-m Allah/babam oku-du-m bitir-e-me-di-m.*
 book-ACC read-PAST-1SG God/my father read-PAST-1SG finish-ABIL-NEG-PAST-1SG
 ‘I kept reading the book (but still) I could not finish (it).’
- b. *Kitab-ı oku-du-m Allah/babam/da oku-du-m.*
 book-acc read-PAST-1SG God/my father/da read-PAST-1SG
 ‘I kept reading the book.’

- (5) a. *Kitab-ı oku-du-m.*
 book-ACC read-PAST-1SG
 ‘I read the book.’
- b. **Kitab-ı oku-du-m oku-du-m.*
 book-ACC read-PAST-1SG read-PAST-1SG
 Intended: ‘I kept reading.’
- c. *Kitab-ı oku-du-m oku-du-m bitir-e-me-di-m.*
 book-ACC read-PAST-1SG read-PAST-1SG finish-ABIL-NEG-PAST-1SG
 ‘I kept reading the book (but still) I could not finish it.’

Erbaşı (2015) argues that DVs modify the main verb by expressing whether an event took place iteratively or duratively,⁴ an adverbial function. Example (6a) exemplifies DVs with an iterative meaning, which is paraphrased by the iterative *kaç kere* ‘how many times!’ in (6b) and by a near-synonymous adverbial paraphrase with *rağmen* ‘although’ in (6c). The example in (7a) exemplifies a durative DV. The paraphrases of (7a) are in (7b), where DVs are paraphrased as *sürekli/devamlı* ‘constantly/non-stop’, and (7c), where a near-synonymous adverbial phrase *için* ‘because’ is used:

- (6) a. *Park-ta düş-tü-m düş-tü-m yaralan-ma-dı-m.*
 park-LOC fall-PAST-1SG fall-PAST-1SG get.injured-NEG-PAST-1SG
 ‘I kept falling in the park (but still) I did not get injured.’
- b. *Park-ta kaç kere düş-tü-m yaralan-ma-dı-m.*
 park-LOC how many time fall-PAST-1SG get.injured-NEG-PAST-1SG
 ‘I fell (so) many times in the park (but still) I did not get injured.’
- c. *Park-ta kaç kere düş-me-m-e rağmen yaralan-ma-dı-m.*
 park-LOC how many time fall-NOM-1SG.POSS-DAT despite
 get.injured-NEG-PAST-1SG
 ‘I did not get injured although I fell (so) many times.’
- (7) a. *Uyu-du uyu-du ödev-i yap-a-ma-dı.*
 sleep-PAST sleep-PAST homework-ACC do-ABIL-NEG-PAST
 ‘S/he kept sleeping (and thus) s/he could not do the homework.’

⁴ The exact meaning depends on various factors, such as lexical aspect. Also, DVs require the verb stem to be doubled to have stages in Rothstein’s (2004) sense. Hence, achievement verbs such as *var-* ‘arrive’ and statives such as *içer-* ‘consist’ cannot be doubled.

- b. **Sürekli/devamlı** uyu-du ödev-i
 constantly/non-stop sleep-PAST homework-ACC
 yap-a-ma-dı.
 do-ABIL-NEG-PAST
 ‘S/he slept constantly (and thus) s/he could not do the homework.’
- c. **Sürekli/devamlı** uyu-duğ-u için ödev-i
 constantly/non-stop sleep-NOM-3SG because homework-ACC
 yap-a-ma-dı.
 do-ABIL-NEG-PAST
 ‘S/he could not do the homework because s/he slept constantly.’

Reduplication of lexical items has been proposed to form adverbs in many cases in Turkish (e.g. Göksel and Kerslake 2005; Lewis 1967). As an example, a noun such as *ev* ‘house’ can take on an adverbial function when it is doubled, as in *ev ev* ‘from door to door; to many places/houses’. Therefore, it is not surprising that doubling an inflected verb stem as in DVs also has an adverbial function.⁵

Erbaşı (2015) suggests that the iterative and durative meanings of DVs can be combined under the term ‘continuity’, which means that an event extends over time.⁶ Therefore, based on the combination of their adverbial function and continuity meaning, DVs are referred to as *Continuous Adverbs (ContAdv)* in the present work.⁷

3 Proposal and analysis

The main proposal of this work is that DVs are formed by copying a TP. Evidence for this proposal comes from data showing that (i) phrase levels below TP can

⁵ As for how different word categories act as adverbs, one could say that they undergo some sort of reanalysis in the sense of Di Sciullo and Williams (1986) or are produced via generalized insertion in the sense of Ackema and Neeleman (2004). A full analysis of such a process is beyond this paper, but the intuition is that any word category can be ‘somehow’ adverbialized in Turkish.

⁶ A reviewer states that Scandinavian languages can express continuity with (pseudo-coordinated) constructions with a verb stem and verbs like ‘sit’. Turkish can do the same, with similar structures: e.g. *okuya dur-* ‘keep reading (lit. read-Converb marker stop-)’. But it is not clear to me why Turkish has various means to express continuity and whether these means serve exactly the same function.

⁷ Based on word order facts, Erbaşı (2015) suggests that the most likely position for ContAdv in a sentence is AspP_{repetitive(I)} of Cinque’s (1999) hierarchy.

be overtly realized and (ii) those above TP are not present in DVs.⁸ Also, there is only one position for above-TP phrase levels in the whole matrix clause hosting DVs. Since these single projections must belong to the main verb, I conclude that DVs do not have those projections. Besides, DVs cannot be modified by higher adverbs.

The following sub-sections provide evidence for (non-)doubling of each of the levels above and below TP starting from the lowest in the syntactic structure. A morpho-syntactic structure covering the findings is proposed thereafter.

3.1 Verb phrase (VP)

VP hosts the verb root and the internal argument(s) of the verb. The example in (8) shows that internal arguments can be doubled with the verb stem, exemplifying the overt realization of the relevant syntactic positions in DVs⁹:

- (8) a. *her gün araba sür-üyor araba sür-üyor*
 every day car drive-PROG car drive-PROG
yorgunluk-tan öl-üyor.
 tiredness-ABL die-PROG
 ‘S/he keeps driving a car every day (and thus) s/he gets exhausted.’

- b. *Aylin biz-e her gel-diğ-in-de Ali-yi*
 Aylin we-DAT every come-NOM-2SGGEN-LOC Ali-ACC
sor-du Ali-yi sor-du bul-a-ma-di.
 ask-PAST Ali-ACC ask-PAST find-ABIL-NEG-PAST
 ‘Aylin kept asking for Ali every time she came to our house (but still) she could not find him.’

(Accusative Case: 60% Y, 20% M, 20% N)

⁸ The phrase levels below TP, as adapted from Cinque (1999), are: VP, vP, VoiceP, MannerP, FrequentativeP and TP. The phrase levels above TP, i.e. TopicP, CP/ForceP and Higher Adverb Phrases, overlap with Rizzi (1997) except for FocusP. FocusP is not included due to the existence of various views about its nature. See İşsever (2003) for a review of different opinions on Turkish focus.

⁹ According to grammaticality judgment results, internal arguments with all Cases can be doubled.

3.2 vP

Subject agreement, an element in v (Öztürk 1999), is obligatorily doubled as in (9):¹⁰

- (9) a. **Yürü-dü-m yürü-dü-m kilo ver-e-me-di-m.**
 walk- PAST-1SG walk- PAST-1SG weight give-ABIL-NEG-PAST-1SG
 ‘I kept walking (but still) I could not lose weight.’
- b. ***Yürü-dü-m yü-rü-dü kilo ver-e-me-di-m.**

Assuming overt subjects are realized in SpecvP,¹¹ the following examples show that SpecvP can be overtly realized because *ben* ‘I’, an overt nominal subject, is doubled:

- (10) **Ben çalış-tı-m ben çalış-tı-m o rahat et-ti.**¹²
 I work-PAST-1SG I work-PAST-1SG s/he comfort do-PAST
 ‘It was me who kept working (and thus) it was him/her that lived comfortably.’

10 The doubling of subject agreement and tense-aspect markers are obligatory for morphological well-formedness conditions (Banguoğlu 1974; Sezer 2001; Taylan 2001). The doubling of other elements such as internal arguments, the TP-internal adverbs and nominal subjects are governed by interpretational/discourse rules (e.g. focus). They seem optional as they surface only under certain readings. See Erbaşı (2015) for details. If there is more than one tense-aspect marker, the second one (usually the past tense marker) may not be realized on the first stem (suspended affixation).

11 One could also argue for an AgentP in Turkish, following Öztürk (2005). But as one reviewer suggests, this goes against the general assumption that subjects are generated in SpecvP. Or they could be generated in VoiceP. Neither assumption harms the analysis here, as both AgentP and VoiceP are phrase levels below TP and a discussion of this issue exceeds the scope of this work.

12 One reviewer suggests that this example sounds best when the nominal subject is focused, indicating the doubling of a focus phrase. But as noted in Footnote 13, when internal arguments, TP-internal adverbs and nominal subjects are doubled, they serve interpretational and especially focus purposes. Thus, these elements, when doubled, are always focused. Given that, one could say that DVs only double ‘focused’ elements, hence only a FocusP is doubled. Erbaşı (2015) argues that this focus property is linked to prosodic structure rather than a realization of a designated Focus Phrase because more than one element other than the verb stem can be doubled (e.g. a manner adverb and an argument), in which case, only the left-most one gets the focus (Erbaşı 2015).

3.3 Manner phrase (MannerP)

Example (11) shows that manner adverbs like *güzel* ‘beautifully, well’ can be doubled with the verb stem, implying the existence of a MannerP:

- (11) *Sarma-yn hep güzel sar-ar güzel sar-ar dün*
 sarma-ACC always nice wrap-AOR nice wrap-AOR yesterday
sar-a-ma-di.
 wrap-ABIL-NEG-PAST
 ‘She always makes “sarmas” well (but still) she could not do so yesterday.’
 (Manner Adverb: 50% Y, 40% M, 10% N)

3.4 Frequentative phrase (FrequentativeP)

FrequentativeP can also be overtly realized as shown by the doubling of the frequentative adverb *her gün* ‘every day’ in (12):

- (12) *Spor-u her gün yap-tı her gün yap-tı*
 sport-ACC every day do-PAST every day do-PAST
 Fayda-sın-ı gör-dü.¹³
 sport-POSS-ACC see-PAST
 ‘S/he kept doing exercises every day (and thus) s/he benefited from it.’

3.5 Tense phrase (TP)

Example (13) shows that tense-aspect markers are necessarily doubled in DVs since their non-realization leads to ungrammaticality as shown in (13b) (see Footnote 12):

- (13) a. *Kitab-ı oku-yor-du oku-yor-du bitir-e-m-iyor-du.*
 book-ACC read-PROG-PAST read-PROG-PAST finish-ABIL-NEG-PROG-PAST
 ‘S/he was keeping reading the book (but still) s/he could not finish it.’

¹³ A continuation for example (12) that makes it easier to give a grammaticality judgment is *Ama sen arada bir yaparak bir yere gidemezsin* ‘But by doing it only sometimes, you cannot get to any point’.

- b. **Kitab-ı oku-yor-du oku-yor bitir-e-me-di.*
 book-ACC read-PROG-PAST read-PROG finish-ABIL-NEG-PAST
 ‘S/he was keeping reading the book (but still) s/he could not finish it.’

The data so far show that DVs have the phrase levels at and below TP. Now DVs will be shown to lack the projections above TP, hence doubling of these is not possible. For example, DVs lack a CP/ForceP because the matrix clause hosting DVs can have only one such phrase and that must belong to the main verb.¹⁴

3.6 Complementizer phrase/force phrase (CP/ForceP)

There can be only one question marker in a matrix clause with DVs (14b)–(14c). Once two elements are questioned simultaneously, ungrammaticality (or an echo question) emerges (14d). The single CP/ForceP belongs to the main verb (no CP/ForceP for DVs):

- (14) a. Çok *çalış-tı-m çalış-tı-m bol kazan-dı-m.*
 a lot work-PAST-1SG work-PAST-1SG much earn-PAST-1SG
 ‘I kept working a lot (and thus) I earned a lot.’
- b. Çok *mu çalış-tı-n çalış-tı-n bol kazan-dı-n?*
 a lot Q work-PAST-2SG work-PAST-2SG much earn-PAST-2SG
 ‘Is it the case that you kept working a lot (and thus) you earned a lot?’
- c. Çok *çalış-tı-n çalış-tı-n bol mu kazan-dı-n.*
 a lot work-PAST-2SG work-PAST-2SG much Q earn-PAST-2SG
 ‘Is it the case that you kept working a lot (and thus) you earned a lot?’
- d. *Çok *mu çalış-tı-n çalış-tı-n bol mu kazan-dı-n.*
 a lot Q work-PAST-2SG work-PAST-2SG much Q earn-PAST-2SG
 Intended: ‘Is it the case that you kept working a lot and is it the case that (by doing so) you earned a lot?’

¹⁴ In cases where an element that belongs to DVs is questioned or topicalized, I assume that this element undergoes movement to the relevant phrase within the CP of the main verb.

3.7 Topic phrase (TopicP)

There can only be one topic in the matrix clause that hosts DVs because repetition of the same topic is not possible as in (15b). When one tries to have two different topics for DVs and the main verb, only a contrastive focus reading is available (15c).¹⁵ The only possibility is (15a), where there is only one common topic:

- (15) a. *İnsan-lar-ı o kadar araştırdım araştırdım*
 human-PL-ACC it (as) much research-PAST-1SG research-PAST-1SG
(hala) anla-ya-ma-dım.
 (still) understand-ABIL-NEG-PAST-1SG
 ‘I kept researching about people so much (but still) I haven’t been able to understand them.’
- b. **İnsan-lar-ı o kadar araştırdım araştırdım*
 human-PL-ACC it (as) much research-PAST-1SG research-PAST-1SG
insan-lar-ı (hala) anla-ya-ma-dım.
 human-PL-ACC (still) understand-ABIL-NEG-PAST-1SG
 ‘I kept researching about people so much (but still) I haven’t been able to understand them.’
- c. *Kitap-lar-ı ara-dım ara-dım defter-ler-i*
 book-PL-ACC look.for-PAST-1SG look.for-PAST-1SG notebook-PL-ACC
bul-du-m.
 find-PAST-1SG
 ‘I kept looking for the books (but still/but instead of the books) I found the notebooks.’

3.8 Higher adverbs

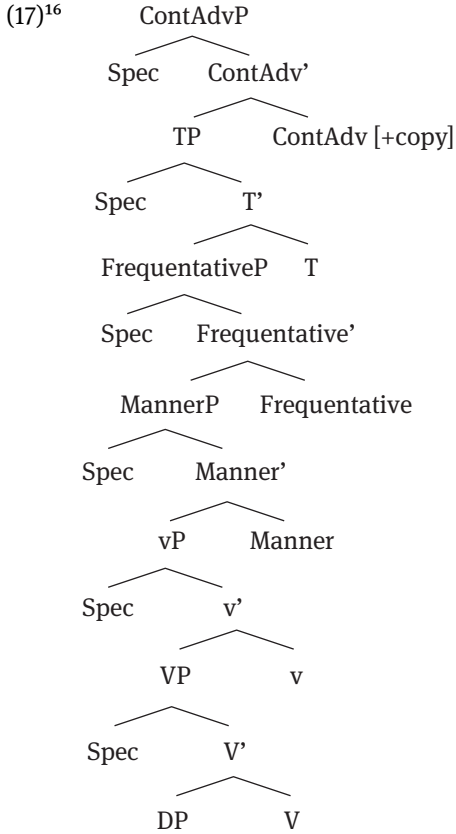
In (16a) and (16b), *maalesef* modifies the main verb because the speaker regrets not having won and having won, respectively. In (16c) the speaker regrets not having won as well as not studying. In (16d), s/he regrets having won but not ‘not having studied’. Here, only the main verb is modified by *maalesef*. It seems that

¹⁵ *Kitapları* ‘the books’ and *defterleri* ‘the notebooks’ are contrastive foci as they answer disjunctive questions like *Kitapları mı buldun defterleri mi?* ‘Did you find the books or the notebooks?’ or *Neyi aradın neyi buldun?* ‘What did you look for and what did you find?’ (Şener 2010).

the contrast between (16c) and (16d) is due to availability of overt negation on the main verb in (16c), which allows the (lexical) negative connotation of *maalesef* to percolate down to DVs. In (16d), there is no overt negation on the main verb, hence no percolation to DVs. Therefore, DVs can only be modified by higher adverbs when the main verb allows it, which in turn implies that DVs themselves lack such a position:

- (16) a. *Maalesef* *kazan-a-ma-dı-m*.
 unfortunately win-ABIL-NEG-PAST-1SG
 ‘Unfortunately, I could not win.’
- b. *Maalesef* *kazan-dı-m*.
 unfortunately win-PAST-1SG
 ‘Unfortunately, I won.’
- c. *Maalesef* ***çalış-ma-dı-m*** ***çalış-ma-dı-m***
 unfortunately work-NEG-PAST-1SG read-NEG-PAST-1SG
kazan-a-ma-dı-m.
 win-ABIL-NEG-PAST-1SG
 ‘Unfortunately, I did not study (and thus) I could not win.’
 ‘Unfortunately, I could not win (because) I kept not studying.’
- d. *Maalesef* ***çalış-ma-dı-m*** ***çalış-ma-dı-m*** *kazan-dı-m*.
 unfortunately work-NEG-PAST-1SG read-NEG-PAST-1SG win-PAST-1SG
 ‘It is unfortunate that I won although I kept not working.’
 *‘It is unfortunate that I did not keep working (but still) I won.’

The discussion of examples (14)–(16) shows that DVs lack phrase levels above TP. Coupled with the evidence showing that DVs have the phrase levels below TP, I propose (17) as the representation of the morpho-syntactic structure of DVs:



(17) indicates that ContAdv is an adverb whose lexical entry dictates that it have a TP complement and a [+copy] feature on its head. Assuming a bottom-up derivation, the phrase levels are introduced one by one. After the TP is introduced, ContAdv, which has a [+copy] feature on its head, is introduced into the structure. Because the ContAdv has a lexical requirement for a TP complement, it takes the already-formed TP as its complement and copies it as required by the [+copy] feature on its head.

The [+copy] feature is the head of ContAdv, i.e. it forms ContAdv. However, it does not have a canonical morphological realization as it lacks pre-specified

¹⁶ Note that (17) is the representation of DVs when all phrase levels below TP are realized. The fact that we do not always realize all of these levels at the same time is tightly related to a prosodic requirement that DVs form a Phonological Phrase (PPh). See Erbaşı (2015) for details.

phonological content and borrows material from the TP it copies. Thus, [+copy] is like Marantz's (1982) RED morpheme, which also lacks internal substance.¹⁷

(17) meets the requirements of DVs as reduplication structures. Two TPs¹⁸ are *adjacent* because the complement TP is immediately dominated by ContAdvP. There are *only two* TPs because there is one TP complement and one [+copy] feature that copies it. The two TPs need to be *identical* because one is copied from the other.¹⁹

4 Discussion

As mentioned in Section 1, there is vagueness in how repetition and reduplication are defined in the literature, and opposing views exist. Many studies suggest that reduplication and repetition are different in the sizes of units they target: reduplication copies words and smaller units such as segments and syllables (Haspelmath and Sims 2010; Inkelas 2014) while repetition copies bigger units such as phrases or sentences (Gil 2005). The opposing view to this distinction suggests that these processes may not be as clear-cut as is often assumed. For instance, Hurch et al. (2008) state that “reduplication can also be seen as a formal linguistic device that can be used at all levels of linguistic structure (Maas 2005: 395)”.

Note that both views take both repetition and reduplication to be formed by the same process of copying. Thus, some overlap may be expected depending on how a language makes distinctions. Cases where a full base is copied pose the biggest problems for attempts at differentiating between reduplication and repetition based on size (Freywald and Finkbeiner, this volume). When the first syllable of the base *mavi* ‘blue’ is copied as in *masmavi* ‘very blue’ in Turkish, it is clearly reduplication. When a whole sentence is copied, it is most probably

17 For Marantz, reduplication is an affixation form. Reduplicative affixes differ from other types of affixes in that they are the affixation of a skeletal morpheme. An abstract morpheme, RED, copies ‘the string of segments’, whose substance is then filled by the material borrowed from the base.

18 Note that we no longer say DVs are verb copying but rather they are TP copying.

19 This is the case in DVs because DVs copy the full base (except maybe in suspended affixation cases, see Footnote 13) and they need to be identical. This may not be clear in partial reduplication since some phonological or prosodic changes may be imposed in those cases (e.g. deletion or addition of segments). For instance, in Turkish partial reduplication, a consonant is inserted between the base and the copied part as in *masmavi* ‘very blue’ derived from *mavi* ‘blue’ with the insertion of [s].

repetition. When a full base or word is copied, it is difficult to tell because it looks like repetition of a word or a phrase but may function both like reduplication or repetition. Language structure may play a role here: a word in an agglutinative language is usually not defined in the same way it is defined in an analytic language. Thus, Gil (2005) proposes the following criteria to distinguish reduplication and repetition better:

Table 1: Gil's (2005) criteria to distinguish between repetition and reduplication.

| Criterion | Repetition | Reduplication |
|-------------------------------|-------------------------------------|-------------------------------|
| 1 unit of output | greater than word | equal to or smaller than word |
| 2 communicative reinforcement | present or absent | absent |
| 3 interpretation | iconic or absent | arbitrary or iconic |
| 4 intonation domain of output | within one or more intonation group | within one intonation group |
| 5 contiguity of copies | contiguous or disjoint | contiguous |
| 6 number of copies | two or more | usually two |

However, one can notice a lot of overlap in Table 1 too. For instance, according to Criterion 5, repetition can be contiguous, and so can reduplication. As for Criterion 2, Turkish uses reduplication of words and even smaller units such as a syllable for communicative reinforcement, e.g. for some sort of 'intensification' as in *taptaze* 'very fresh', derived from *taze* 'fresh' (e.g. Kornfilt 1997: 419). DVs, as reduplication of phrases, intensify events by giving iterative or durative meaning, as discussed in Section 2.²⁰ The overlap problem holds for all criteria in Table 1 except the first.

The first criterion is also shown to be problematic in another way by the DVs. Recall that DVs copy TPs, which are bigger than words, categorizing them as repetition structures. But as stated in Section 2 and 3, they meet the criteria for reduplication such as the requirement for only two identical TPs, identity

²⁰ Some studies (e.g. Travis 2001) posit that the major function of reduplication is pluralization. To me, in many cases, pluralization and intensification are interrelated such that when some entity is pluralized, it is intensified as there are many entities in that case rather than a single one. DVs add the continuity aspect to this picture by pluralizing events (in most cases). When events are pluralized, we get the sense that the (sequence of identical) events lasted long. Given that these identical events cannot occur at the same time, they are necessarily scattered over time, which gives the continuity sense. Such a long and continuous sequence of identical events leads to the interpretation of DVs as 'intensified events' as there are many identical events that keep going. A detailed investigation of this point is beyond this paper but DV data certainly point to such a relation.

and adjacency. Therefore, the first criterion in Table 1 is of no help in providing a division between repetition and reduplication either.

The point made regarding the first criterion in Table 1 takes us to the main contribution of the DV data regarding the literature on defining repetition and reduplication. The proposal that DVs are TP-level (i.e. phrase-level) reduplication structures is problematic for the view suggesting that reduplication is confined to the word-level. The analysis seems to provide evidence for the view that suggests that reduplication may apply at all levels of linguistic structure (i.e. syllable, word, sentence etc.). DVs show that reduplication can at least be extended to phrases.

The above discussion indicates that we need a better definition of reduplication and/or better criteria to distinguish reduplication from repetition, if there is such a distinction. To that end, we may have to change the criteria we have used so far since they do not seem to help much (also see Stolz and Levkovych, this volume, for such a suggestion). Given the diversity of criteria used so far (e.g. interpretational, structural etc.), finding different criteria is difficult.²¹ We may need to keep at least some of these criteria, but will need to redefine their relation to repetition and reduplication.

A continuum approach can be adopted without omitting the criteria discussed so far. In that case, copying of syllables would be reduplication and copying of sentences would be repetition. Copying of words and phrases is the real challenge: Where can we place these on the continuum and which criteria can help us decide? Will we have a single continuum based on copied units or will there be a different continuum for each criterion? These questions are difficult to answer at this point.

A third option would be to take reduplication and repetition to be formed by the single mechanism of copying, which happens at different (all?) levels of grammar (i.e. syllable, word, phrase, sentence etc.).²² Differences in size, function etc. can be coded in the lexical entry of a given copying structure. For instance, the lexical specification of ContAdv states that it have a TP complement and [+copy] feature.

The third option is different from the first as it does not require new criteria. The two differ also in that the first takes reduplication and repetition as different

21 Maria Luisa Zubizarreta (p.c.) suggests that one possible addition could be information structure, i.e. focus/presupposition encoding.

22 For now, I do not differentiate between phonological, syntactic, morphological or semantic units as targets of reduplication. I assume that any constituent in any part of grammar can be reduplicated.

processes while the third does not. Rather, it indicates that they can be combined under [+copy] that heads a syntactic phrase, differences due to lexical specifications.

What differentiates the third option from the second one is that it is not a purely continuum approach either. This is because it does not make any commitment to what criterion is basic or how we can form a continuum. It only requires that all features (including size, function etc.) of reduplication and repetition structures be encoded in the lexical entries of these structures. Hence, these structures come with a bundle of features. What unifies them is the [+copy] feature on their heads.

This proposal seems elegant in that it unifies various structures. It can be argued that it relies too heavily on lexical specification. But this is not an outrageous proposal given the tendency in various sub-fields of linguistics (e.g. syntax) to attribute the properties of linguistic units to the lexicon (Chomsky 1993, 1995).

Yet another problem that arises concerns the meaning frequently associated with reduplication, which is plurality (other meanings and functions such as Case are also possible; Inkelas 2014). As far as I am aware, Turkish reduplication always results in some kind of plurality (e.g. event pluralization, intensification) (Lewis 1967; Kornfilt 1997; Göksel and Kerslake 2005). If we attribute [+copy] to the lexicon, how can we capture this generalization? Here, I can only say that the elements with [+copy] feature could be likened to nouns such as *millet* ‘nation’ in Turkish, which do not have overt plural marking but behave like a plural at least in some cases because they are lexically specified as plural. ContAdv, and all other forms with [+copy], can also have a lexical plural meaning, realized by [+copy].

5 Conclusion

This paper has argued that Inflected Doubled Verbs (DVs) in Turkish are TP reduplication structures. The evidence came from data showing that phrase levels below TP can (or must) be overtly realized and those above TP do not exist in DVs at all. DVs’ status as TP reduplication structures challenges the attempts to distinguish repetition and reduplication since TPs are neither words (the copying of which is termed as “clear reduplication”) nor sentences (the copying of which is termed as “clear repetition”). Rather, they occupy an intermediary level between the two. This paper has argued that a fully worked out proposal suggesting that copying happens systematically at different levels of Grammar based on lexical specifications about what is copied could be a promising line of research for future studies on this issue.

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Matthias Eitelmann and Britta Mondorf

Cognate objects in language variation and change

Abstract: This paper investigates cognate object constructions such as *sing a song* or *snore a snore*, which constitute a repetition phenomenon involving the occurrence of a verb in combination with an object that is etymologically and semantically related to the verb. As a first step, cognate object constructions are put into the larger context of English pseudo-object constructions and syntax-semantics mismatches (e.g. *way*-constructions such as *to snore one's way through a lecture*, dummy *it* such as *to leg it* or light verb constructions such as *to take a snore*) in order to evaluate the systematicity with which English makes use of transitivity strategies. Drawing on a large database of historical prose fiction corpora, the study then sheds empirical light on the trajectory of change of 46 cognate object constructions with both canonically transitive and intransitive verbs in the diachronic development from the 16th century to the present, with the 19th century emerging as the 'breeding ground' for cognate object constructions.

1 Introduction

Cognate object constructions (COCs) contain a verb and a direct object that are etymologically related to each other (cf. Visser 1970: 413).¹ Schematically they can be represented as follows:

- (1) a. SUBJ [V_i [(DET) (MODIFIER) DIRECT OBJECT_i]]
He snored a good snore
b. SUBJ [V_i [(DET) DIRECT OBJECT_i (MOD)]]
He slept the sleep of the just

The subscript (_i) indicates that the verb and cognate object must be etymologically linked. The round brackets signal optional components.

1 They have variably been termed *figura etymologica* (cf. Visser 1970), *internal object* (cf. Tjerstra 1999: 27), *(cognate) doubling/excorporation* (cf. Gallego 2012) or *absolute object, accusative of inner object, accusative of content or schema etymologicum* (cf. DeMosse 1969: 31).

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Such COCs entail a twofold repetition, one being functional or semantic and the other formal or morphological. This notion of a twofold reiteration is already implied in Sweet's (1891: 91) early definition of cognate object as "a noun (...) which repeats the meaning of the verb (...), where the noun is simply the verb converted into the noun".² As the following examples illustrate³, COCs often involve verbs that are traditionally classified as intransitive (*cough*, *grunt*, *breathe*) in combination with a nominal copy, with both of them either being completely identical (*cough*, *grunt*) or near-identical (*breath*):

- (2) *Lord Emsworth **coughed a cough** that was undisguisedly a bronchial white flag.*
(Wodehouse 2011: 118)
- (3) *Conroc **grunted a grunt of approval**.*
(COCA: Ruiz, Michael. *Galactic Responsibility*, 2011)
- (4) *As she walked the woman **breathed a great breath** of warm night air and syringa, (...).*
(BNC: H9G)

Cognate objects are also found with verbs that otherwise license genuine direct objects, i.e. canonically transitive verbs:

- (5) *But I will never leave the field until I've **kicked a kick** from each spot and have been happy with the strike.*
(The Daily Mail 2013)
- (6) *We **sang all the most common songs** and our Christmas carol of our own, which we wrote the words to and illustrated our own booklet to give out to people.*
(BNC: HDB)
- (7) *I just loathe the thought of **telling my nasty little tale** a second time.*
(BNC: JYC)

² Note that reverse orderings with nouns preceding cognate verbs are also occasionally found in the data.

³ Throughout this paper, all constituents of a COC are printed in bold; verbs that form part of a COC are put in regular font style, the related nouns are underlined.

It has to be emphasized, though, that particularly in English, a verb's argument structure is neither synchronically invariable nor diachronically immune to change, which makes a clear-cut distinction of verbs into transitive or intransitive highly difficult.⁴ Interestingly, COCs of both types are well attested throughout English language history, with occurrences dating back to as early as Old English (8) and they are continuously found in Middle English (9), Early Modern English (10) and Late Modern English (11):

- (8) *Ge **syngodon þa mæstan synne.*** [Ælfric, 10th century]
 Ye sinned the most sin
 'you sinned the greatest sin' [= 'you committed the greatest sin']
- (9) *The ladye **lough a loud laughter** As shee sate by the king* [c1470]
- (10) *I haue labored and **streiuen a good strife.*** [1528]
- (11) *Catharine **blushed a blush of anger.*** [1828]
 (examples from Visser 1970: 416–417)

The present paper aims at discussing COCs against the backdrop of repetition phenomena, with a particular focus on their development in the course of English language history. For this purpose, the larger topic of transitivization processes needs to be addressed in order to contextualize the evolution of COCs within changes affecting a verb's argument structure. In this context, the reiteration of the verb in the form of a cognate object is shown to be particularly repetitive when the cognate verb occurs with intransitive verbs and when verb and cognate object are more or less form-identical copies of each other. Apart from addressing the issue of what motivates the use of COCs, the present paper also provides new insights into their properties and distribution – both synchronically and diachronically. Though a number of studies have focused on cross-linguistic similarities and differences (see, e.g., Mittwoch 1998 for Hebrew; Lavidas 2012 for Greek; Hong 1998 for Chinese; Pham 1998 for Vietnamese; Pereltsvaig 1999 for Russian), a thorough empirical investigation of English COCs is still pending, especially as regards

⁴ That distinctions are indeed notoriously blurred in the case of English verbs is also evident when it comes to subgroups of intransitive verbs, i.e. unaccusative vs. unergative verbs, in the context of COCs. While Levin and Rappaport Hovav (1995) have postulated an unergativity constraint that allegedly prohibits unergative verbs such as *fall* from occurring with cognate objects, Kuno and Takami (2004: 124) have provided counterexamples (*fall a short fall*).

their functional and historical distribution. The present paper seeks to contribute to close this research gap by addressing important aspects regarding the syntactic variability of COCs as well as tracing their trajectory of change throughout the history of English.

The remainder of this paper is structured as follows. Section 2 elaborates on the connection between COCs and repetition phenomena, a relation that deserves special attention as repetition phenomena are otherwise rare in English. Section 3 analyses syntactic and semantic properties of two major types of English COCs discussed in the literature in relation to transitivity. We will show that, on the one hand, their repetitive nature is due to the co-occurrence of two etymologically related elements which are formally similar, if not completely identical. On the other hand, COCs owe their repetitive nature to violating redundancy constraints as well as argument structure constraints. In order to investigate pertinent functional aspects of COCs, they will be analysed within the larger context of English pseudo-object constructions and syntax-semantics mismatches, which can augment the argument structure of intransitive verbs (e.g. *way*-constructions: *to snore one's way through a lecture* or dummy *it*: *to leg it*). Section 4 argues that one function of cognate objects is to provide a supportive ground for embedding the modifying element that seems to constrain the construction in its usage, but also contributes to its overall productivity and creativity in the sense of rule-bending (cf. Lyons 1977: 549). An empirical historical corpus-based study of COCs covering a time-span of four centuries is presented in Section 5, shedding new light on their trajectory of change. The diachronic analysis will be related to the broader issue of how much repetition and redundancy the English language system tolerates. Finally, Section 6 summarizes our results and presents concluding remarks as well as sketches further avenues for research.

2 Cognate object constructions in the context of repetition phenomena

The fact that COCs are well-attested with a wide array of verbs both synchronically and diachronically raises theoretical issues concerning the systematicity of the twofold repetition of the underlying lexical morpheme. In other words, can we subsume COCs under the heading of repetition phenomena, which, in Rubino's (2005: 11) definition, refer to "the systematic repetition of phonological material (...) for semantic or grammatical purposes"? Such repetition phenomena are otherwise rare in English – something that English shares with

other Germanic languages.⁵ For instance, English and European languages in general largely lack the feature of reduplication⁶, in the sense of a grammaticalized form of repetition characterized by obligatoriness (cf. Aitchison 1994: 24)⁷, which serves to express grammatical functions, such as plurality or intensification⁸. Due to the “morphological resemblance” (Stolz et al. 2011: 65) of cognate objects to the verbs they combine with, we might be tempted to regard them as cases of reduplication. However, as Stolz et al. (2011: 66) point out, etymological relatedness does not suffice to classify these constructions as genuine representatives of reduplication phenomena, even though they may be said to constitute “borderline cases” (Stolz et al. 2011: 65). The main reason why COCs are not prototypically reduplicative is that they violate a crucial characteristic, i.e. the ‘principle of word class identity’, which posits that the original item and its reduplicated form must belong to the same word class (cf. Stolz et al 2011: 66).⁹

The question arises of what might be the function of repetition in language. Empirical variationist studies document the existence of two diametrically opposed forces: on the one hand, we observe a marked tendency in favour of repetition (i.e. positive priming or persistence). On the other hand we find a range of constructions that clearly strive to avoid repetition wherever possible (i.e. negative priming).

Psycholinguistic priming experiments have long shown that language users increase their share of e.g. passive rather than active sentences when the prompt contains a passive (cf. Bock 1986: 371). Empirical studies in the framework of

5 This is not to say that repetition phenomena of a more systematic kind are completely absent from English. See, for example, Horn (this volume) on English lexical clones that have a pragmatic function in that the repeated lexical item invites a contrastive focus reading, e.g. “I’m not *drunk drunk*, I’m just drunk.” (<https://www.facebook.com/-Im-not-DRUNK-drunk-Im-just-drunk-472080480507/> 2016)

6 However, so-called doubler-upper-nouns that display a double marking of the derivational affix *-er* such as in *fixer-upper* or *sock-putter-onner* might constitute a rare case of reduplication in English as discussed in Lensch (this volume).

7 Reduplication and repetition are closely linked to each other, with reduplication most often resulting from repetition via grammaticalization, though not exclusively so (see Stolz and Levkovych, this volume).

8 For extensive treatments of reduplication phenomena in the languages of the world see, e.g., Inkelas and Zoll (2005), Stolz et al. (2011) and Schwaiger (2015).

9 Still, COCs are borderline cases of reduplication in that they follow a somewhat predictable pattern of a morphologically near-identical noun reiterating the form of a preceding verb, which could be said to have the grammatical function of increasing the verb’s transitivity.

grammatical variation research reveal that language users also tend to choose variants in accordance with the prime (e.g. *more full* as opposed to *fuller*, if the prime is an analytic rather than a synthetic comparative). They tend to re-use a given variant over longer stretches of discourse, though the likelihood to re-use a variant decreases with textual distance between two choice contexts (cf. Szmzrecsanyi 2005: 127) or with changes in turn-taking (cf. Szmzrecsanyi 2005: 137). There is a clear preference for parallelism, persistence or positive priming. What is more, even the quantifier *more* can trigger a *more*-comparative. This means that formal (graphemic or phonological) resemblance is sufficient for positive priming – in the absence of functional resemblance between the prime and the variant chosen, a phenomenon dubbed β -persistence in Szmzrecsanyi (2005: 125).

By contrast, there are also indications that English, in general, is not repetition-friendly, a tendency evidenced by “conspiracies”, as Menn and MacWhinney (1984: 519) succinctly put it, “to avoid ‘accidental’ repetition of phoneme strings across morphs”. Such avoidance strategies come into play in so-called *horror aequi* effects (Brugmann 1909, Rohdenburg 2003: 236-242, Vosberg 2003: 315-322). The *Horror Aequi* Principle predicts a “widespread (and presumably universal) tendency to avoid the use of formally (near-)identical and (near-)adjacent grammatical elements or structures” (Rohdenburg 2003: 236) by opting for formally distinct, though functionally equivalent variants. For instance, two consecutive *-ing* forms are strongly disfavoured in English (see Ross 1972, Rohdenburg 2003, Vosberg 2003), resulting in the tendency to prefer *to*-infinitives over canonical *-ing* complementation (*avoiding seeing* vs. *avoiding to see*, cf. Vosberg 2006: 96-104) or to insert additional elements to mitigate the clash of two immediately following *-ing*-forms (*keeping singing* vs. *keeping on singing*, cf. Bolinger 1979: 41).

On the morpho-phonological level, for instance, we find two types of repetition avoidance strategies, a weak version that circumvents repetition by simply opting for another variant, and a strong version in which a bound morpheme is attached to a clipped base. The weak version is illustrated by adjectives in <-r, -re> and <-st>, which tend towards analytic comparative and superlative forms respectively in order to avoid /-rər/ sequences and /-stst/, in

- (12) a. *more sober* instead of *soberer*
 b. *most honest* instead of *honestest*
 (cf. Mondorf 2009: 26f.)

The strong version is operative in haplology effects, e.g.

- (13) *perylloust* instead of *peryllousest*
(cf. Jespersen [1909] 1956: 344)

On the prosodic level we find that both speakers and writers avoid the immediate repetition of stressed syllables in adherence to the Principle of Rhythmic Alternation:

- (14) *lit cándle* stress clash
lightèd cándlè rhythmic alternation
(cf. Schlüter 2004)

Avoidance strategies such as these are possibly motivated by processing requirements (cf. McClelland 1987; Pulvermüller 2002):

It is not too far-fetched to assume that the neurological and processing motivations are the same in grammar and phonology: Firstly, identity avoidance might reflect a tendency to inhibit reactivation of neurons within a given time-span in order to accommodate refractory phases. And secondly, such a strategy creates sufficiently distinct adjacent elements to facilitate recognition and processing. (Mondorf 2009: 23)

Apart from such avoidance strategies on the levels of syntax, morphology, and prosody, the repeated use of linguistic items in close proximity is also constrained by a stylistic imperative that requires language users to strive for synonyms in order not to sound monotonous (cf. Quirk et al. 1985: 1441).¹⁰

Considering the listed indicators of an aversion to repetition in many respects, it is all the more remarkable that COCs are considerably widespread in English past and present – or that they are afforded even at the cost of lexical repetition, which English rather tends to avoid (cf. Mittwoch 1998: 328).

10 Of course, not all repetitions are stylistically awkward; on the contrary, one may think of rhetorical figures, as used by Latin orators as e.g. Quintilian, that are based on repetitions for the sake of word play, emphasis or clarity, such as the *antanaclasis*, which involves the repetition of the very same word in close proximity, yet with different meanings (cf. Cuddon 1992: 45), or the *polyptoton*, which refers to “the repetition of a word in a different form [as in] ‘The live give life to the living’” (Cuddon 1992: 728). The latter prominently features *figurae etymologicae* with their characteristic juxtaposition of a verb and its etymologically related object – a rhetorical device the term of which, as noted before, has come to be used synonymously for cognate object constructions.

3 Cognate objects in the context of transitivization

3.1 Syntax-semantics mismatches

COCs are not only conspicuous because of their inherently repetitive structure, they also form an interesting case of syntax-semantics mismatches which challenge traditional conceptions of transitivity and lexical semantics (cf. Jackendoff 1990: 213, Mondorf 2016). Firstly, they accommodate cases where an intransitive verb appears to license a direct object. Secondly, while they are syntactically transitive by hosting a direct object, this object is semantically almost redundant, as the lexical meaning has already been expressed by the verb.

Both inconsistencies can be resolved if we assume a semantic rather than syntactic conception of transitivity, as the latter is more powerful in explaining the gradient rather than categorical nature of transitivity. We follow Hopper and Thompson (1980: 251) in defining transitivity as “the effectiveness with which an action takes place (...)”. Hopper and Thompson’s (1980) transitivity framework moves beyond the single criterion of the presence or absence of a direct object by postulating ten parameters measuring the degree to which a clause is transitive (see Table 1).

Table 1: Criteria for measuring transitivity (based on Hopper & Thompson 1980: 252).

| | | High Transitivity | Low Transitivity |
|---|-----------------------------|----------------------------|-------------------------|
| A | Participant | 2 or more participants | 1 participant |
| B | Kinesis | action | non-action |
| C | Aspect | telic | atelic |
| D | Punctuality | punctual | non-punctual |
| E | Volitionality | volitional | non-volitional |
| F | Affirmation | affirmative | non-affirmative |
| G | Mode | realis | irrealis |
| H | Agency | agent high in potency | agent low in potency |
| I | Affectedness of the object | object totally affected | object not affected |
| J | Individuation of the object | object highly individuated | object non-individuated |

In order to illustrate the application of these parameters, consider criterion A, according to which high transitivity contexts imply two or more participants (as in (15)):

- (15) *A killed B.* highly transitive
 [+ syntactic, + semantic] transitivity

The clause in (15) is syntactically transitive, since the direct object slot is filled. And it is also semantically transitive, because there are two participants, the agent and the patient, the latter of which is affected by the verbal action.¹¹ Given the high effectiveness of the verbal action of the verb *kill*, resulting in the death of the patient B, we also have a high degree of semantic transitivity. Syntax and semantics point in the same direction. The clause is highly transitive.

If we now consider reflexive objects, which are co-referential with the subject, there is only one participant:

- (16) *A killed himself.* moderately transitive
 [+ syntactic, – semantic] transitivity

While the sentence is syntactically transitive, because the subject and the direct object slots are filled, (16) is not semantically transitive, as it lacks a second participant. The subject and the patient are the same person, i.e. there is an element of volition and at least theoretically the patient can stop the agent (cf. also Primus 1999). Therefore, the syntax-semantics mismatch leads to a lower degree of transitivity in (16) than in (15).

If we finally consider intransitive uses exemplified by (17), we find that there is no direct object and merely an implied patient.

- (17) *A killed ∅.* intransitive
 [– syntactic, + semantic] transitivity

The “effectiveness with which the action takes place” (Hopper and Thompson 1980: 251) can only be gauged in terms of agent- and verb-related properties.

COCs are similar to reflexives and other pseudo-objects¹² (cf. Mondorf 2016) in displaying a syntax-semantics mismatch as regards their transitivity.

¹¹ Note that syntactic transitivity refers to argument roles (e.g. subject, object), while semantic transitivity has alternatively been referred to as event structure (cf. Zacks and Tversky 2001) or participant roles (cf. Goldberg 1995: 43), thereby relating to the arguments required by the verb semantics (e.g. agents, patients).

¹² Pseudo-objects are direct objects which do not carry a significant semantic load (cf. Mondorf 2016: 83). They are semantically reduced noun phrases which occur in direct object position but which behave unlike ‘fully-fledged’ direct objects by being highly restricted syntactically and/or semantically. For instance, the pseudo-object dummy *it* in “(...) your mother-in-law snuffed **it**” (OED; Daily News 1896) doesn’t permit passivization, insertion or extraction (cf. Mondorf 2016: 78). Neither does the pseudo-object in *way*-constructions, such as “(...) he can’t, on current performance, organise **his way** out of a bag of popcorn” (The Guardian 1994) (cf. Mondorf 2011: 408).

- (18) *Tom grinned an enormous grin...* moderately transitive
 (BNC: A6J) [+ syntactic, – semantic]
 transitivity

Syntactically the direct object slot is filled, but due to the repetition cognate objects are semantically light, i.e. they do not carry a significant semantic load. In addition, the patient is not immediately affected by the verbal action. COCs thus form part of a larger set of so-called Moderate Transitivity Contexts (cf. Mondorf and Schneider 2016).

3.2 Two major types of COCs

On the basis of whether the verb in COCs is canonically used transitively (see examples (5)–(7)) or intransitively (see examples (2)–(4)) two major types of COCs have been distinguished in the literature (cf. Visser 1970). The first type, which we dub pleonastic COCs, shown in (19), takes a canonically intransitive verb and equips it with a cognate object, thereby raising its transitivity. The second type are so-called hyponymic COCs (cf. Kuno and Takami 2004: 117; Puigdollers 2008: 158), which occur with canonically transitive verbs. In comparison to fully-fledged direct objects, the cognate object reduces the clause's transitivity by being semantically light. The transitivity defined as “the effectiveness with which the verbal action takes place” (Hopper & Thompson 1980: 251) is therefore lower.

- (19) SMILE A SMILE pleonastic cognate object augments transitivity
- (20) SING A SONG hyponymic cognate object satisfying transitive argument structure

Traditional conceptions of transitivity would classify pleonastic COCs as a violation of the verb's argument structure constraints, because intransitive verbs cannot license direct objects. However, assuming a gradient notion of transitivity permits us to accommodate ambitransitivity and the notorious “floating transitivity of English verbs” already observed by Jespersen (1927: 319). The blurred boundary between transitive and intransitive verbs results in a comparatively high amount of ambitransitive verbs in English (cf. Kilby 1984: 37, Dixon and Aikhenvald 2000: 4), which forms part of a more general typological development characterizing a wide range of differences between English

and German (cf. Berg 2014).¹³ What is more, transitivization and detransitivization processes appear to feature prominently in language change. Recent analyses indicate that canonically transitive verbs can leave the language via stages of successive detransitivization. Conversely, verbs that do not normally license direct objects can extend their verbal territory by taking semantically weak pseudo-objects (cf. Mondorf 2011, 2016; Mondorf and Schneider 2016) or verbal particles (cf. Cappelle 2007; Mondorf 2010).¹⁴ Similarly COCs can extend the verbal territory of canonically intransitive verbs by equipping them with a semantically reduced object.

To a certain extent, pleonastic COCs could be paraphrased by functionally equivalent intransitive counterparts; in other words, *to smile a smile* largely overlaps with *to smile*, which renders the cognate object ultimately pleonastic. Syntactically pleonastic COCs are fully transitive by having a subject and a direct object, semantically they are not.

With hyponymic COCs, as Kuno and Takami (2004: 117) point out, the cognate object is more or less a hyponym for the other object NPs with which it stands in a paradigmatic relationship.

- (21) *John sang a sad song*
 a lullaby
 the part of Carmen
 etc.

(examples based on Kuno and Takami 2004: 130)

13 Apart from the permeable boundaries between transitive and intransitive verbs, English also has less clear-cut distinctions between active and passive, leading to considerably more middle constructions. Likewise, the loss of morphologically marked word class distinctions in English leads to a more extensive use of conversions in English than in German. Further instances of Boundary Permeability are a greater amount of light verb constructions, the recession of certain reflexive constructions in English, which are supplanted by more variant forms, as well as the fuzzy distinction between auxiliaries and lexical verbs (cf. Rohdenburg 2009; Mondorf 2011; Eitelmann 2012; Altenkirch and Dolberg 2015; etc.).

14 The reason why we can group particles and directional prepositional phrases with pseudo-objects lies in their similarity within a class of transitivizing operations which require measuring-out of the verb meaning (cf. Tenny 1994). Direct objects can measure-out the event to which the verb refers. The *way*-construction improves the acceptability of some verbs, because it delimits their meaning. It supplies a direct object capable of measuring-out the event to a canonically intransitive verb (cf. Tenny 1994: 38). The same goes for other pseudo-objects. Thus, dummy *it* in (25) ... *floor it* means 'accelerate'. This meaning is only used with dummy *it*, i.e. we cannot use it in this sense with fully-fledged direct objects (*... *floor the car*). Such delimitation of the verbal territory can also be achieved by means of particles or directional PPs.

As opposed to hyponymic COCs (*sing a song*), for the canonically intransitive verbs in pleonastic COCs (*smile a smile*) pseudo-objects are the only way in which they can take a direct object. They cannot take fully-fledged objects. Similar restrictions apply to other pseudo-object constructions, i.e. *way*-constructions (23), reflexives (24), or dummy *it* (25).

- (22) *First he **snored a little short snore**.*
(Sorensen, Virginia. *Plain Girl*, 2003: 132)
- (23) *(...), while I **snored my way** into a hangover.*
(LOB)
- (24) *Only the night before he'd gently **snored himself** through the late-night news, (...).*
(Joseph, Marie. *The Way We Were: A Collection of Short Stories*, 2012)
- (25) *I was going about 55kph [34mph] on a slight descent and he [the motorbike rider] just **floored it** to get through a gap from behind (...)*
(*The Guardian*, 2003)

The restriction to semantically light objects is also the reason why not even largely synonymous objects are grammatical with these canonically intransitive verbs, as exemplified in (26):

- (26) *Mary smiled a friendly smile.*
* *a smirk*
* *a sneer*
etc.¹⁵

Admittedly, the OED (s.v. *smile*, II.) lists some further transitive uses of *smile* such as *to smile thanks* or *to smile disbelief*. However, in these examples, *smile* has a slightly different meaning, in that it expresses the means by which the noun action is performed, i.e. 'to express thanks or disbelief by means of smiling'. In contrast to these examples, the combination of *smile* and a cognate object NP preserves the original semantics of the verb. Unlike the hyponymic object NP in COCs of the first type, the object NP in the *smile a smile*-type does not really have

15 An asterisk (*) indicates that the following example is unattested in any of the corpora used and – to the authors' knowledge – not attested anywhere else.

a semantic content of its own; in Hopper and Thompson's (1980) terms, sentences of this kind do not involve two distinct participants, and there is no extrinsic entity affected by the action of smiling.¹⁶

3.3 Cognate objects as pseudo-objects

The preceding considerations also raise questions concerning the direct objecthood of cognate objects. In order to assess their status, we can draw on three standard tests for direct objecthood: the insertion test, the passivization test, and the extraction test (for a similar discussion see Moltmann 1989).

The insertion test is based on the observation that a verb and its direct object tend to be adjacent (see Kozinskij 1979: 158); only in those cases where e.g. the direct object is relatively long and complex, fully-fledged direct objects occasionally permit insertion of material between the verb and its object for reasons of end-weight. Cognate objects behave similarly in this regard.

- (27) a. *John eats **quickly** his meal.
 b. Washington later postponed **indefinitely** the bilateral consultations on future U.S.-U.S.S.R. space projects.
 (TIME Magazine, 1978)
 c. *John sings **loudly** a song.
 d. *Mary smiles **sadly** a smile.

The other two tests reveal crucial differences between hyponymic COCs and pleonastic ones. Just like fully-fledged direct objects, hyponymic cognate objects may be passivized, as they are semantically loaded (28). By contrast, pleonastic cognate objects (29) are not as easily passivized (cf. Jones 1988: 91):

- (28) *He sang a happy little song.* [BNC: FSK]
A happy little song was sung (by him).
- (29) *Lucy smiled a small tight-fisted smile.* [BNC: AOL]
?A small tight-fisted smile was smiled (by Lucy).

¹⁶ A similar point is made in Höche (2009: 165) when she observes that “the elaboration of events by means of COCs goes hand in hand with an increase in transitivity. With the construal of a second participant, which is verbalized as the direct object, the number of participants increases, and factors such as ‘Aspect’ and ‘Affectedness of O’ take on a higher value.”

The passive versions of COCs are more likely to be attested if they are put into a generic context¹⁷, something that they share with light verb constructions (e.g. *take a shower* or *have a laugh*), which score similarly in passivization tests for direct objecthood.

Finally, the hyponymic type easily allows extraction as in (30), while it is again doubtful whether the pleonastic type does so as readily:

- (30) *It was a happy little song that he sang.*
 [?]*It was a small tight-fisted smile that she smiled.*

Table 2 summarizes the results from the three tests, with greyed-out areas showing similarities between cognate objects and fully-fledged direct objects.

Table 2: Tests for Objecthood.

| | Insertion | Passivization | Extraction |
|--------------------------------|-----------|---------------|------------|
| Canonical Direct Objects | +/- | + | + |
| Hyponymic CogO: SING A SONG | - | + | + |
| Pleonastic CogO: SMILE A SMILE | - | - | - |

Overall, the similarities between hyponymic cognate objects and fully-fledged direct objects indicate that pleonastic COCs rather have the status of semantically light pseudo-objects. They do not carry a significant semantic load and they are used with canonically intransitive verbs, which ultimately keeps them from being readily passivized or extracted. In this regard, COCs of the pleonastic kind constitute a syntax-semantics mismatch that challenges common notions of transitivity. The theoretical relevance of this violation of argument structure constraints as evidenced by pleonastic COCs is reflected in their treatment by approaches of different linguistic schools.¹⁸ What unifies them is the attempt to make sense of the ‘messy’ behaviour of intransitive verbs, such as in generative formal accounts (cf. Jones 1988; Matsumoto 1996; Felser and Wanner 2001; Sailer 2010), functional accounts (cf. Kuno and Takami 2004),

¹⁷ Consider, e.g., the following corpus example which evokes a generic context: “[W]e will suppose the step taken, **the frown frowned, the laugh laughed, and the moan moaned.**” (NCF: 1831, Sir Walter Scott, *Kenilworth*). Generic contexts, subsumed under one of Hopper and Thompson’s (1980) transitivity parameters (shown in table 1), namely Individuation (I), are also characterized by reduced transitivity.

¹⁸ For a comprehensive overview see also Höche (2009: 8–48).

Construction Grammar accounts (cf. Goldberg 1995; Kim and Lim 2012) or Cognitive Linguistics accounts (cf. Iwasaki 2007; Höche 2009). While the prototypical case is a 1:1 correspondence between syntax and semantics, COCs are syntactically transitive but semantically intransitive, an observation that calls for a crucial distinction between syntactic and semantic transitivity (cf. the discussion in Section 3.1).

In this regard, COCs tie in with other (de)transitivization strategies involving semantically light pseudo-objects¹⁹, such as reflexives (cf. Mondorf 2010; Mondorf and Schneider 2016), *way*-constructions (cf. Israel 1996; Mondorf 2011) or dummy *it* (cf. Mondorf 2016). In all of these, a verb's territory is extended via syntactic means, namely by equipping it with a pseudo-object. Thus, they increase the verbhood of intransitive verbs or weakly established verbs, which, however, results in similar syntax-semantics discrepancies as is the case with COCs. For example, resultative *way*-constructions can provide support for novel verbs, as illustrated in (31) to (34):

- (31) *The pilot **map-read** his way across the country.*
(OED, cited in Salkoff 1988: 69)
- (32) *Max **double-taked** his way through her extraordinary confession.*
(Salkoff 1988: 71)
- (33) *We labor over the past, **Monday morning quarterbacking** our way through the week.*
(Salkoff 1988: 72)
- (34) *He **George W. Bushed** his way into the governor's chair [...]*
(<http://www.smirkingchimp.com>)

What all of the examples above have in common is that they contain verbs more or less created ad hoc, such as the compound verbs *to map-read* in (31) or *to double-take* in (32), the latter of which is particularly noteworthy because of its weak past tense ending. In these instances, the pseudo-object consisting

¹⁹ Due to the syntax-semantics mismatch, pseudo-objects constitute Moderate Transitivity Contexts that introduce weakly established novel verbs. However, not only do Moderate Transitivity Contexts establish 'waxing' verbs, they also usher out 'waning' verbs, such as causative *bring*, which can only stand its ground in weakly transitive contexts. For a discussion of the role of Moderate Transitivity Contexts in linguistic variation and change, see Mondorf and Schneider (2016).

of the possessive determiner and the noun *way* reinforces their verb status by enhancing the clause's transitivity (see also Rohdenburg 1996: 114–115). This supportive function becomes even more evident in (33), where the pseudo-object can be said to help identify the phrasal group *Monday morning quarterbacking* as the verbal element in the clause, or in (34), where *his way* increases the verbhood of “even the nouniest of nouns”, viz. the proper noun *George W. Bush*.

Likewise, non-referential *it* may serve to highlight the verbiness of weakly entrenched verbs, as in (35)–(37), where the converted verbs *foot*, *leg*, *cab*, and *bus* are supported by dummy *it* occurring in the direct object slot (cf. Rissanen 1999: 261):

- (35) *Thai fut it so that lang war to devys Thair hasty fair.*
(OED; G. Douglas tr. Virgil *Æneid*, 1513, cited from Mondorf 2016: 74)²⁰
- (36) *We may 'cab' it ... we may 'bus' it; or we may go by boat.*
(1869, cited from Visser 1970: 456)
- (37) *... one of you must leg it up to the hotel.*
(1924, cited from Visser 1970: 456)

Apart from the verb-supporting function, pseudo-objects may also serve to establish new verb senses. A case in point is the *way*-construction that gradually extended its scope of application via a process of grammaticalization (cf. Mondorf 2011) described above.

As the brief overlook of *way*-constructions and non-referential *it* has demonstrated, what all of these constructions share with COCs of the *smile a smile*-type is their transitivizing quality with which they overcome the argument constraints otherwise imposed upon intransitive verbs. What distinguishes pleonastic COCs from the other transitivizing strategies, however, is that they do not appear to establish novel or weakly entrenched verbs, nor do they participate in the evolution of new verb senses, as the discussion above has already shown. Instead, they increase the overall transitivity of the clause with regards to its telicity in that they rather denote a completed action than an ongoing one (cf. *I slept a sound sleep* vs. *I slept soundly*).

²⁰ The OED glosses Middle Scots *foot* as “To move the foot, step, or tread to measure or music; to dance. Esp. in phr. to foot it”.

COCs can also be related to transitivity (e.g. valency-increasing) and detransitivizing (e.g. valency-decreasing) constructions, which have been adduced as support for Construction Grammar frameworks (cf. Hilpert 2014: 17f.). Constructional approaches could argue that pleonastic COCs (*smile a smile*), which are valency-increasing, must be part of our knowledge of language, since aspects of a verb's meaning vary systematically depending on the construction in which the verb occurs. Thus language users need to assign a resultative reading to constructions in which a conventionally intransitive verb (*smile*) takes a direct object, in line with the *Principle of Coercion*:

If a lexical item is semantically incompatible with its morphosyntactic context, the meaning of the lexical item conforms to the meaning of the structure in which it is embedded. (Michaelis 2004: 25)

In this sense COCs coerce a resultative reading on the verb. A constructional approach is also applicable to hyponymic COCs (*fight a fight*). Here, we are dealing with a detransitivizing use of a conventionally transitive verb (*fight*), because the direct object slot is filled (i.e. the clause is syntactically fully transitive), but the direct object is not semantically loaded (i.e. the clause is semantically less transitive). The core meaning of the noun (*fight*) has already been expressed by the verb. Such argument structure constructions are assumed to convey “some meaning of their own that goes beyond the meaning of their component words” (Hilpert 2014: 48). They are adduced as support for CxG approaches, as they permit non-conventional uses of verbs and they convey non-compositional meanings.

What is more, cognate objects provide a syntactic frame for the modifying element. So, after having considered the verbal parts of COCs within the context of transitivity issues, it is now time to focus on the nominal constituent and the modifier(s) that accompany it.

4 Modifying cognate objects

Indeed, the modifying element is another criterion that crucially distinguishes the two types of COCs, or more precisely the obligatoriness of the element modifying the cognate object. Generally, hyponymic cognate objects appear to have fewer modifiers than pleonastic ones (cf. Jespersen 1927: 235):

(38) *John sang a song.* acceptable without modifiers

(39) *John smiled a smile.* less likely to occur without modifiers

In the case of pleonastic COCs, bare cognate objects might also be less likely because the impression of repetitiveness and redundancy is considerably heightened if they occur without additional elements.

Note that modification of cognate objects is not restricted to attributive adjectives; postmodification is also possible, e.g. by relative clauses (40) or prepositional phrases (41):

(40) *Lord Luxellian ... **smiled a smile that missed its mark and alighted on a total stranger...***

(Hardy, Thomas. *A Pair of Blue Eyes*, 1873)

(41) [*George*] **smiled a smile of sublime scorn and security.**

(Ouida. *Under Two Flags*, 1862)

The issue of modification also affects the long-standing controversy on the question whether cognate objects are syntactic arguments (cf. Massam 1990, Tenny 1994, Macfarland 1995, Matsumoto 1996) or adjuncts (cf. Iwakura 1976, Jones 1988, Moltmann 1989). According to Puigdollers (2008: 163), the syntactic status of cognate objects depends on the respective type they belong to (i.e. hyponymic or pleonastic). Thus, cognate objects of the hyponymic *sing a song*-type should be classified as arguments, as it is impossible to replace a cognate object by an adverbial adjunct (42), which is indicative of their being a constituent part of the verb's argument structure. Cognate objects of the pleonastic *smile a smile*-type, on the other hand, rather behave like adjuncts, in that they can indeed be replaced by an adverbial adjunct (43) (see also Jones 1988: 93):

(42) *She **sang a sad song**.* ≠ She sang sadly.

(43) *She **smiled a sad smile**.* ≈ She smiled sadly.

In other words, the syntactic status of the cognate object has semantic repercussions in that the prenominal element either modifies the nominal constituent (i.e. in the hyponymic type) or the verbal action (i.e. in the pleonastic type). Likewise, it is conspicuous that hyponymic COCs can safely take another adverbial adjunct which stands in an oppositional relation to the attributive adjective (44), while this would result in a paradoxical statement in the case of pleonastic COCs (45) (cf. Puigdollers 2008: 163):

(44) *She **sang a sad song** happily.*

(45) **She **smiled a sad smile happily.***

Even though pleonastic cognate objects are essentially functionally equivalent to adverbial adjuncts, this does not imply that it is generally possible to replace the cognate object NP by an adverbial. Thus, not all of the premodifying adjectives in (46) have adverbial alternatives:

(46) *He **smiled a tight, dark, unamused smile.***
(BNC: JXT)

As far as the BNC data show, only the collocations *smile tightly* and *smile darkly* are attested (19 times and twice respectively), while the collocation *smile unamusedly* does not exist, with the adverb *unamusedly* being extremely rare anyway (just one occurrence). What is more, we would be hard put to find any acceptable alternative for the COCs in (47)–(50), which are not only innovative with respect to the premodifying elements but also display some variation with respect to the determiners:

(47) *Piper sat bolt upright in the passenger seat, **smiling a fat smile...***
(BNC: FP7)

(48) *Grimwood rose slowly to his feet, **smiling his oily smile...***
(BNC: CN3)

(49) *She had my present in her hand and **was smiling a merry Christmas-morning smile.***
(BNC: FEE)

(50) *He **smiled that predatory smile she remembered from their first meeting.***
(BNC: H8S)

Examples such as the ones above show that one of the main functions of the cognate noun is to provide a syntactic frame for the modifying element. After all, as Dixon (2005: 305) points out, “there are much greater possibilities for adjectival etc. modification of a noun than there are for adverbial modification of a verb”, and it is this potential inherent to COCs that explains their variability and supplies a functionalist answer to the question why English tolerates repetition and redundancy in this regard.

5 Cognate objects in the context of language variation and change

In order to shed light on the development of COCs in the context of repetition phenomena, a wide array of representatives from both types, i.e. the hyponymic type as well as the pleonastic one, have been analysed in four historically stratified corpora with the aim to trace their trajectory of change over an extended time-span in British English. The factor genre has been kept relatively constant over the centuries in that only prose fiction corpora have been taken into consideration. Table 3 lists the British (sub-)corpora adding up to some 78 million words.²¹

Table 3: British English prose fiction corpora (* birth dates, p publication dates).

| British Corpora | Period | Mio Words |
|--|--------------------------|-----------|
| Early English Prose Fiction | *1460 – 1682 | 10 |
| Eighteenth Century Fiction | *1660 – 1752 | 10 |
| Nineteenth Century Fiction | *1728 – 1869 | 39 |
| British National Corpus (wridom1) ¹ | ^p 1960 – 1993 | 19 |
| Total | | 78 |

¹ *Wridom 1* stands for ‘written domain 1’, a subsection of the *British National Corpus*, which exclusively comprises imaginative prose to make the BNC data comparable to the historical prose fiction databases. The question whether variation according to the medium triggered by e.g. restricted planning time, fragmentation or involvement (cf. Chafe 1985) has an effect on the frequency of COCs is outside the scope of the present study.

An exhaustive list of more than 160 COCs has been compiled, gleaned from the literature (Visser 1970; Jespersen 1929; Höche 2009) and supplemented by random finds of our own. Some of these COCs have become obsolete in the course of time, such as Old English *gehatan gehat* (from *hatan* ‘to be called’) or *cweðan cwide* (‘to speak’). For the present paper, 80 COCs have as yet been investigated, 46 of which have been attested at least once in our corpora from the 17th to 20th centuries, as listed in Table 4 below.

21 In table 3, the asterisk (*) indicates birth dates of the authors included in the corpus, while the abbreviation (p) indicates publication dates. In order to work with timespans of similar length, the *Eighteenth Century Fiction* corpus and the *Nineteenth Century Fiction* corpus have been split into subcorpora (ECF 1, ECF 2, NCF 1, NCF 2) starting or finishing at the turn of a century. Any multiple entries of identical occurrences have been discarded from the tally.

Table 4: List of cognate object constructions investigated.

| hyponymic cognate object constructions (24 in total) | pleonastic cognate object constructions (22 in total) |
|---|---|
| <i>bite a bit; build a building; button a button; cry a cry; cut a cut; dance a dance; do a deed; drink a drink; enjoy a joy; fight a fight; name a name; offer an offer; plan a plan; plot a plot; present a presentation; produce a product; say a say(ing); shoot a shot; sing a song; smell a smell; talk a talk; taste a taste; tell a tale; wish a wish</i> | <i>blow a blow; bow a bow; breathe a breath; cough a cough; die a death; dream a dream; frown a frown; grin a grin; grunt a grunt; laugh a laugh(ter); live a life; pray a prayer; purr a purr; rain a rain; scream a scream; sigh a sigh; sleep a sleep; smile a smile; snore a snore; step a step; yawn a yawn; yell a yell</i> |

For automatically retrieving the COCs, we used the corpus tool WordSmith; spelling variants have been taken into account by checking the respective OED entries of both cognate verbs and nouns. The search span has been restricted to those cases in which the verb form is accompanied by the cognate noun within a range of four words to the left or right.²² In this way, more wordy COCs have been successfully extracted, which might otherwise have gone unnoticed, such as the one in (51) which contains four words between verb and cognate noun. All corpus hits were manually edited to discard cases which did not qualify as COCs, such as (52), which contains a cognate noun in an appositive function indicated by a comma.

- (51) *Then in her sleep she would **smile the faintest, most pitiful smile**.*
(MacDonald, George. *At the Back of the North Wind*, 1871 [NCF2])
- (52) *He began to smile, a rather wobbly, damp smile.*
(BNC: HH9)

Figure 1 visualizes the development of all 46 COCs across all four time spans investigated, with the vertical axis providing information on their occurrences in per million words frequencies.

The picture that emerges from a total of 4584 occurrences is a highly varied one. On the one hand, there is a bundle of low-frequency COCs at the bottom, all

²² A pilot study revealed that the search span of four words between the verb and its cognate object is ideal, because it is sufficiently large to find the majority of COCs in our data, while a window of 5 words produced hardly any hits but a disproportionately large number of instances that had to be excluded from the tally.

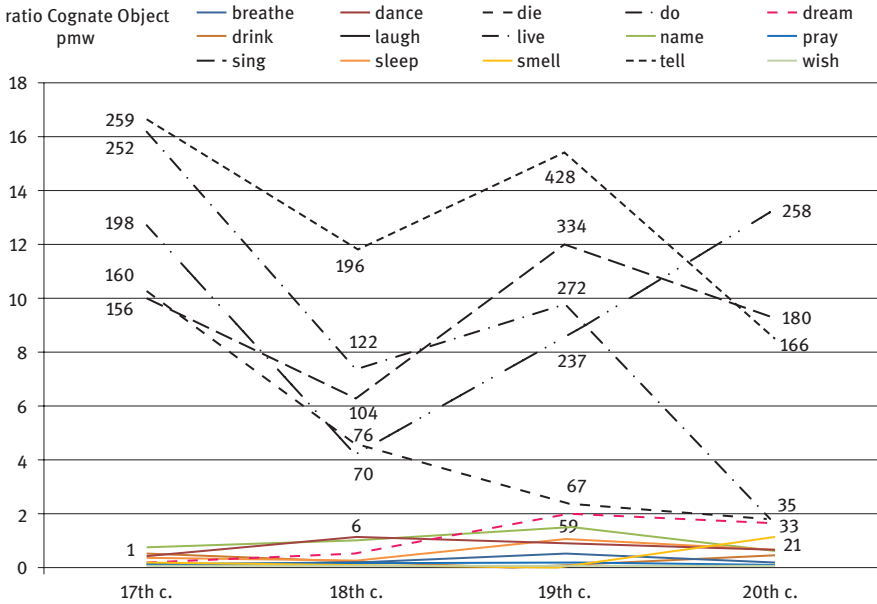


Figure 2: Cognate object constructions occurring throughout all 4 timespans (N = 4083).

Strikingly, all of these COCs involve a nominal copy less identical to the verb even if still etymologically related to it. Against the backdrop of the comments made in Section 2 on repetition phenomena in English, it is fitting that those COCs occurring most frequently are the ones that bear the least repetitive effect. Also, it is conspicuous that the lower frequency COCs are more prone to exact repetition, such as *dream a dream*, *smell a smell* or *laugh a laugh*.

The second group, displayed in Figure 3, contains 14 COCs that occur sporadically in any of the four timespans, i.e. with attestations of merely 2 to 3 times, which makes them considerably more scarce than the ones belonging to the first group.

Clearly, a successful COC standing out in this group is *smile a smile* that is barely attested in the earliest periods, then increases noticeably in the 19th century and takes a big leap in the 20th century, more than tripling its pmw frequency. First analyses show that it is also in the 20th century that *smile a smile* evolves a great deal of variability with regards to the modifying elements. However, this

NP in *live a life* might initially also have had the status of an adjunct, which becomes evident when we apply a movement test that other COCs of the pleonastic type would not pass (*he lived all his life happily* vs. *all his life, he lived happily*).

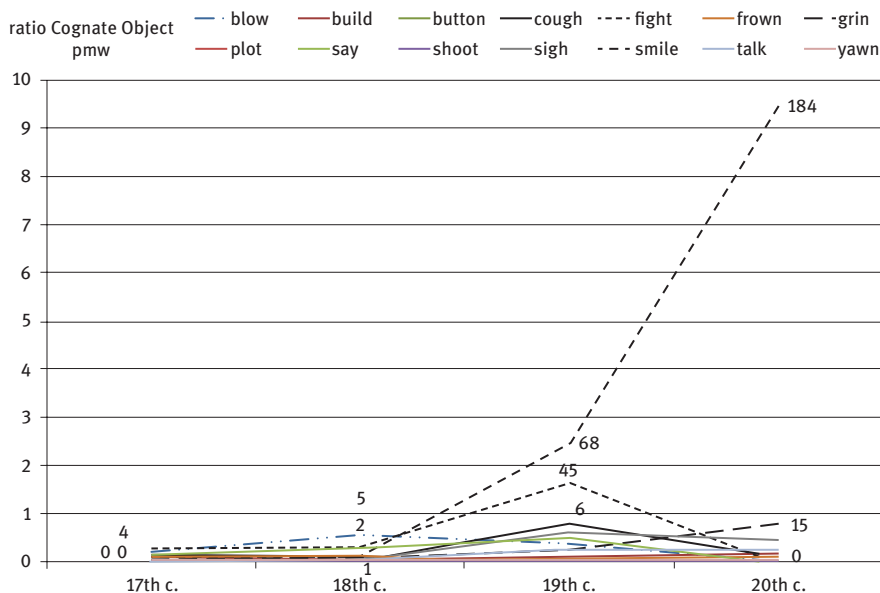


Figure 3: Cognate object constructions occurring sporadically in any of the 4 timespans (N = 455).

impressionistic assessment of a flourishing productivity awaits further research, particularly in order to see how this trend for *smile a smile* ties in with developments of other COCs. Still, it is remarkable that *smile a smile* is the only COC involving an exact repetition that experiences such an upward development, while even a construction such as *build a building* (listed in Höche 2009), which is a relatively recent transitive COC, does not belong to the high frequency constructions.

Lastly, the third group contains 17 COCs that occur scarcely in any of the four timespans, some of them eventually ceasing to be used altogether. In this group, the pmw frequencies are all below 1.

What this group confirms once more is that English seems to be more favourable to those COCs that contain verb-noun pairs that are considerably phonologically distinct from each other (albeit still etymologically related). COCs such as *step a step* or *cry a cry* that involve an exact copy of phonological material do not fare well and are not attested at all in some of the periods.

As above observations have shown, not all COCs behave in the same way; rather, we are dealing with different constructions with each of them having their own trajectory of change. The 19th century seems to constitute an especially fertile ground for the development of COCs, as new types enter the paradigm, well-established types gain in frequency and develop innovative uses, leading to

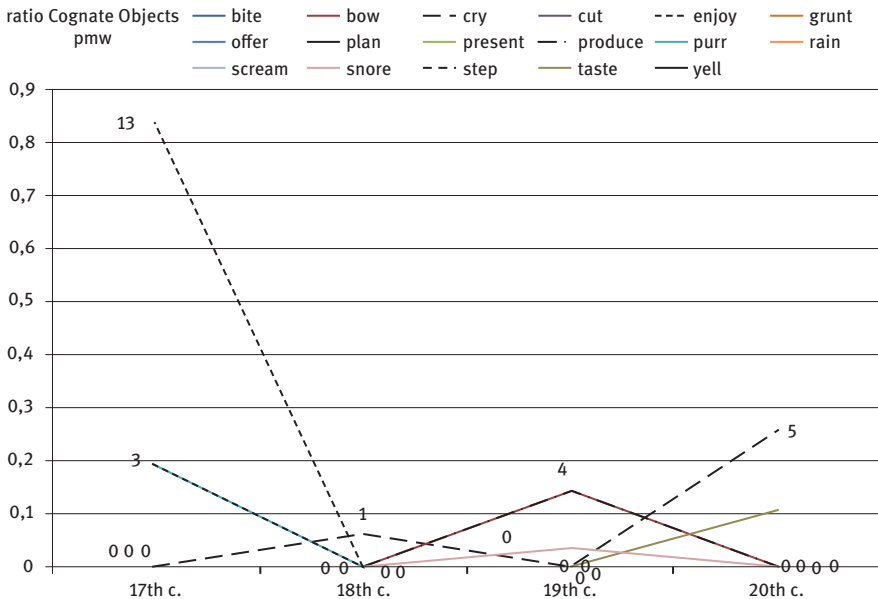


Figure 4: Cognate object constructions occurring scarcely in any of the 4 timespans (N = 46).

a concomitant increase in pragmatic expressivity as typical of repetition proper. Interestingly, we find a group of high-frequency COCs that constitute the most consistent constructions (i.e. *die a death, sing a song, live a life, do a deed, tell a tale*); these comprise a verb and noun that are not exactly identical to each other (albeit etymologically related), something that is of immediate interest in the context of repetition phenomena. Others are not as consistently used, especially those verbs belonging to the pleonastic type and involving a reiteration of phonological material. This could be a symptom of the aversion against repetition and redundancy that English in particular displays.

6 Conclusion

The present article has investigated cognate object constructions showing that the pleonastic *sleep a sleep*-type constitutes a repetition phenomenon in which the verb is repeated as a nominal copy. Several syntactic and semantic properties of COCs can be understood if we take a functional perspective acknowledging that transitivity is a matter of degree. English as a language that has

virtually lost morphological transitivity marking developed a comparatively large number of ambitransitive verbs. It therefore relies heavily on syntactic means in the postverbal slot to indicate aspects related to transitivity in the sense of the effectiveness of the verbal action, such as telicity or punctuality. This is a property systematically and creatively exploited by language users in the formation of COCs.

Strikingly, these cognate objects, similar to other pseudo-objects, can create a sense of humour.²⁴ According to so-called incongruity theories of humour, creating humour involves an element of unexpectedness, i.e. a violation of expectations which cannot be logically accommodated (cf. Suls 1983). As regards the use of COCs, language producers can similarly violate expectations concerning

- argument structure, by shifting a canonically intransitive verb to the transitive domain,
- word class, by shifting a canonical verb to the nominal domain (by means of conversion),
- economy, by using a noun, the meaning of which has just been expressed by a preceding verb.

As regards the diachronic distribution of the 4584 occurrences of 80 COCs investigated, 46 types also occurred in earlier stages of English covered by the historical corpora analysed. The 19th century can be pointed out as the ‘breeding ground’ for COCs, as this is the period in which new types entered the paradigm and well-established types increased in frequency. Apart from these general developments, some types are more successful diachronically than others. Thus, we find that those COCs which involve a nominal copy less identical to the verb (e.g. *die a death*, *sing a song*) fare more successfully in our data than identical forms (e.g. *grunt a grunt*, *cry a cry*), etc. While it is most interesting that English does not shrink back from using COCs in the first place, thereby tolerating some degree of repetition and redundancy, which could easily be avoided by using alternative expressions for the functions covered by COCs, the English language system still displays a noticeable tendency to avoid repetition and redundancy by favouring those cognate objects that are not identical copies of the verb. This indicates that semantic repetition is more readily tolerated than formal repetition. In line with the *Horror Aequi*-Principle language users opt for formally distinct, though functionally equivalent, variants.

²⁴ For instance, *way*-constructions are most frequent in fiction and humorous text types and least frequent in religious and scientific texts (cf. Mondorf 2006).

These observations are indicative of very subtle and systematic negotiations of the pros and cons of repetitions within language systems. Further research on functional variants of COCs will be needed to fully understand why the English language system has come to establish a repetitive structure, while at the same time constraining its spread throughout the past centuries.

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Part III: Exact Repetition in (Discourse) Pragmatics

Laurence R. Horn

The lexical clone: Pragmatics, prototypes, productivity

Abstract: The lexical clone construction in English – a.k.a. the double (Dray 1987), contrastive focus reduplication (Ghomeshi et al. 2004), or identical constituent compounding (Hohenhaus 2004) – involves the full reduplication of a lexical item or phrase to form a modifier-head construction with focal stress on the first (modifying) element. Recent examples include “Saying slavery was the cause of secession isn’t politically correct, it’s CORRECT correct” (Larry Wilmore on “The Daily Show”, 9 Dec. 2010), “She’s not a DOCTOR doctor, more of a dead person doctor, but a doctor nonetheless” (Dr. Brennan on TV show “Bones”, 9 Sept. 2014), “Do you love it? Or do you LOVE it love it?” (2007 Cold Stone Creamery ice cream commercial), “You mean ‘HERE here’? Or here more generally” (from Meg Wolitzer’s 2013 novel *The Interestings*). While varying across categories (adjective, noun, VP, adverb) and illocutionary force (affirmation, negation, question), these cases all illustrate the prototype use of clones on which I will focus; elsewhere, clones can also be used for scalar strengthening as in *TALL tall* or *DEAD dead*. Clones typically function as pragmatic slack regulators (Lasersohn 1999), inducing a partition of the relevant set and picking out the subset corresponding to what (given the context and/or common ground) count as core, salient, or literal category members. This study surveys the semantic and pragmatic motivations for – and effects of – cloning, addressing the role played by discourse priming (the tendency for an XX clone to be triggered by an earlier occurrence of X), the relation of cloning to lexicalization and compounding, the role of discourse and grammatical context in coercing a given interpretation, the role of prosodic focus, and the sociolinguistic variables influencing which groups of speakers are (or are perceived to be) more likely to use clones and when. I also touch on the relationship of cloning to non-reduplicated focus contrasts (e.g. “It’s not hot, it’s HOT”; “Was it a kiss or a KISS?”) and related constructions cross-linguistically.

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1 Clones: an overview

1.1 A brief personal history and a roadmap

During a forum lecture at the Linguistic Society of America Institute at Stanford University in the summer of 1987, the speaker John Searle suddenly interrupted his talk to ask “Is there a doctor in the house?” Following a brief pause, dozens of hands shot up as chuckles rippled through the room. Professor Searle announced, “No, I need a DOCTOR doctor.” One audience member was struck by the grist for his mill: in the pragmatics seminar I was co-teaching with Steve Levinson at the Institute, I had just been discussing the properties of what Nancy Dray had characterized that spring in her unpublished University of Chicago master’s thesis (Dray 1987) as the double construction.

Many of the examples gathered by Dray and the ones I had begun to collect (see Horn 1993, 2006) exhibit the contrastive property of the Searle case, occurring as corrections or refinements of a previous linguistic claim or extralinguistic offer, as in utterances like those in (1a,b). (1b), a Spanish line from Pedro Almodovar’s 1988 film “Women on the Verge of a Nervous Breakdown” uttered by the protagonist, seeking a rental apartment and shown a penthouse equipped with a chicken coop, was subtitled ‘This isn’t a real house’, indicating both the cross-linguistic spread of this construction and the tendency to “correct” it in written language to an ordinary modifier-head compound when the opportunity arises. In (1c,d), attested examples from Horn (1993: 49), the property or category at issue is context-inferrable although not explicitly signaled in the discourse.

- (1) a. *No, what I wanted was a {DOG dog/SALAD salad/DRINK drink}.*
 b. *No es una CASA casa.*
 c. *She was over the legal limits of sobriety, but still functioning; she wasn’t ‘DRUNK drunk’.*
 d. *We have muffins, and we have DESSERT desserts.*

Here and throughout this study, the central role of context in motivating the formation of clones and guiding their interpretation will be apparent.

A note on nomenclature: Following Dray, I refer in earlier work to the construction of interest as the *double*. Within a few years I had begun to refer to our construction as the (*lexical*) *clone*, as I have continued to do since (cf. Horn 2006; cf. also Huang 2009, 2015) and will do here. Prominent competing labels are *contrastive focus reduplication* (Ghomeshi et al. 2004) and *identical constituent compounding* (Hohenhaus 2004).

In this introductory section, I explore the relation of clones to other varieties of nonce word-formation, touch on early attestations, and review the arguments for and against treating clones as compounds, the range of lexical and phrasal categories that do and do not undergo cloning, and the pragmatic factors motivating speakers to employ clones. In Section 2, I turn to the question of the function of nominal and adjectival clones with respect to the core functions of prototypicality (or “*echt*-icity”) and intensification. Additional functions of clones – literalism and euphemism – are exemplified in Section 3, prompting a discussion of the perceived sociolinguistic attributes of clone users. In Section 4, I examine the function of clones and related focus constructions as coercing partitions within categorical domains. Having surveyed the empirical domain, I return in Section 5 to consider the position of English lexical clones within the cross-linguistic landscape of processes of reduplication and repetition.

1.2 Clones and kin: varieties of nonce word-formation

In their dependence on and motivation by the utterance context and in their evanescent character, clones share features with other nonce formations, including:

– **the “deictic compound” as an ad hoc name** (Downing 1977)

- (2) a. *apple-juice seat*
 b. *pumpkin bus*
 c. *Ferrari woman*
 d. *tot mom*

– **the innovative denominal verb** (Clark and Clark 1979)

- (3) a. *to Houdini the locks open*
 b. *to KLM to Amsterdam*
 c. *to kneecap/necklace one’s adversary*
 d. *to message the president*

– **the *un*-noun** (Horn 2002, 2005; Zimmer et al. 2011)

- (4) a. The A[most]-class *un*-noun: when an *un*-X is almost an X:
un-cola, un-martini, un-handout
 b. The B[arely]-class *un*-noun: when an *un*-X is barely an X:
un-job, un-politician, un-bank

– **the creative *un-*verb** (Horn 2002; Zimmer et al. 2011)

- (5) a. *to uninvite a guest*
 b. *to unburn one's bridges*
 c. *to undelete, uninstall, unselect, unbold, unsort* (via computer)
 d. *to unfollow, unlike, unfriend, unpublish* (via social media)

The *apple-juice seat* in (2a) is one in front of which a glass of apple juice was placed. For Downing (1977: 818), a compound of this kind functions as a demonstrative:

In such situations, reference must frequently be made to ephemeral states of affairs; and compounds based on relationships derived from these temporary states are often used in much the same way as descriptive phrases or demonstrative markers. [...] Thus, while this compound was used in this instance to pick out one seat, its use did not imply the existence of a subcategory of seats known as apple-juice seats, of which this particular seat was a member.

Reference to a “taco baby” out of the blue in Emily Gould’s 2013 novel *Friendship* might be puzzling; surely no presupposed subcategory of such babies is available. But if we recall that the narrator has introduced us on p. 95 to “a rosy perfect baby from the rosy perfect baby dispensary in central Brooklyn” engaged in “taking the radish slices from its mother’s taco and flicking them one by one onto the pavement, narrating its activities with a battery of ear-splitting bird noises”, we are not too surprised that when the young radish-flicker, after disappearing for ten paragraphs, returns on p. 96 – though he is now “lying sleepy and docile in its mother’s arms” with no taco in sight – he has earned the moniker of “the taco baby.”

In specifying *DESSERT desserts* or *DRUNK drunk*, the speaker seeks, perhaps through pragmatic accommodation (cf. Beaver and Zeevat 2012), to invoke the existence of such a nonce category or ad hoc concept (see Carston 2002 and Reboul 2014 for the pros and cons of ad hoc concepts). But in any case, as with the *un-*noun or deictic compound, no move is made to register such an item in the permanent lexicon.

In his investigation of another variety of (semi-)productive nonce formations, Chris Barker considers the nominalizing *-ee* suffix found in established forms (*employee, trainee, amputee*) in the light of innovative formations created and re-created on an ad hoc basis, as attested in *adulteree, best-wishee, fantasizee, festschriftee, harvestee, implantee, or ticklee*:

-ee is reliably and genuinely productive; there has been a steady stream of naturally occurring new formations, many of which have been established. It is less than fully productive –

indeed, native speakers often report that an unfamiliar word in *-ee* seems weird or non-standard in a way that a never-before-encountered word in *-er* does not. Therefore I will consider *-ee* to be **ROBUSTLY SEMI-PRODUCTIVE**. (Barker 1998: 703–704)

Similarly, the Oxford English Dictionary acknowledges ad hoc *un-verb* formations:

[T]he prefix denotes a simple reversal of the action of the verb. Many of the new formations in M[iddle] E[nglish] are of the same type, as *unbend*, *unclench*, *uncover*, *unfasten*, *unhasp*, *unhide*, *unshut*, etc., **and additions to this class continue to be freely made at all subsequent periods**. In addition to the numerous examples entered as main words, many others have been **casually employed**. (s.v. *un-*, prefix², 3; emphasis added)

The OED's notion of casual employment is analogous to Barker's robust semi-productivity: there is no need to list output of such processes in the mental dictionary.¹

In the case of clones – as with *un-noun* formation and deictic compounds, as opposed to *un-verbs* and *-ee* nominals – the path to full lexical citizenship is treacherous and often occluded. It is much more difficult to point to cases of lexical drift, in which the meaning (as with *unfriend* or *amputee*) is opaque enough to require lexical listing, although arguably *Do you LIKE HIM like him* (i.e. romantically) and *JOB job* (i.e. a real one in terms of hours, remuneration, longevity – the opposite of a *McJob*) are established enough to merit inclusion.

1.3 Clones: some natural questions and some tentative answers

– When did clones arise?

Unlike *un-nouns*, for which the introduction of the 1968 commercial campaign to promote 7-Up as “the Un-cola” served as a clear and frequently acknowledged catalyst for later coinages (Horn 2005), there was no single archetype to act as a forerunner for future clones, but the construction does have a longer history than is sometimes acknowledged. Contra Huang (2015), there is an attestation as early as 1961, from page 98 of John Steinbeck's *Travels With Charley*:

- (6) *And Charley is no more like a DOG-dog than he is like a cat. His perceptions are sharp and delicate and he is a mind-reader.*
(cited in Ghomeshi et al. 2004: 312)

¹ Like *-ee* nominals, *un-nouns*, and *un-verbs*, clones tend to be more felicitous when syntagmatically primed in the local context, although this isn't always required, as seen in (1c,d).

I follow Ghomeshi et al. (2004) in employing CAPS for the first element within clones (while preserving original notation in work cited from others). This suggests compound stress, with the peak on the normally stressed syllable within the first element; the reduplicant behaves prosodically as a modifier of a segmentally identical head. One question arising from the CF of Ghomeshi et al. (2004) is whether this prosody does instantiate contrastive focus rather than (or in addition to) compound stress per se.² Evidence against any necessary link to focus is provided by clones whose use does not activate any obvious alternative set; cases like (1c) and (6), where the XX compound does not explicitly contrast with a YX modifier-head structure, indicate that narrow focus is not always involved.

– **But are clones actually compounds?**

According to Ghomeshi et al. (2004), they aren't, since clones allow formations never found in compounds. While nouns can be cloned, as in (6), so can also be adjectives, adverbs, verbs, verb + weak pronoun sequences, particles, proper names, and lexicalized expressions, i.e. idioms (but see also Travis 2001), and the resultant clones don't behave like compounds. Further, they argue, pronouns can't form ordinary YX compounds but can be cloned, so "analysis in terms of compounds is a non-starter" (Ghomeshi et al. 2004: 322, fn. 8). But while (7a) exemplifies a cloned pronoun, the forms in (7b) show that pronouns do occur in first position in (lexicalized) ordinary YX compounds as well.³

- (7) a. *Nick loved me. A six-o kind of love: He looooooved me. But he didn't love me, me. Nick loved a girl who doesn't exist.*
 (Gillian Flynn (2012), *Gone Girl*, p. 222)
- b. *she-goat, he-man, I-thou* (relationship), *me-first* (attitude)

² Thus, for example, Huang (2015: 80) notes that the first element of a clone "contains a contrastive focus accent" and "is utilized to single out some privileged sense, in contrast to other senses, of an ambiguous, polysemous, vague, or loose expression." But does the first element in *CHINA China*, *mainland China* (in Huang's example) have a different prosody from the non-contrastive compound stress of *blackbird* or *washing machine*?

³ Ghomeshi et al. (2004: (1f)) provide the example "My car isn't MINE-mine, it's my parents'", with a cloned possessive pronoun. This is possible in general with possessive pronouns but not subject pronouns (compare (7a) with **I love you but I I don't love you*) or with possessive adjectives: compare the attested (i) with the impossible (ii).

- (i) *Public land is there for all of us to share. It's yours, but it's not yours yours if you get what I mean.* <http://wheelingit.us/2014/01/17/7-tips-on-boondocking-etiquette-rights-wrongs-plain-common-sense/>
- (ii) **It's your land but it's not your your land.*

For Hohenhaus (2004), clones are indeed compounds, more specifically identical constituent compounds, a conclusion based partly on German where non-nominal clone formation is less robust than in English (cf. Finkbeiner 2014, Freywald 2015, and Kentner 2017 for elaboration; we return to this question in Section 5). Ghomeshi et al. (2004) claim unpersuasively that German has *no* clones, noting the translation of “not RICH rich” (“obscenely rich by the world’s standards; but not RICH-rich, not New York City rich”; Michael Cunningham, *The Hours*) into German as *nicht richtig reich*. But this argument from translation is not convincing, as seen by the subtitle in (1b) or by comparing this passage in English and its source in Norwegian:

- (8) [context: Kari Farstad of the Norwegian Embassy in Bangkok is homesick]
Kari stared at the rows of rubber trees planted alongside the motorway. She wanted to go home. Home as in home home.
 (Jo Nesbø (2013), *Police*, Don Bartlett trans., p. 193)

Home home here renders a non-clonal modification: *Hun ville hjem. Helt hjem*. (lit., ‘She want(ed) home. Totally/All the way home.’).

– Which syntactic configurations can be cloned?

It has long been recognized that phrasal constituents and not just lexical ones can be cloned, particularly VPs with weak object pronouns that encliticize phonologically onto the preceding verb (Ghomeshi et al. 2004: 321), yielding phonological words that may then freely undergo cloning and resulting in minimal pairs like those in (9):

- (9) a. *Do you LIKE (HIM) like him?*
 b. *Do you LIKE (*KIM) like Kim?*

Beyond VPs, cloning is attested (if less productive) with full NPs and even with sentences, as in (10) and (11):

- (10) A: *Actually, what they’re most concerned with is your appearance next week.*
 B: *[long pause] My appearance?*
 A: *Yeah, they thought that if you delay –*
 B: *Oh, my appearance in court. I thought you meant MY APPEARANCE, my appearance.*
 A: *Oh, like “You need to get your hair done”? No. [laughing]*
 (exchange between Lawyer A (male) and Lawyer B (female) in courtroom elevator, overheard by Gregory Ward (p.c. Aug. 1999))

- (11) “Who are you?” she said. [...] “My name’s Richard.”
She rolled her eyes. “I know that. I didn’t mean who are you what’s your name I meant who are you who are you.”
 (Ann Packer, “Walk for Mankind”, *Swim Back to Me* (2011), p. 4)

– **What about idiom chunks?**

According to Ghomeshi et al. (2004), idiom chunks can’t be cloned, as seen in (12a). However, with idioms that are less frozen and more transparent, cloning the idiom chunk, as in (12b), facilitates access to the idiomatic interpretation as a euphemism, allowing the continuation “so I won’t be jealous of you” as opposed to the literal reading, allowing the continuation “so I don’t know if he snores”. When the entire phrase is cloned, as in (12c), both interpretations are readily available.

- (12) a. **Hari kicked the BUCKET-bucket.* (Ghomeshi et al. 2004: 331)
 b. *I slept with him but I never SLEPT slept with him.*
 c. *I slept with him but I never SLEPT with him slept with him.*

A striking example of a cloned idiom chunk is provided in this excerpt from a young woman’s 2011 travel blog posting from Chiang Mai, Thailand, offering an eye-witness account of the excretory practices of pachyderms (emphasis added):

- (13) *One of the elephants grabbed a sandwich wrapped in plastic and shoved it into her mouth, which I found to be pretty funny. But, what was even funnier, as gross as this sounds, is **when the elephants go to the bathroom**. It sounds like a waterfall when an elephant pees, and it looks like one, too. All the while, the elephant is just standing there, staring straight ahead and looking for food. **When an elephant goes to the BATHROOM bathroom**, it isn’t nearly as funny other than the fact that it just stands there and lets loose ...*
 (<http://www.thewritewayaround.com/blog/2011/125/>)

(American English readers may be reminded of the distinction between going number 1 vs. going number 2.)

– **Why do clones exist?**

One puzzle in the analysis of clones is determining why they should exist, given that a clone of the form XX involves more effort for the speaker to produce than the unmodified X, while being less informative for the hearer than YX where $Y \neq X$. As first observed in Dray (1987), the lexical clone offers a natural laboratory for

observing the interplay of the Q and R Principles (Horn 1984, 2006). A clone XX is more effortful (to produce and to process) than the simple nominal X. On the other hand, the clone XX is less informative, and arguably less effortful (for speaker and/or hearer) than a phrase or compound YX, where $Y \neq X$. XX must be both *necessary* (as against X), given the R Principle (essentially “Don’t say too much”) and *sufficient* (as against YX), given the Q Principle (essentially “Say enough”), to narrow the domain appropriately. By the Division of Pragmatic Labor (Horn 1984, 2006; Levinson 2000), the addressee will infer there must have been a reason for the speaker to expend the additional effort, but this does predict just what that reason might have been.⁴

One motivation for the use of a clone, as Dray observes, is that the speaker might find it harder (or, in the case of *DRINK drink*, more socially laden) to characterize the narrowed domain by spelling out the specific denotatum overtly in a YX construction than by invoking it via the clone. In addition, by assuming that we share sufficient common ground for you to draw the appropriate understanding of my intended meaning or reference, my use of a clone will index the social bond between us in a similar way to specialized acronyms, initialisms, secret language and code, or reclaimed epithets or slurs within the in-group.

2 Functions of clones

2.1 Nominal clones and *echt*-icity

While acknowledging the essential role of context in narrowing down intended meanings and likely interpretations, we can draw certain generalizations for the derivation of default, *ceteris paribus* meanings, as recognized in early work on the construction:

[T]he reduplicated modifier singles out a member or subset of the extension of the noun that represents a true, real, default, or prototype instance: a *DOG dog* may be a canine (excluding hot dogs or unattractive people) or it may be a German shepherd or collie (excluding Chihuahuas and toy poodles), a *SALAD salad* is based on lettuce, not tuna, potatoes or

⁴ Cf. Horn (1991) for a detailed account along these lines of the possible motivations for abjuring a simple adjective X in favor of the doubly negated *not un-X*. This analysis of the pragmatic grounds for clones (Dray 1987; Horn 2006) remains somewhat controversial even within neo-Gricean theory; see Huang (2009: 133–141, 2015) for an alternative neo-Gricean/neo-Levinsonian picture drawing on the marked nature of XX vis-à-vis YX structures.

squid, while a *DRINK drink* is the real thing, in the alcohol (not Pepsi) sense of the term: not a default beverage but a socially salient one, [...] functioning as a quasi-euphemism. (Horn 1993: 48)

Thus nominal clones tend to instantiate what Rosch (1978 et seq.) terms a prototype – a psychologically or perceptually salient exemplar or central category member. We can dub the relevant property *echt*-icity: a DOG dog is an *echt* dog, not an outlier or peripheral category member. The SALAD salad is the star player in the eponymous paper on the construction, Ghomeshi et al. (2004), and returns in periodic sightings since, often in explicitly contrastive settings:

- (14) *I just couldn't pick one thing so I filled my plate with tiny piles of shrimp and pesto salad, steak tip salad, Chinese chicken salad, and salad salad.*
(Claire Cook (2007), *Life's a Beach*)

Thus an XX is prototypically (although not invariably) a “real”, “true”, or “echt” X, at least by default (cf. Hohenhaus 2004, Finkbeiner 2014, Huang 2015). As such, prototype or *echt*-icity clones build in the same exclusionary or contrastive function that Austin (1963: 70) described for the *real X* locution itself⁵:

[A] definite sense attaches to the assertion that something is real, a real such-and-such, only in the light of a specific way in which it might be, or might have been, not real. ‘A real duck’ differs from the simple ‘a duck’ only in that it is used to exclude various ways of being not a real duck – but a dummy, a toy, a picture, a decoy, etc.; and moreover I don’t know *just* how to take the assertion that it’s a real duck unless I know *just* what on that particular occasion, the speaker has in mind to exclude [...] [T]he function of ‘real’ is not to contribute positively to the characterization of anything, but to exclude possible ways of being *not real*.

To extend Austin’s point, it might be added that *real duck* – or *DUCK duck* – also rules out albino ducks, dwarf or diseased ducks, holographic ducks, and the like.⁶

In addition to signaling *echt*-icity, clones may have an intensifying or “value-added” function, particularly when applying to scalar adjectives (*TALL*

⁵ Despite the tempting paraphrase with *real* (cf. Stolz et al. 2011 and Freywald 2015 on RXR = “Real X reduplication”), I adopt the German loan *echt* and introduce its nominalization *echt*-icity for the prototype use of clones, in part because *echt* (at least in its use in English, as supported by lexicographic entries) extends to ‘true, genuine, typical’ and in part to forestall having to make do with *reality*, *realness*, or *real-icity*, none of which lends itself as well as does *echt*-icity as a label for the relevant property.

⁶ With mass nouns too, XX can represent the real (instance of) X: *He was afraid of the dark. The dark dark. Real dark* (Harlan Coben (2014), *Missing You*, p. 141).

tall, DRUNK drunk). Still others serve to indicate a literal as opposed to figurative or metaphorical use of the cloned item. We will touch on examples of all three of these functions.⁷

But first we need to underline another important insight of Dray's description: the overriding role of context in disambiguating among possible interpretations of a given token. Thus the same clone XX, in explicit or implicit contrast with X, can signal a stronger meaning (by its presence or its absence, as in (15a) and (15b) respectively) or a weaker or literal meaning as in (15c).

- (15) a. (just) X or XX?; not (just) X but XX
 b. not XX but X (+ optional concessive contour as in (14b) below)
 c. (just) XX; XX but not X

Dray stresses the essential role of context in speakers' implying and hearers' inferring the appropriate interpretation, as illustrated by her elegant minimal pair in (16):

- (16) a. Oh, we're just LIVING TOGETHER living together.
 [simple falling contour]
 b. Oh, we're not LIVING TOGETHER living together.
 [rise-fall-rise (cf. Constant 2012), L+H* L-H%]

With the *echt-icity* clone in (16a), induced by down-toning *just* and falling contour, the couple present themselves as mere roommates who are not romantically or sexually involved,⁸ while the negation and rising concessive contour in (16b) yields the opposite (value-added) sense. The result is that the affirmative and negative sentences convey precisely the same (innocent) proposition.

A speaker can even contrast two readings of the identical clone in the appropriate double-decker context, as in (17), an exchange reported by Dray (1987: 90):

⁷ Other functions may arise in local contexts. Thus, as employed by Jon Stewart in his interview on "The Daily Show" (Jan. 28, 2014) of comic Louis C.K., whose movie "Tomorrow Night" had just been released years after it was made, the clone reinforces the completive feature on *finish*:

Louis C. K.: "It was delayed."
 Jon Stewart: "When did you FINISH it finish it? 'Cause I remember you were editing it, and this was '96."

⁸ Contrary to the prediction by Ghomeshi et al. (2004: 321), who cite the idiomatic (16b) [their (1g)], (16a) shows that *non-idiomatic* verb-adverb sequences can be cloned as well; cf. also (12c) above.

- (17) A: [pulls off nightclothes] *I'm hot.*
 B: *Do you mean HOT hot, or ^^HOT hot?*

(The diacritic in the double-decker clone, introduced in Horn 1993: 49, represents raised eyebrows.) Moving from the bedroom to the kitchen, B could pose the same query without raised eyebrows in response to a warning that the chili was hot to ask whether the reference had been to temperature or spiciness.

While some (Horn 1993, 2006; Ghomeshi et al. 2004; Finkbeiner 2014) have posited default meanings in isolation for nominal and adjectival clones, others (e.g. Whitton 2006; Huang 2009; Song and Lee 2011) follow Dray in stressing the effects of context and question the feasibility of establishing core meanings, especially for nominal clones. This point is made forcefully by Whitton (2006: 19–20), reporting the examples in (18), in which *DRINK drink* variously narrows the referent to alcoholic drinks (as opposed to beverages more generally), to hard liquor (as opposed to wine), and to a soft drink (rather than water); Whitton's point is that while each can be read as a value-added clone,⁹ the actual opposition (tacit or expressed) depends on the relevant scale.

- (18) a. *You said in an earlier article that if you must have a “**drink, drink**” go with the hard liquor. Why is hard liquor better than beer?*
 b. *“Do you want a bottle of wine?” Mac asks. “I think I'll have a **drink-drink**”, I say, and when the waiter comes I order a martini.*
 c. [Two people at fast food restaurant sharing a meal that includes a soft drink]
 – *What do you wanna get?*
 – *I'll probably just get water so if you want a **drink-drink** get what you want.*

There is, however, no true conflict between defaultists and contextualists. The pattern manifested by clones may be seen as part of a tradeoff whose general form can be traced back to the Elsewhere Condition in morphological theory (Anderson 1969 and Kiparsky 1973, developing principles dating back to Pāṇini): Essentially, a more specific context is disjunctively ordered to apply before the more general “elsewhere” context can be invoked. In the terminology of Lascarides and Copestake (1998), the principle *default survives* represents the elsewhere condition that is overridden (or bled) by the more specific *discourse*

⁹ And even that codicil doesn't always apply, as seen in another of Whitton's examples: “Are you looking for alcohol? Or just a **drink-drink**?” (See Song and Lee 2011: 444–447 for discussion.)

wins. Thus, given a conflict, the more specific heuristic principle overrides, as in the interpretation of coerced predicates:

(19) *My goat enjoyed your book.*

Default: *X enjoyed the book* +> *X enjoyed reading the book.*

Pragmatic knowledge: *Goats don't read.*

Derived non-monotonic inference: *The goat enjoyed eating the book.*

2.2 Adjectives, scales, and intensification

Cloning an adjective (*DRUNK drunk, TALL tall*) generally yields an intensified meaning. Indeed, the intensifying function of adjectival clones is more robustly replicated cross-linguistically than the *echt*-icity function of nominal clones; on crosslinguistic variation in clones and related reduplications see Moravcsik (1978), Ghomeshi et al. (2004), Hurch (2005), Huang (2009), Stolz et al. (2011), and Aboh et al. (2013).

It is plausible to see in the widespread attestation of intensified adjectival clones a reflex of what has been called the *iconic principle of reduplication* (Kouwenberg and LaCharité 2005: 534, citing earlier work): “More of the same form stands for more of the same meaning.” The correspondence between iteration and salience is a general feature of repetition as well as of reduplication (see Stolz and Levkovych, this volume, for a comparison and contrast between the two processes). Thus, to take discourse repetition, if you tell me “We walked and walked and walked and walked” or “They kissed and they kissed and they kissed” or, channeling Macbeth, “Tomorrow, and tomorrow, and tomorrow, creeps in this petty pace”, the greater locutionary effort required by your iteration implies a commensurately greater distance traversed, intensity achieved, or desperation felt (cf. Hohenhaus 2004; Horn 2006).¹⁰

But in speaking of the intensifying effect of adjectival clones, what exactly do we mean by “intensity”? In his classic treatment of scalar adjectives, Kennedy (2007) distinguishes relative adjectives from absolute ones by invoking diagnostics derived from the distribution of adverbs and comparatives:

¹⁰ To be sure, clones differ from discourse repetitions across a variety of parameters. For one thing, repetitions have the general form *X* where $n \geq 2$, and there is a general analog correspondence: *walking and walking and walking and walking* > *walking and walking*. For another, clones cross-categorially have the form *XX* with prosodic focus on (or within) the first *X*, whether or not they can be straightforwardly analyzed as lexical compounds (*SALAD salad, DRUNK drunk*) or not (*LIKE HIM like him*); none of these properties hold for discourse repetitions.

- (20) Relative adjectives (*tall, good, big, rich, happy*):
 ✓*very tall*, ✓*bigger than X*, but #*completely*/#*totally*/#*absolutely*/#*almost tall*
 Absolute adjectives (*empty, closed, dry, dead, naked*):
 #*very naked*, #*emptier than X*, but ✓*completely*/✓*absolutely*/✓*almost naked*

While cloning a relative adjective yields an intensified reading (*TALL tall, RICH rich*), cloning an absolute adjective yields an endpoint value (*DRY dry, EMPTY empty*) or a literal meaning (*DEAD dead, NAKED naked*). We are dealing here not with intensification as such but with slack regulation (Lasersohn 1999): “XX” is opposed to “technically X”, often with the suggestion “Now **that’s** what I’d call **X!**” Is there some way of generalizing across the semantically distinct subcategories of adjectives to allow for a unified characterization of the effect of cloning?

One approach is to follow Franke (2012: 311), who provides evidence of “a general tendency to use gradable terms to preferentially pick out extreme-valued properties” and points out that “it is pragmatically beneficial to use those gradable properties in referential descriptions that are *perceptually salient* in a given context”, i.e. strong values distant from the mean of the distribution. It is the salience associated with both heightened relative values (*TALL tall*) and the endpoints of closed upper-bounded scales (*DRY dry*) that is most pragmatically efficient for adjectives. For nominals, what is particularly salient in referential identification is arguable *echt*-icity, the closeness to a prototype value. For adverbs, salience can plausibly be taken to correlate with the deictic center or origo (*SOON soon, HERE here, NOW now, HOME home*).

2.3 Slack regulation and cloning

What sort of meaning adjustments does cloning (or “contrastive reduplication”) impose on interpretation? Here is Ghomeshi et al.’s take (Ghomeshi et al. 2004: 317):

What CR and Lasersohn’s slack regulators have in common is that they both have a set-shrinking effect, the effect of narrowing down the range of appropriate referents of a lexical item. How they differ (putting aside the fact that CR cannot apply to propositions) is in the types of sets involved. Lasersohn defines a pragmatic halo in truth-theoretic terms: his slack regulators make fewer truth-conditionally false statements appropriate in a given context. By contrast, CR rules out not denotations that are truthconditionally false (not FALSE-false), but rather denotations that are less prototypical: many things are salads but not SALAD-salads.

Similarly, Huang (2015) cites Lasersohn and pragmatic slack regulation. But for adjectival scales, there are truth-conditional differences between being X and being XX. One can be rich without being RICH rich, or dead (i.e. brain dead) without being DEAD dead (i.e. actually dead).

Even more clearly, cloning a universal quantifier induces a truth-conditionally relevant domain narrowing: *NOTHING nothing* rules out what *nothing* may admit, just as *EVERYBODY everybody* ranges over every last member of the (narrowed) domain with no exceptions. Thus a negated clone will admit counterexamples to universality:

- (21) a. A: *So what have you got for me?*
 B: *Professionally? Well, honestly, nothing.*
 A: *Nothing?*
 B: *Well, not NOTHING nothing. Just nothing much.*
 (exchange between a singer and her manager on “Nashville”, Feb. 11, 2015)
- b. Ebola in any form is pretty much bad news for everybody. Well, not EVERYBODY everybody... Lakeland Industries, the newly famous hazmat [hazardous materials] suit maker which manufactures the ChemMax 1 worn by medical staff treating Ebola patients, did great in early trading, reaching a high of 16.25 dollars a share today.¹¹

Beltrama (2014) makes a related point with respect to innovative uses of the Italian suffix *-issimo*, a superlative suffix on scalar adjectives or adverbials that has become increasingly available for expressive intensification on quantifiers and nominals. *Nessunissimo* can be glossed as ‘ANYONE anyone, anyone at all’, widening the usual domain of *nessuno*. A speaker-oriented use, parallel to Eng. *totally* or *so* (cf. Irwin 2014) is in current development, as illustrated in the social media examples Beltrama has been collecting, including captions like *lampughissima in alto adriatica* (‘dorado-issimo from the deep Adriatic’) and *Il tramontissimo della Pianura Padana* (‘Sunset-issimo on the Po Valley’).

3 Other forms, other functions: the versatility of clones

3.1 Clones and literality

In complaining “Now I’ve lost my work husband *and* my HUSBAND husband”, Dr. Miranda Bailey uses a clone (on “Grey’s Anatomy”, Nov. 12, 2009) to invoke an opposition between the man to whom she is married, her literal husband, and

¹¹ <http://fotios.whotrades.com/blog/43254811471>

her primary colleague at work, her work husband. As evidenced by Google hits, the metaphorical (work) spouse is a standard conceit in contemporary American and British culture, but the use of clones to signal literal rather than metaphorical property possession is productive, as seen in in (22) and (23).

- (22) – *What about his car? He said he could get anything he needed from his car.*
 – *He didn't mean his CAR car. He meant his crew. His people. Together they're a car, going everywhere together. It comes from county lockup. Eight people to a cell. They call them cars.*

(Michael Connelly (1999), *Angels Flight*, p. 199)

- (23) *And what I'd done is, I'd pissed my life away. Literally. Well, OK, not literally literally. I hadn't, you know, turned my life into urine and stored it in my bladder and so on and so forth.*

(Nick Hornby (2005), *A Long Way Down*, p. 8 [*piss away* = 'spend wastefully'])

A particularly striking instance of the literality clone is the ultimate context:

- (24) A: *I'm sorry, your husband is effectively brain dead.*

B: *But not DEAD dead.*

(exchange on "The Good Wife", 23 May 2010)

- (25) *Hosni Mubarak: Not Dead Dead*

by Juli Weiner, 20 June 2012 [boldface added]

*Yesterday evening Twitter and Tahrir Square reacted to the passing of deposed Egyptian despot Hosni Mubarak, who was described in a Reuters tweet as "clinically dead". Turns out Mubarak is not **dead dead**, just doing very badly. June 19, 2012: write that down. The first time Twitter incorrectly reported a famous person's death. Reuters then clarified that Mubarak is "on life support", "completely unconscious", and "using artificial respiration".¹²*

3.2 Euphemism and taboo avoidance

We have explored the use of "value added" clones as euphemisms to avoid violating negative face and social taboos, as with *DRINK drink*, *SLEEP WITH HIM sleep with him*, *LIVING TOGETHER living together*, or go to the *BATHROOM bathroom*.

¹² <http://www.vanityfair.com/news/2012/06/Hosni-Mubarak-Not-Dead-Dead>

The realm of sexual and romantic interaction serves as a particularly fruitful domain for such clones. To (26) (= Ghomeshi et al. 2004 (16); Ghomeshi et al. 2004: 315 note the “raised eyebrow” contour associated with the ‘pregnant’ sense of *late*) we can add the naturalistic data in (27) gathered by Yale undergraduates in 1987–1995.¹³

- (26) A: *I’m late, Lois.*
 B: *Well, if you didn’t spend so much time on your hair...*
 A: *No, I mean ^^LATE-late.*
- (27) a. A: *And now her girlfriend is going to drive 16 hours to come see her in New Haven.*
 B: *Oh... I didn’t think she was **that** good a friend.*
 A: *Nonono... Her GIRLFRIEND girlfriend.*
 B: *Ohhhh!*
- b. *SEX sex: “refers to regular intercourse, not variations or imitations such as oral or vaginal sex”*
- c. A: *Did you hook up?*
 B: *Yeah, we hooked up.*
 A: *Did you ^^HOOK up hook up?*
 B: *No, we just hooked up hooked up.*

As seen in the double-decker clone above, *hook up* covers a multitude of activities: for A, the relevant scale is <*mess around, ^^hook up*>; for B, it’s <*hook up, have sex*>.

Hook up as value-added or euphemistic clone reappears in (28), where B’s parsing instantiates the X vs. XX contrast of (15a). This contrast is subtler but robustly attested when X = *like(s) [pro]*, as in (29)–(31).

- (28) A: *I’m sorry, I didn’t know you slept with Logan. I thought you two just messed around.*
 B: *No, you said **you** just messed around with him. I said that he and I hooked up. I meant HOOKED UP hooked up.*
 A: *I thought you meant **just** hooked up, like messed around.*
 (dialogue among bridesmaids on “Gilmore Girls”, 1 March 2006)

¹³ The background presuppositions of the (female) student who produced (27b) will be left as an exercise for the reader. Compare, from Sarah Dunn’s 2009 novel *Secrets to Happiness*, p. 49: “Betsy hadn’t had sex, actual SEX-sex, full sex, in two hundred and fifty-three days.”

- (29) Doctor: *What are you doing?*
 (Male) intern: *Hiding. There's this VIP patient... he likes me.*
 Doctor: *That's good, right?*
 Intern: *He LIKES ME [pause] likes me.*
 (exchange on "Grey's Anatomy", 11 April 2005)
- (30) A: *Is that other doctor your boyfriend?*
 B: *No.*
 A: *Do you like him?*
 B: *He's a friend.*
 A: *Do you LIKE HIM like him?*
 (exchange on "House", 20 Dec. 2007)
- (31) *I think she actually likes him. Like, LIKES HIM likes him.*
 (Kristina to Adam about a girl in their son's class, "Parenthood", 30 Oct. 2014)

3.3 The (apparent) gendered sociolinguistics of clones

It is hardly a coincidence that the majority of scripted clones in the preceding sections were produced by female speakers. This is not universally the case, but the preponderance of instantiations in popular media occur in, and arguably index, an indirect, "dancing-around" speech style associated (legitimately or not) with women (or, as noted below, gay men). Thus, a *FRIEND friend* may be a prototype friend ("just a friend") as opposed to an "umfriend" ("Grandma, I'd like you meet my... um... ^^friend") or "friend-plus", as in these Google-drawn examples:

- (32) a. *"Is he... a friend friend, or a special friend?" I sighed and continued to stare at Harry's face, now forcing down a smile. "Just a friend."*
 b. *Is he a friend-friend or a "friend" (someone you've never really been friends with and you've always suspected he wanted more although he never acted upon it)?*
 c. *as Harvey Fierstein once so cleverly wrote, is he "a friend-friend or a euphemism-friend"?*

As with *LIVING TOGETHER living together* in (13) or *HOOK UP hook up* in (27), other contexts force the value-added, euphemistic "umfriend" reading.

Of particular interest in (33a) is Zara's association of the clone with "girly-ing out", echoed by the blogger's complaint in (33b) about the preciousness

(or stupidity) of women's use of clones – to be laid of course at the door of society.

(33) a. Sam: *Well, I don't cotton much to kissing gents and my preferences veer towards ladyfolk [...] Joe and I are friends.*

Zara: *I could **girly out on you** and follow-up with "Are you friends or are you **friends-friends**?" but I'm just not that girly.*¹⁴

b. [From blog entry on Tumblr by a self-described "humor columnist":] *To be fair, it is really society that "mind fucks" women on a daily basis and makes it impossible for them to say exactly what is on their mind. Instead they dance around actual subjects... Phrases like, "I like him, but I don't like him, like him", and "I went shopping but I didn't go shopping, shopping" make guys just stare at them cross-eyed and give up altogether.*

(<http://andreitrostel.tumblr.com/post/21863193736/women-really-are-stupid>)

These disparaging views of clone and clone-wielder reflect a perception that the construction is somehow coy or affected. In any case, the clone often tends to function as a marker of women's style – and derivatively that of gay and "metro-sexual" men. Thus, within thirty minutes of screen time in the 1998 film "Object of My Affections" (screenplay by Stephen McCauley from his eponymous novel), we have three clones:

(34) a. [George enters a crib store with his roommate Nina, who's pregnant with the baby-to-be (not his!) they're planning to raise together, and is surprised to run into an ex-lover, the man running the store]

Crib store guy: ***You're** not someone I expected to see in here.*

George: *This is my friend, Nina Borowski.*

Crib store guy (puzzled): *Yes, I see that.*

George: *No, she's my **FRIEND**... friend.* [cf. (32)]

b. [George is flirting with Paul, a young actor attending a literary workshop as the companion of an older man, a famous critic who George and the viewer incorrectly assume is his lover]

George: *How long have you been with him?*

Paul: *I haven't been **WITH HIM** with him.*

¹⁴ <http://www.matchflick.com/column/1662#sthash.L5BRayiL.8ePsZ7lM.dpuf>

- c. [Just afterward, Paul interrupting a post-coital conversation to mention having to make a phone call, prompting George to suddenly blurt out that he was supposed to call Nina]

Paul: *Your roommate.*

George: *Yeah, we live together.* [pause.] *We don't LIVE live together, we just live together.*

In the 2014 movie “While We’re Young”, Ben Stiller’s character is straight but metrosexual; his clone is used to signal incredulity, perhaps disingenuously searching for an escape hatch that by definition isn’t there:

(35) Doctor: *You have arthritis.*

Ben Stiller: *Like ARTHRITIS arthritis?*

Doctor: *I usually just say it once.*

(<http://www.mtv.com/news/2016091/while-were-young-trailer/>)

A similar example comes from a conversation between two old junior-high school classmates who have just run into each other (from the 2002 film “Lovely and Amazing”, cited in Hohenhaus 2004):

(36) Michelle: *What about you? What are you up to?*

Debbie: *I'm a pediatrician.*

Michelle: *Are you kidding me?*

Debbie: *No, why?*

Michelle: *I don't know. It seems...too fast.*

Debbie: *We **are** 36.*

Michelle: *I know, but we're not **36** 36.*

There may also be metalinguistic or self-conscious flavor in clones, as overtly represented in (37), taken from Episode 7 (Homesick/Lagom) of the bilingual situation comedy “Welcome to Sweden” aired in the U.S. on NBC, Aug. 21, 2014. This is a transcript of the English subtitles for a conversation in Swedish between Emma and her boss about their upcoming meeting to negotiate salary levels; the quote marks in the English subtitles correspond to two-fingered air quotes in the actors’ rendition of the Swedish lines.¹⁵

¹⁵ This episode is accessible within North America at <http://www.nbc.com/welcome-to-sweden/episode-guide/season-1/homesicklagom/107>, 7:30–8:07. Elisabet Engdahl observes (p.c.)

- (37) Boss: *All set for our negotiations tomorrow? Well, not “negotiations negotiations”, but “negotiations.”*
 Emma: *What do you mean by “negotiations negotiations”?*
 Boss: *You know what I mean. These negotiations are just a formality. Everyone in the department gets the same salary, so...*
 Emma: *So why bother with negotiations?*
 Boss: *It’s company policy. I mean it’s not “policy policy”, but “policy”. Plus, it’s the only time the company pays for our lunch.*
 Emma: *OK, so is it lunch, or “lunch lunch”?*
 Boss: *It’s “lunch lunch”.*

4 Clones and induced partitions

4.1 The un-prototype: Clones, *un*-nouns, and retronyms

The episode of “Parenthood” that provided the clone in (31) also features this plaint from Adam to Kristina, who has been busying herself with small non-profit enterprises:

- (38) *I can’t take it anymore. Everybody needs something from me... It’s like a weight around my neck and I want it gone, and I could call a head-hunter tomorrow, I could get a JOB job.*

Similarly, Michelle of “Lovely and Amazing” above – the 36 (but not **36** 36)-year-old who has been unsuccessfully seeking a market for the dollhouse chairs she makes from twigs – is pointedly lectured by her mother, “Maybe you should just get a job. You know, a JOB job?”

JOB job has arguably joined the permanent lexicon (at least temporarily) for salaried work, prototypically 9:00 to 5:00 every day, with health benefits – a “real job” or “regular job”, as opposed to a “McJob” or an *unjob* (as a self-employed free agent, a contract worker or part-timer, an unpaid intern, or a stay-at-home parent). The *un*-noun, already encountered in (4), comes in two flavors (see Horn 2002, 2005 for elaboration). The “Class A” *un*-X is Almost (but not quite) an X: an *un-cola* is a soft drink that isn’t a cola, an *unmartini* is a concoction served in

that the Swedish data is plausible if exaggerated; the clones have the prosody of compounds in Swedish with stress on first element as in English.

a martini glass that doesn't contain gin and vermouth, an *UnTurkey* is (or was, before Now & Zen stopped making them) a "bird" designed to be roasted up for the vegan holiday table.

But other *un*-nouns denote actual, but peripheral, members of the relevant category: the "Class B" *un*-X is Barely an X. Thus *unsheets* are unbleached, untreated cotton sheets, an *unvegetarian* is a gourmet vegetarian chef, an *unbank* is one that has no tellers or no mean bankers out to profit at your expense. For our purposes, the key point is that the *echt*-icity or prototype clone XX can be seen as the functional opposite of the Class B *un*-X. One case in point is the *BOOK book* and its imitations¹⁶:

(39) What makes a real book vs. a 'book'

A couple of years ago I was walking up Sixth Avenue in New York with my friend, the literary agent Michael Carlisle. Michael was ebullient; he had just sold a book about Miguel Cervantes to Bloomsbury, an excellent small press best known for discovering "Harry Potter". "It's a book book, it's not a 'book'", Michael explained. ... "I represent books. There are enough 'books' in the world already." Celebrities, sports heroes, YouTube sensations and feckless politicians generally create 'books,' or have them created for them. (Alex Beam, Boston Globe, 30 Oct. 2014, <http://tinyurl.com/q2nk12s>)

In such cases, the clone serves to induce a partition of the set denoted by X, dividing it into the real or *echt* X's (the XX's, of course) and the others. An X in the complement of the XX set can be designated in a number of different ways, e.g. by a negative prefix, typically (and increasingly) *un*-, as with the Class B *un*-nouns (*un-book*) or by scare/air quotes, à la agent Carlisle: a "book" is not a real or *echt* book, not a BOOK book.

In the old days, before the peripheralizing *un*-noun or the dismissive scare/air quotes, there was the pejorative *non*-:

The term *nonbook* has been applied to a book consisting of photographs of babies or stills from old movies with clever captions under each picture. It has also been used to describe the sort of "gift volume" that is of a size intended for large coffee tables rather than normal book shelves, is flossily bound, and contains more colored illustrations than text. [...] A nonbook is something that has the shape and superficial appearance of a book, but that the critic feels to be devoid of the value, use, or worth commonly associated with books. (Algeo 1971: 92)

¹⁶ Freywald (2015) cites *Buchbuch* as a canonical prototype-denoting clone in German (= 'book-book; a real book, not an e-book'), an example of what she terms RXR ("Real-X Reduplication").

Of course in the OLD old days, a BOOK book was called... a book, and is thus not only a clone but a retronym. A retronym is an innovative term containing a previously unnecessary modifier introduced to respond to lexical pressure prompted by technological and/or social progress (or “progress”); thus, a landline telephone now designates what, in the days of our pre-cellular innocence, was known simply as a telephone.¹⁷ Examples include:

- | | | | |
|------|-------------------|--------------------|---------------------------------|
| (40) | acoustic guitar | analog watch | brick and mortar store |
| | snail mail | meat people | rotary phone |
| | Roman Catholic | Latin Mass | Orthodox Jew |
| | biological mother | birth mother | manual labor |
| | amateur athlete | natural childbirth | human intelligence, human polls |
| | World War I | Queen Elizabeth I | George Bush 41 |

As demonstrated by *BOOK book*, *echt-icity* clones make natural (if superficially redundant-sounding) retronyms, especially for mass nouns/substances:

- (41) *WOOD wood* (as opposed to imitation wood grain)
WOOD wood (for a golf club, as opposed to fiberglass)
CREAM cream (vs. non-dairy creamer or half-and-half)
GLASS glass (not plexiglass)
CHEESE cheese (as opposed to “cheese food product”)
MOM mom (as opposed to *step-mom*)

4.2 How to coerce a partition

As we have seen, clones often function to distinguish the X from the XX; if the set or category in question is not already pre-partitioned into a prototype or core sub-domain (the *SALAD salad*) and its un-*echt* complement, if a scale is not pre-partitioned into a salient or intensified interval (*TALL tall*) and its complement, the use of the clone in a contrastive context will induce or coerce such a partition. This motivation for clones is a convenient ploy for advertisers. One example is the Saatchi & Saatchi campaign launched in May 2007 for Cold Stone Creamery based

¹⁷ Cf. <https://en.wikipedia.org/wiki/retronym> for a useful history of the term with references and links, and Horn (1993) on the relation of retronyms to clones.

on the tagline “Do you love it, or do you LOVE IT love it?”¹⁸ Another is the commercial for Samsung Galaxy Note 4 with the “S pen” stylus aired in November 2014:

(42) Man in train station: *Do you like that pen?*

Woman: *I love it.*

Man: *LOVE IT love it?*

Voiceover: *SHE DOES she does.*

These commercials coerce a scalar opposition of the form <love it, LOVE IT love it> along the lines of classic oppositions like <some, all>. This allows for upper-bounding implicature, in which one can “love X” but not “LOVE IT love it” (as in *some but not all*). Analogous cases are not hard to find. Here is Seth Meyers on Saturday Night Live Weekend Update, Feb. 11, 2012, on the plan by congressional Republicans to block birth control funding:

(43) *That’s got to be bad news for women who are Catholic but, you know, not CATHOLIC Catholic.*

On a more serious note, in a now infamous segment of “The View”, Sept. 28, 2009, Whoopi Goldberg tacitly invoked a scale of the form <rape, RAPE rape> in maintaining that while it may have been unfortunate that a 43-year-old Roman Polanski plied a 13 year old with Quaaludes and champagne and then having sex with her,

(44) *I don’t believe it was RAPE rape.*

(<https://www.youtube.com/watch?v=nZskUvAGyIQ>)

Other devices are available for coercing such partitions, such as the double existential (here and below, **boldface** is added to mark contrastive stress when this is not otherwise indicated in the original):

(45) a. *There’s loving something and (then) there’s **loving** it.*

b. *There are Catholics and (then) there are **Catholics**.*

c. *There’s rape and (then) there’s **rape**.*

Of course it’s easy to imagine the anti-partitionist reply: “Rape is rape” (cf. Ward and Hirschberg 1991 on the uses of tautology).

18 Three versions of the Cold Stone Creamery commercial can be viewed at <http://www.kevinmyers.com/the-ultimate-ice-cream-experience/>.

4.3 Contrastive focus non-reduplication

The double existentials surveyed above exhibit a similar contrastive focus to that of partition-inducing clones. Indeed, perhaps the strongest argument for positing an inherently contrastive nature of clones (à la Ghomeshi et al. 2004) is the contrastive nature of certain *non*-clones, as seen not just in the double existentials of (45) but in minimal contrasts between unfocused and (prosodically or orthographically) focused alternatives. Dray (1987: 91) recognizes a category of “contrastive repetition” illustrated by her (constructed) example (46) (emphasis hers), to which we can add the attested examples in (47) and (48) in which upper-casing serves to mark focus:

(46) *Was it a kiss or a **kiss**?*

(47) *After playing a staggering 40,000 minutes (in just 11 seasons) and carrying four straight Finals teams, LeBron [James] might be battling the long-term effects of a historically ridiculous two-way burden. He’s still great, but he’s not GREAT.*

(Bill Simmons, 19 Dec. 2014, <http://grantland.com/the-triangle/finding-the-cleveland-misery-tipping-point/>)

(48) *There’s great, and there’s Great. Methinks this chic Lanvin Happy Snakeskin Shoulder Bag definitely falls into the latter category.*

(<http://www.pursepage.com/lanvin-bags/lanvin-happy-snakeskin-shoulder-bag.html>)

The same contrast can be attested in sequences of the form *hot but not **hot*** – whether the domain is temperature, spiciness, or arousal:

(49) *But – I can tell you this, and maybe I’m stating the obvious here but – Vegas is a DESERT. In other words, it’s hot. No, it’s not hot ... it’s HOT. REALLY HOT. People drop like flies during the day from *walking* too much.¹⁹*

(50) *I like a man who can admit when he’s wrong: “It’s not hot ... IT’S HOT!! Put them away.”*

(video showing toddlers’ reactions to tasting spicy Cheetos, http://thestir.cafemom.com/toddler/125453/kids_have_hilarious_reactions_to)

¹⁹ <http://www.skatelogforum.com/forums/showthread.php?t=5774>

- (51) *J, it's not "hot", it's "HOT!!!" haha. This should definitely help make it obvious why people do mods like that.*
 (genital modification blog, <http://news.bme.com/2006/07/07/feelings-outside-and-inside/>)

The correlation of prosodic focus and scalar intensification in these cases is a clear instance of iconicity: an increase in form correlates with an increase in content. The same pattern can be found with vowel duration, another variety of contrastive focus non-reduplication. But there is an interesting asymmetry here, as noted by Pierre Schlenker (p.c.). The vowel of *long* can be lengthened to convey length in time or space: *A loooooong time* lasts a lot longer than a long time, and *if it's a long chapter we can publish it, but if it's a loooooong chapter, you might have to cut it down a bit*. But no such intensification is possible with counter-iconic intensification: *shoooooort* doesn't convey 'very short' (or anything else), and there's no possibility of shortening *short* either. On the other hand, *SHORT short* yields the desired meaning without a problem, and amplitude can do what duration cannot:

- (52) *I'm short. Not SHORT, but short. I'm 5'8" (on a good day) with a 30" inseam.*
 (<http://www.totalmotorcycle.com/BBS/viewtopic.php?t=22628>)

Crucially, though, both amplitude and duration convey intensification through analog rather than digital means, and are thus akin to repetition (cf. Stolz et al. 2011, Stolz and Levkovych, this volume) rather than to true lexical processes like cloning. Not only is their distribution restricted to adjectival and adverbial domains rather than nouns but they can only signal salience along scalar dimensions: I cannot inform you that the patient is *dead* [i.e. brain dead] but not *DEAD*, or that Mubarak is not [dææææd] but just *dead*. Only *DEAD dead* does the deed.

5 Clones in cross-linguistic perspective

Given their formal – almost childlike – simplicity, their colloquial flavor, and their implicit invocation of negotiation between speaker and hearer,²⁰ lexical clones have been the subject for speculation from cartoonists to language

²⁰ For related reduplicative constructions whose interpretation involves negotiation of meaning between speaker and hearer, see Engdahl and Norén (2007) on Swedish *X och X* and Finkbeiner (this volume) on German *X hin*, *X her* and *X und X*.

bloggers. Carey (2012) notes the contagious quality of the construction and embeds a short routine from English comedian Micky Flanagan who explains the difference between going *out* and going *OUT out*, complete with glottal stops. Solomon (2013) offers a summary of Ghomeshi et al. (2004) for a general readership and discusses the motivation for the use of clones along the lines we have discussed; her post drew 114 comments, with interesting examples along with, inevitably, misunderstandings, e.g. citations of repeated sequences that are not clones at all (“*Yeah, yeah*”; “*He had had it*”; “*The thing is is*”; “*That’s a no-no*”).

This returns us to the question of how to situate clones within the families of narrowing, intensification, and repetition practices in English and other languages. The reduplication of adjectives for scalar intensification is available in many languages, sometimes formed on a syllabic rather than word-based template, as in Mandarin (*gratia* Chao Li; the relevant adjective is highlighted):

(53) A: 他 把 房间 打扫 干净了 吗?
Tā bǎ fángjiān dǎsǎo gānjìng-le ma?
 he OBJ room sweep clean-PERF Q
 ‘Did he sweep the room clean?’

B: 干净 是 干净了, 但 还 不 是 干干净净。
Gānjìng shì gānjìng-le, dàn hái bú shì gāngānjìngjìng.
 clean be clean-PERF but still not be clean-clean
 ‘Yes, it’s clean, but not very clean’ (= not CLEAN clean)

The case of German (Finkbeiner 2014; Freywald 2015) is of particular interest. In the first place, German – like English – is replete with productive processes of cloning and of non-clone nominal compound formation. As seen in Section 1.3, there is a tension between the classification of clones as “identical constituent compounds” (Hohenhaus 2004) and the observation that cloning is far more robust cross-categorially in German than is compounding itself, especially outside the nominal domain; adverbs and verbs can be cloned but tend not to occur in non-identical constituent compounds. While the *echt*-icity clones or “Real X reduplications” share some properties with canonical heterogeneous compounds, Freywald (2015) points to morphosyntactic differences between the two constructions, so that the ultimate verdict on the extent to which XX patterns can be subsumed under compound formation remains unsettled.

As we have noted, the treatment of English clones as compounds is rejected by Ghomeshi et al. (2004), in part because of the categorial restrictions on the latter. Another point they raise is that both halves of a clone may inflect, and

when irregular both halves must (Ghomeshi et al. 2004: 323): *DUCK(S) ducks* vs. **GOOSE geese/✓GEESE geese*. Compounds, on the other hand, are far more restricted: *duck(*s) feathers*, ? *geese feathers*. This supports the view of Ghomeshi et al. (2004) and other work that clones instantiate reduplication on a lexical level but not compounding.

Beyond Germanic, analogues of nominal clones can be found in a variety of European languages, as noted in Ghomeshi et al. (2004) and more recently in work cited in Rossi's very useful studies based primarily on French, a language that lacks ordinary compounds (Rossi 2011; Rossi et al. 2015). It will be noted that the majority of Rossi's French examples work perfectly well in their English glosses; compare the exchange in (54) (Rossi 2015) with my English rendering in (54')

- (54) A: *Cet été je pars en vacances en Grèce.*
 B: *Oh, quelle chance! En Grèce Grèce ou dans les îles?*
- (54') A: *This summer I'm going on vacation in Greece.*
 B: *Lucky you! In GREECE Greece or the Isles?*

The use of *Grèce Grèce* to designate mainland Greece or Greece proper essentially replicates the example from Huang (2015) cited in footnote 2 above in which *CHINA China* designates mainland China (as opposed to Taiwan).

As in English, the output of cloning processes in French are “well-formed and meaningful albeit ephemeral expressions” (Rossi 2015) – i.e. robustly semi-productive and casually employed (see Section 1.2 above). An additional question for future research is the extent to which such expressions are intended and interpreted as inherently affective or expressive (as Rossi et al. 2015 argue based on both English and French) or whether, as I would argue based on the data exhibited in this study, it is more that contexts favoring the use of clones often result in affective understandings.

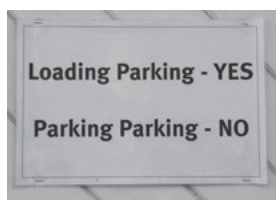
For Stolz and Levkovych (this volume), the absence of any necessarily emotive or expressive meaning is characteristic of reduplication (a grammatical phenomenon) as opposed to simple repetition (part of discourse pragmatics). While not as universal as syntactic and discourse-level repetition, reduplication on the lexical level – including varieties of total reduplication like the *echt-icity* and intensifying clones of English – is frequently attested cross-linguistically, although with variation in the set of constraints on what can be reduplicated and how.

Stolz and Levkovych (this volume) observe that with total reduplication, “it is by no means always clear whether we are dealing with a complex word

unit (compound) or a syntagm (or something in between).”²¹ As we have seen, English nominal clones represent a particularly delicate case, given that the output of the formation process yields compounds, words whose subparts are themselves words, while phrasal units and even idiom chunks can be cloned as well.

For those exploring the boundaries between lexical semantics and pragmatics and the boundaries between reduplication and repetition, the complexities of cloning amply repay investigation (and the data are fun to collect!). Lexical clones are a vibrant and productively generated supplement to the temporary mental lexicon; whether and how they should be included in the LEXICON lexicon is a question for future research.

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Sign on building in Northampton, MA; photo courtesy of Ray’s son-in-law Tom Chang

²¹ The “something in between” option is intriguing but a bit formally inchoate. It might be worth returning in this connection to the seminal observations in Dowty (1979) on the nature of morphological and syntactic operations involved in lexical rules across a variety of semi-productive processes including but not limited to nominal compounds. Unfortunately, I cannot pursue these issues here.

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Rita Finkbeiner

Sentence-peripheral Coordinative Reduplication in German: A pragmatic view

Abstract: In many languages, there are instantiations of non-adjacent syntactic reduplication, sometimes referred to as “syndetic reduplication” (Stolz 2009). Such patterns have been accounted for in constructionist approaches as constructional schemata with a certain semantic meaning that is directly mapped onto form (Jackendoff 2008; Zwarts 2013). However, constructionist approaches often have little to say about the role of pragmatics in the meaning constitution of utterances containing reduplicative constructions. While more recent approaches to “Construction Discourse” (Östman 2005, 2015) aim to integrate conventional aspects of discourse into constructional schemata, they fail to account for context-variable aspects of meaning that can be regularly inferred by hearers on the basis of general pragmatic principles. In this paper, I investigate the case of Sentence-peripheral Coordinative Reduplication (SpCR), a category not described earlier, arguing that a comprehensive account of SpCR must take into account not only the conventional syntactic, semantic and discursal properties, but also the more general pragmatic principles that are at work in the meaning constitution of such patterns. More generally, I argue that our theory of reduplication must incorporate a systematic interface with pragmatics.

1 Introduction

Within various areas of linguistics, it is often assumed that formal and semantic identity of two linguistic elements that occur within the same local domain should be avoided. For example, it is a general, cross-linguistic requirement of coordinative constructions that the two conjuncts be categorically identical, but conceptually distinct. Thus, (1) is fine, while (2) is odd.

(1) *She likes coffee and tea.*

(2) ??*She likes coffee and coffee.*

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However, many European languages have certain restricted options of pairing two formally and semantically identical elements within coordinative constructions (Lang 1984; Lindström 1999), cf. (3) and (4).

(3) *She sleeps and sleeps.*

(4) *She runs faster and faster.*

This raises the question which rules or principles license those cases where identity of elements is allowed. A standard assumption is that reduplication is licensed if it brings about a special semantic effect. For (3) and (4), the special semantic effect lies in the expression of continuity of action or increasing value. By contrast, (2) is not connected with any special semantic effect, and is therefore marked.

We can take (3) and (4) to be examples of what Stolz (2009) calls “syndetic reduplication”.¹ According to Stolz (2009), patterns of syndetic reduplication, which he examines with reference to examples such as Ger. *nach und nach* (‘by and by’) or French *peu à peu* (‘by and by’), are

- (5) “those putatively reduplicative constructions which consist ideally of
- two phonologically, morphologically and semantically identical chains of segments
 - each of which is a fully acceptable word-form when used in isolation and
 - which are connected to each other by additional phonological material² to form a bipartite syntactic unit and
 - their combination is assigned a meaning/connotation which is not absolutely identical with the one associated with the individual components of this combination.”

(Stolz 2009: 101)

The additional semantic value requirement, as mentioned in the last bullet point (cf. also Stolz 2007: 57), parallels definitions of morphological reduplication

¹ Note that “syndetic” in Stolz’ definition does not only refer to syndetic coordination (with ‘and’), but to all types of reduplication that display some kind of intervening “phonological material” in between the two reduplicated instances, cf. his definition in (5).

² Under this rather broad term, we may also subsume a case discussed in this paper, *X hin, X her*, which does not contain any conjunction or preposition, but an adverb *hin* as “phonological material” that intervenes between the two X-instances.

which assign the operation of morphological doubling specific grammatical or semantic effects such as plurality or intensification (Schwaiger 2015).

However, as will be argued in this paper, there are syndetic reduplicative constructions whose meaning is much more complex than the meaning of, e.g., *nach und nach*. For these constructions, it does not seem apt to think of their meaning as being brought about solely by a grammatical doubling operation. For example, in German, there is the sentence-peripheral coordinative construction *X hin, X her* ('X hither, X thither'; 'X here, X there'), by which speakers convey that a certain state of affairs P is irrelevant for the truth of another state of affairs Q, cf. (6).

- (6) *Wirtschaftskrise hin, Wirtschaftskrise her, der Landeshaushalt soll ausgeglichen bleiben.*³

'Economic crisis here, economic crisis there, the state's budget is expected to stay balanced.'

In using *Wirtschaftskrise hin, Wirtschaftskrise her* in (6), the writer conveys that the economic problems referred to by *X hin, X her* are of no relevance to the expectation that the state's budget stay balanced. At the same time, the writer positions herself as critical with respect to the topical argument that the economic crisis might justify a state budget which is not balanced, and puts forward, as a contrast, her own, opposite argument, which is focused. Now, it would be rather simplistic to assume that the meaning of *X hin, X her* is brought about solely by the (optional) reduplication of elements. Rather, this effect seems to result from a complex interaction between syntactic, semantic and pragmatic properties of the construction. In particular, apart from the reduplication of the nouns, what is crucial is the (left-) peripheral syntactic position of the construction and the lexical semantics of the deictic adverbs *hin* and *her* which both contribute in important ways to the irrelevance effect of the construction. What is more, as will be shown in more detail below, the meaning of *X hin, X her* is not uniform in every context of use. Rather, readers may infer different additional explicatures and implicatures from usages of *X hin, X her*, dependent on the linguistic context, communicative intentions of the writer, and shared background knowledge.

According to Stolz (2009: 100), syndetic patterns of reduplication generally are "borderliners" that do neither entirely fall into the realm of what traditionally is regarded reduplication nor into the realm of what is traditionally

³ *Nordkurier*, 07.01.2010.

regarded repetition.⁴ Due to this classificatory borderline status, syndetic patterns of reduplication have gained very little attention in the research literature. However, in empirical terms, it is clear that such patterns are not a marginal phenomenon, but pervasive in many languages (e.g., Lindström 1999; Jackendoff 2008; Stolz 2009; Zwarts 2013). Syndetic patterns of reduplication are not only highly productive, they also may get loaded with additional pragmatic aspects of meaning which contribute to their capacity to fulfil important communicative goals. Therefore, we can require that a comprehensive theory of syntactic reduplication⁵ should be able to account for these patterns in a systematic way.

In this paper, I will take a closer look at Sentence-peripheral Coordinative Reduplication (SpCR)⁶ as a particular, not earlier described subtype of syndetic (or, more broadly speaking, syntactic) reduplication. In SpCR, as exemplified in (6) above, two identical lexical or phrasal constituents are paired within a coordinative structure, which as a whole is positioned outside a juxtaposed main clause. I argue that a pragmatic approach is necessary to develop a comprehensive view of SpCR. In Section 2, I describe the main grammatical properties of three patterns of SpCR in German. In Section 3, I discuss two recent constructionist approaches, the approach of Jackendoff (2008) to syntactic reduplication, and the approach of Östman (2005, 2015) to the role of discourse in Construction Grammar. It is argued that a constructionist approach is suitable, in principle, for the descrip-

4 See also Gil's (2005) distinction between reduplication and repetition, and the alleged association between, on the one hand, reduplication and grammar, and, on the other hand, repetition and style.

5 Syntactic reduplication is here taken to be the more general term under which "syndetic reduplication" may be subsumed. While most textbooks take morphological reduplication to be the prototypical case of reduplication, many scholars agree that reduplication may also occur at the syntactic level (e.g., Wierzbicka 1986; Israeli 1997; Lindström 1999; Maas 2005; Stolz 2009; Stolz et al. 2011). Syntactic reduplication targets syntactic constituents, which means that the constituents may be larger than a word. This violates Gil's (2005) definitional criterion that the output of a reduplication process is smaller than or equal with a word. However, it has been shown with respect to various phenomena of (adjacent and non-adjacent) total reduplication that the word criterion is in need of revision (e.g., Ghomeshi et al. 2004; Stolz 2006; Stolz 2009; Stolz et al. 2011; Kallergi 2015).

6 The term "coordinative reduplication" (*koordinerad reduplikation*) was already introduced by Lindström (1999: 172 *passim*). The category here referred to by Sentence-peripheral Coordinative Reduplication (SpCR) can be regarded as a subset of Lindström's class of coordinative reduplication. Other types of syntactic reduplication in (left-) peripheral syntactic position are echo reduplication (Grohmann and Nevins 2004) and 'reduplicative topics' in Spanish (Valenzuela et al. 2005). Both types are, however, instances of adjacent syntactic reduplication and not the topic of this paper.

tion of SpCR, but that the approaches sketched lack a systematic interface with pragmatics, understood as Gricean or Neo-Gricean processes and principles. In Section 4, I demonstrate for the case of *X hin*, *X her* that pragmatics – in a number of different domains – plays a key role in the meaning constitution of the construction. In Section 5, I outline a pragmatic account of SpCR along the lines of Ariel (2008, 2010), which neatly distinguishes between conventional aspects of a construction and true pragmatic, i.e. inferred aspects. Section 6 summarizes the discussion.

2 Sentence-peripheral Coordinative Reduplication (SpCR) in German

The phenomenon of SpCR in German can be illustrated by the three patterns presented in Table 1. Below, I will go through the patterns one by one.

Table 1: SpCR patterns in German.

| <i>Pattern</i> | <i>Example</i> | <i>References</i> |
|----------------|--|--|
| X und X | <i>(naja) teuer und teuer</i> 'well, expensive and expensive' | Lindström (1999), Lindström and Linell (2007), Finkbeiner (2012) |
| X hin, X her | <i>Mindestlohn hin, Mindestlohn her</i> 'minimum wage here, minimum wage there' | Finkbeiner (2015a), Finkbeiner (2017) |
| X oder nicht X | <i>Krieg oder kein Krieg</i> 'war or no war' | Pullum and Rawlins (2007), Finkbeiner and Meibauer (2014) |

(i) *X und X* ('X and X')

The *X und X* construction is a dialogical reactive construction used to negotiate the situational appropriateness of a certain word usage. In using *X und X*, the speaker quotes a previously used word or lexical phrase X. There is no equivalent construction in English, but one might paraphrase the meaning of the construction by 'X – it depends what you mean by it'. An example is (7).

(7) A: *Hab grad geschaut, die gibt's z.B. bei Schockemöhle für 79 Euro.*

Total geil sehen die aus!! Schade, dass die so teuer sind!

B: *Naja, teuer und teuer, wenn die Qualität stimmt dann finde ich den Preis okay.*

‘I checked it up, you can get them at Schockemöhle for 79 Euros. They look really amazing!! Such a shame they are so expensive!’
 ‘Well, expensive and expensive, if the quality is right, then I find the price okay.’
 (<http://www.reitforum.de/schabracke-aus-italien-gesucht-229468-2.html>; accessed 6 June 2011)

(ii) *X hin, X her* (*X here, X there*; *X hither, X thither*)

The *X hin, X her* construction is used as an antecedent in an irrelevance conditional construction. In using *X hin, X her*, a speaker conveys that a certain state of affairs P is irrelevant for the truth of another state of affairs Q. *X hin, X her* is closely related, but not totally equivalent to *X oder nicht X* (*X or no X*) (see below as to the semantics of the patterns).⁷ An example is (8).

(8) *Mindestlohn hin, Mindestlohn her, unser Hauswein bleibt weiterhin gewohnt günstig.*

‘Minimum wage here, Minimum wage there, our house wine will continue to be a bargain.’

(<http://mybeautime.com/germany/ahaus/restaurant-cafe/la-casita/136474653056669>; accessed 14 September 2015)

(iii) *X oder nicht X* (*X or no X*)⁸

The *X oder nicht X* construction is more or less equivalent to English *X or no X*, which is used as antecedent in an irrelevance conditional construction. In uttering *X oder nicht X*, a speaker conveys that the set of alternatives denoted by the antecedent P is irrelevant for the truth of the consequent Q. An example is (9).

(9) *Krieg oder kein Krieg – in Wahrheit geht es um die Glaubwürdigkeit des Afghanistan-Einsatzes.*

‘War or no war – essentially, it’s all about the credibility of the Afghanistan operation.’

(*Hamburger Morgenpost*, 25.6.2009)

⁷ In some contexts, *X hin, X her* can also be translated by English ‘X willy nilly’.

⁸ The negation element *nicht* (*not*) is mostly replaced by the negative determiner *kein-* (*no*) if a noun follows. It is not ungrammatical to have instances like *Krieg oder nicht Krieg*, though.

The main characteristics shared by all of the three patterns can be summarized as follows:⁹

- The patterns syntactically pair (exactly) two identical categories X that have a lexical head.
- The X-expression typically is previously used material, i.e. part of previous discourse.
- The internal syntactic structure of the pattern is that of a coordinative construction.
- The patterns have phrasal status, i.e. there is no major syntactic or prosodic boundary in between the two identical elements.
- The patterns occur in syntactically disintegrated position, juxtaposed to a main clause, within which they do not have constituent status.¹⁰
- The patterns are each assigned a specific semantic meaning that cannot be derived in a fully compositional way from the meanings of their parts.

While the three SpCR patterns share a number of aspects, they also show a number of interesting differences. These concern (i) the presence or absence of a connector, (ii) their status as independent units, (iii) their semantic meaning, and (iv) the identity requirement. I will go through the four aspects one by one.

Presence or absence of a connector. While all of the patterns instantiate coordinative constructions, they differ with regard to the connectors. While *X und X* and *X oder nicht X* overtly contain a coordinative conjunction (disjunction), namely *und* ('and') and *oder* ('or'), respectively, *X hin*, *X her* is an instance of asyndetic coordination with no (overt) conjunction. However, the connection between the two conjuncts is strengthened in *X hin*, *X her* by the adverb pair *hin/her*.¹¹

⁹ For a more detailed description of the different patterns, see Finkbeiner (2012, 2015a), Finkbeiner and Meibauer (2014).

¹⁰ As to syntactic disintegration, there seems to be a preference for the SpCR patterns to appear in the position *left* to the juxtaposed main clause. However, *X hin*, *X her* and *X oder nicht X* are possible, likewise, in the right sentence periphery, or as parentheticals (cf. ex. (33); see also Finkbeiner and Meibauer 2014; Finkbeiner 2015a for examples). By contrast, *X und X* is restricted to the left periphery (cf. Finkbeiner 2012). As for the case of non-sentential *X oder nicht X*, also the related sentential concessive conditionals must appear in syntactically peripheral position (e.g., *Ob es regnet oder schneit, Heinz ist im Garten* 'Whether it rains or snows, Heinz is in the garden'; but: **Ob es regnet oder schneit ist Heinz im Garten*, 'Whether it rains or snows is Heinz in the garden').

¹¹ In German, there are a number of adverbs that appear pairwise in coordinative structures. Interestingly, these are mostly reduplicative, e.g. *teils ... teils* ('partly ... partly'), *mal ... mal* ('sometimes ... sometimes'), *bald ... bald* ('sometimes ... sometimes').

Status as independent units. As pointed out above, the patterns appear in the periphery of a main clause, to which they are in juxtaposition. They differ as to their ability to be used independently of this main clause. While *X hin, X her* cannot be used as an independent syntactic unit, but only in juxtaposition to a main clause, cf. (10), *X oder nicht X* has an independent usage as a question, cf. (11).

(10) **Krieg hin, Krieg her.*
‘War here, war there.’

(11) [Question to the community:] *Öl ins Nudelwasser oder kein Öl ins Nudelwasser?*
‘Oil into the pasta water or no oil into the pasta water?’

For *X und X*, an independent usage as a comment seems not absolutely excluded, cf. (12).¹²

(12) A: *Das Zeug war echt teuer, fand ich.*
B: *?Naja, teuer und teuer.*
‘This stuff was really expensive, I think.’
‘Well, expensive and expensive.’

In most cases, however, speakers add a subsequent utterance motivating the usage of *X und X*, cf. (7) above.¹³

Semantic meaning. The patterns are associated with different (abstract) semantic meanings. *X und X* induces a comparison between two readings of ‘X’. This comparison may be paraphrased roughly by a ‘full sentence’ such as ‘X and X are two different things’ and can be taken to be at the basis of the speech act of metalinguistic negotiation of word meaning that is the core function of *X und X* utterances. By contrast, *X oder nicht X* has question semantics, as it denotes a set of alternative propositions ({x, ~x}), whose truth or non-truth is taken to be of no relevance for the truth of Q (cf., e.g., König 1986; König and van der Auwera 1988). The alternative set semantics is in accordance with the meaning of the disjunction ‘or’. *X hin, X her*, by contrast, while sharing the irrelevance aspect with

¹² In Swedish, there is the *X och X* construction (cf. Linell and Lindström 2007), to which German *X und X* is an equivalent (cf. Finkbeiner 2012). Compared to German *X und X*, the Swedish *X och X* construction shows a considerably higher degree of conventionalization. Also, for the Swedish construction, the independent usage is perfectly grammatical.

¹³ Cf. the corpus study in Finkbeiner (2012).

X or *no X*, does not have question semantics. It is not a set of alternatives that is denoted by *X hin*, *X her*. Rather, *X* is taken to be presupposed, and *X hin*, *X her* conveys that one may look at *X* from different perspectives. The aspect of different perspectives is contributed by the deictic adverbs *hin* and *her*.

Identity requirement. Finally, there is a crucial difference between *X hin*, *X her*, on the one hand, and the patterns *X oder nicht X* and *X und X*, on the other hand. While *X oder nicht X* and *X und X* require strict formal and semantic identity of the expressions inserted into the *X*-slots, cf. (13) and (14), *X hin*, *X her* regularly allows for non-identical *X*-elements, cf. (15) and (16).

- (13) **teuer und billig* [in the relevant reading]
‘expensive and cheap’
- (14) **Krieg oder keine Konfliktbewältigung*¹⁴
‘war or no conflict management’
- (15) *Finanzkrise hin, Rezession her*
‘financial crisis here, recession there’
(*Nürnberger Nachrichten*, 27.05.2009)
- (16) *Dackel hin, Katze her*
‘dachshund here, cat there’
(*Rhein-Zeitung*, 22.06.2007)

This raises the question whether *X hin*, *X her* can be treated as an instance of syntactic reduplication in the first place. Let us expand on this point a little bit.

As far as I can see, there are two approaches under which a reduplication analysis of *X hin*, *X her* is mandated: A first alternative is to argue that the identical and the non-identical variant are two different constructions. One could then treat each construction in its own right, maintaining a reduplication analysis for the identical variant only. However, this analysis is rather inadequate from a pragmatic point of view. Crucially, both variants have the same pragmatic interpretation. For example, in the context of (17), *Finanzkrise hin*, *Rezession her* (cf. [15]) could be replaced by either *Finanzkrise hin*, *Finanzkrise her* (‘financial crisis here,

¹⁴ I assume that the overt negation is a defining element of this construction. If one defines the pattern broader, allowing for covert negation, then one might include also instances with lexical antonyms, e.g., *Krieg oder Frieden* (‘war or peace’), *jung oder alt* (‘young or old’). These, of course, do not require lexical identity of the two elements.

financial crisis there’) or *Rezession hin, Rezession her* (‘recession here, recession there’) without any relevant changes in the overall meaning.

- (17) *Finanzkrise hin, Rezession her: Die deutschen Verbraucher lassen sich ihre Kauflaune nicht vermiesen.*
 ‘Financial crisis here, recession there: The German consumers don’t let [it] spoil their shopping mood.’
 (Nürnberger Nachrichten, 27.05.2009)

By both the identical and the non-identical variant, the speaker would convey that the economic problems don’t have any negative influence onto the shopping mood of the German consumers. If both variants, which also fully match each other structurally, convey the same interpretation, it is highly unintuitive to treat them as two separate constructions.

A second alternative, which I prefer, is to assume that *X hin, X her* is one single construction with identity requirement, but that this identity requirement sometimes is violated by speakers in discourse. Thus, under this analysis, the non-identical variant would be a marked usage of the (identical) construction, applied by speakers in order to achieve certain stylistic effects. In the domain of phraseology, this is a well-known process called creative modification (Nunberg et al. 1994; Gläser 2001; Glucksberg 2001). Creative modification is ubiquitous with phraseological units and can be found in different text types, e.g., fiction, poems, advertisements, but also ordinary newspaper texts. For the case of *X hin, X her*, my data shows that the distinct variant is often utilized for purposes of text structuring. For example, in (18), the construction is used to introduce an article about the growing popularity of exotic pet animals.

- (18) *Dackel hin, Katze her: Viele Tierhalter im Kreis Altenkirchen schwärmen eher für exotische Vögel, Reptilien oder Spinnen.*
 ‘Dachshund here, cat there: Many animal owners in the district of Altenkirchen prefer exotic birds, reptiles or spiders.’
 (Rhein-Zeitung, 22.06.2007)

By initially enumerating two prototypical members of the category of usual Western pet animals, a set is established that contrasts with the set of exotic pet animals mentioned later on in the text.¹⁵ The construction is used here primarily

¹⁵ As is the case in creative idiom modification in general, the distinct usage of *X hin, X her* is not totally unrestricted. Instead, the referents of the two nouns must be conceivable as two

to catch the initial attention of the reader, because it requires, for a full understanding, a continuation which resolves the feel of contrast. Thus, in (18), the main communicative intention of using *X hin*, *X her* is not to convey some kind of irrelevance semantics. Neither does (18) require the topic “pet animals” to be previously established – rather, the construction is used to introduce this topic. Interestingly, the identical variant cannot fulfil these specific effects. If we replace *Dackel hin*, *Katze her* in (18) by *Dackel hin*, *Dackel her*, the result is a rather odd, because *Dackel hin*, *Dackel her* does not evoke a set to be contrasted with the set {exotic birds, reptiles, spiders}.

Thus, under this latter analysis, we may regard *X hin*, *X her* as much as a reduplicative pattern as the other two SpCR patterns. As outlined above, the fact that speakers sometimes violate the identity requirement for stylistic reasons does not in itself provide counterevidence to this assumption.

Having established SpCR as a relevant class of reduplicative constructions in German, the question arises how we can account for this type of reduplication. In the next section, I will take a closer look at two existing constructionist approaches that have been developed to account for (i) patterns of syntactic reduplication (Jackendoff 2008) and (ii) the role of discourse in constructions (Östman 2005, 2015).

3 Constructionist approaches

As a common feature of SpCR, I have suggested above that the meaning of the different SpCR patterns cannot be derived entirely from the meaning of their component parts. For example, it is obvious that the complex irrelevance meaning of *X hin*, *X her* does not result compositionally from doubling the noun and adding the directional adverb meaning. What is more, there are aspects on the form side of the constructions that cannot be traced back to other regular constructions of German. For example, it is unclear of what category the two conjuncts in *X hin*, *X her* are. Even if we were to assume that X (typically) is N, we still would have

instances of the same higher category. For instance, *dachshunds* and *cats* belong to the category of Western pet animals. In being conceptually similar, the nouns in fact correspond to the identity restriction on the conceptual – but not on the formal – side. The fact that the two referents share a “common integrator” is also further evidence for the fact that *X hin*, *X her* is a genuinely coordinative structure (Lang 1984). I am grateful to a reviewer for pointing this out to me.

difficulties to decide what kind of structure [N *hin*] is, and what its head is.¹⁶ Taken together, these characteristics strongly suggest an approach that treats SpCR patterns as schematic constructions in the sense of Construction Grammar (Fillmore et al. 1988; Goldberg 1995, 2006), cf. the classical definition of Goldberg (1995):

C is a construction iff_{def} C is a form-meaning pair $\langle F_i, S_i \rangle$ such that some aspect of F_i , or some aspect of S_i is not strictly predictable from C's component parts or from other previously established constructions. (Goldberg 1995: 4)¹⁷

While I think that a constructionist analysis is feasible, in principle, for the case of SpCR, I believe that it is not comprehensive as long as it does not incorporate an interface with pragmatics. In order to develop this view, I will in this section take a closer look at two existing constructionist approaches and point to some of their shortcomings when applied to our case. Subsequently, it will be shown that context-dependent aspects play an important role in the meaning constitution of SpCR (Section 4), and that these aspects may be accounted for only if we allow for a systematic interface of constructions with Gricean pragmatics (Section 5).

For syntactic reduplication, a number of constructionist analyses have been proposed (e.g., Lindström 1999; Ghomeshi et al. 2004¹⁸; Jackendoff 2008; Zwarts 2013). Some of them have parallels in the morphological approach of Inkelas and Zoll (2005), who consider morphological reduplication as a doubling construction. I will first take a closer look at the analysis of Jackendoff (2008). After, I will discuss the recent model of Östman (2005, 2015) on “Construction Discourse”.

16 As to the phrase structure of the construction as a whole, one may assume a conjunction phrase (&P) with empty conjunctive head (Johannessen 2008). However, it is clear that the assumption of an empty functional head is in need of independent evidence, otherwise it is nothing more than an ad hoc stipulation.

17 In a more recent, somewhat weaker definition, Goldberg also includes fully compositional structures that are stored (or entrenched) as constructions because of frequent use: “Any linguistic pattern is recognized as a construction as long as some aspect of its form or function is not strictly predictable from component parts or from other constructions recognized to exist. In addition, patterns are stored as constructions even if they are fully predictable as long as they occur with sufficient frequency” (Goldberg 2006: 5).

18 Ghomeshi et al. (2004) discuss two different analyses for contrastive focus reduplication: an analysis within the Parallel Architecture framework (Jackendoff 1997), which comes close to Construction Grammar, and an analysis within the framework of the Minimalist Program (Chomsky 1995). They prefer the PA analysis over the minimalist analysis.

3.1 Jackendoff (2008): NPN

An example of a constructionist approach to syntactic reduplication is Jackendoff's (2008) analysis of the NPN construction (e.g., *student after student*, *page by page*). This reduplicative construction may be used either as an argument (*Student after student entered my office*) or adverbially (*He went through the book page by page*), and comes in different meaning variants. One important meaning variant is 'succession'. Focusing on the empirical side of the phenomenon, Jackendoff argues that a rule-based, X-bar theoretical account is not feasible to explain NPN, as the construction "violates standard principles of phrase structure" (Jackendoff 2008: 8).¹⁹ In particular, he argues, it is unclear what syntactic category NPN is, as the adjunct positions in which NPN can appear are categorically unselective. Also, the internal structure of NPN is puzzling, as prepositions normally do not take bare nouns as their complements, nor as their specifiers. As an alternative to the X-bar approach, Jackendoff suggests a constructionist analysis. Under this analysis, there is a lexical entry for the NPN construction that maps meaning directly onto form as sketched in (19).

- (19) sem: MANY X_iS IN SUCCESSION
 syn: [_{NP} N_i P_j N_i]
 phon: Wd_i after_j Wd_i

In the meaning representation, there is only one entity that is mapped into two nouns in syntactic representation (index *i*). The preposition in syntax maps into *after* in phonology, but not into semantics, i.e. it does not contribute directly to the 'succession' meaning. This is the non-compositional aspect of the construction. Thus, Jackendoff stipulates a constructional schema for NPN which imposes an identity restriction and which is associated with the semantics of the entire construction.²⁰

Applying Jackendoff's constructionist approach to the case of SpCR, we might conceive of, e.g., *X hin*, *X her* as a syntactic schema with two open slots for whose

¹⁹ By contrast, Müller (2011) takes NPN to be a phrase with prepositional head [P N], where the left-hand N is derived via a post-syntactic phonological copying process.

²⁰ In his general model, Jackendoff (2013) assumes an inheritance hierarchy, in which more specified constructions can inherit properties of more general constructions. While this is not detailed in his (2008) paper, NPN could be modeled as part of such an inheritance hierarchy, in order to cover those properties which can be related to more general principles of grammar.

fillers identity is required, and to which an irrelevance meaning is assigned. We may represent this as in (20).

- (20) sem: REGARDLESS X_i (, Q)
 syn: [_{&P} N⁰/NP^{min}_i Adv_j N⁰/NP^{min}_i Adv_k]
 phon: P_i *hin*_i P_i *her*_k

In the meaning representation, there is only one entity that is mapped into two nominal constituents in syntactic representation (index *i*). This gives us the desired interpretation. The adverbs in syntax are not mapped into semantics, only into phonology. This is what makes the construction idiomatic.

A clear advantage of this Jackendoff-style approach is that it fits the intuition that *X hin, X her* is a frozen idiomatic pattern. The constructional template states that this pattern is fixed in exactly this shape, with exactly the phonological, syntactic, and semantic features it has. However, it becomes clear immediately that one level of description is missing here, namely, pragmatics. As pragmatics is not a separate component in Jackendoff's (1997) "tripartite parallel architecture", it is unclear how pragmatic principles or inferences become active in this model. Thus, it is unclear, e.g., in how far the deictic expressions *hin* and *her* might contribute to the overall meaning of the construction.

More generally, constructionist approaches to grammar usually do not incorporate a systematic interface with pragmatics. This is in line with standard definitions of Construction Grammar as a non-modular theory (Goldberg 2013: 16). This means, first, that a typical constructionist analysis represents both semantic (truth-functional) aspects and aspects traditionally thought of as pragmatic (e.g., information structural status, speech act force) as part of the meaning side of a construction (Lakoff 1987; Lambrecht 1994), without drawing a clear distinction between semantics and pragmatics. Second, non-modularity means that Construction Grammar does not incorporate a theoretical explication of the status of general pragmatic principles (as developed, e.g., by Grice 1975 and Levinson 2000) with respect to constructions.

Against this background, the recent "Construction Discourse" model developed by Östman (2005, 2015) makes a necessary contribution to the integration of pragmatics into Construction Grammar. Let us have a look at this approach in the next subsection.

3.2 Östman (2005, 2015): Construction Discourse

The approach of Östman (e.g., 2005, 2015; cf. also Nikiforidou 2009) attempts "to systematize pragmatic/discoursal knowledge in a way analogous to other kinds

of speaker knowledge which is reflected in grammar” (Nikiforidou 2009: 25). This systematization is done by including additional, “external features of context” (Östman 2015: 25) as major attributes into the constructional description, formalized as boxes containing attribute-value pairings. The “external features of context” suggested by Östman (2015) are given in (21).

(21) Overview of external attributes (Östman 2015: 25–26)

| | |
|----------|--------------------------|
| fr | functional relation |
| ia | implicit anchoring |
| dp | discourse pattern |
| sv | sociolinguistic variable |
| sc | speech community |
| n-v | non-verbal |
| grnd | grounding |
| synCxPck | construction packaging |
| istr | information structuring |
| semTXT | text semantics |
| prosDISC | discourse prosody |

For example, the attribute ‘discourse pattern’ is relevant to the description of certain text types, e.g., to describe the text type ‘recipe’, which typically comprises a heading, a list of ingredients, and cooking instructions – together with a bunch of other, culturally learned specifications. At the same time, ‘discourse pattern’ as an attribute can be included into the description of (syntactic/semantic) constructions that co-constitute recipes, representing an important part of conventional knowledge speakers have about these constructions (e.g., that infinitive constructions in German are used as directives in recipes, as in *vorsichtig umrühren* ‘stir carefully’ or *5 Minuten köcheln lassen* ‘simmer for 5 minutes’ [my examples, R.F.]).

This may be formalized as in Figure 1, where an attribute “dp” is added into the constructional box.



Figure 1: Representation for the attribute *dp* (Östman 2005: 136).

Thus, what this approach does is including properties that – in a very broad sense – may be regarded ‘pragmatic’ into constructional schemata.²¹ In this respect, it goes far beyond constructionist representations as the one of Jackendoff (2008). However, the crucial point is that this model exclusively aims at “integrating systematic and *conventionalized* discourse phenomena into Construction Grammar” (Östman 2005: 121, my emphasis), while neglecting those pragmatic aspects of meaning that are not conventional(ized), but inferred in context by hearers/readers, guided by general pragmatic (Gricean) principles. In other words, “Construction Discourse” is intended as a broad theory of *grammar*, in which the notion of ‘grammar’ has been extended to include conventional aspects of discourse. It remains unclear in this proposal how ‘grammar’ interacts with other processes, such as Gricean maxims, or speech act assignment, which standardly are assumed to be part of the pragmatic component (e.g., Horn and Ward 2004; Allan and Jaszczolt 2012; Huang 2012a,b).

We may illustrate the problem by looking at an example given by Nikiforidou (2009: 22; earlier discussed in Langacker 2001: 165–166), cf. (22).

(22) *Harold has finished his thesis. And I was just elected pope.*

Using (22), “the speaker pretends to make an assertion but follows it with another assertion, so obviously false that the hearer is bound to realize that it is not the intended meaning” (Nikiforidou 2009: 22). According to Nikiforidou (2009: 22), “while this may be regularly derivable by Gricean Quality or Relevance, it is still the case that speakers learn and use this pattern [...] as a matter of established convention.” Certainly, it is true that there is something like conventionalization of indirect speech acts (cf. Morgan 1978; Kay 2004). Thus, speakers may have internalized that by adding *And I was just elected pope* to a statement, they can perform the speech act ‘withdrawal of the commitment to the truth of a previously made assertion’. However, this does not in itself make speech act assignment an arbitrary process, and it does not make Gricean principles superfluous. While it is true that idiomatic sentences often have a highly restricted speech act potential (cf. Finkbeiner 2008), and thus often are bound to specific sentence types, sometimes, we have several alternative realizations, cf. (23)–(24).

²¹ Beyond integrating discursal categories into Construction Grammar, the approach also aims, conversely, at extending the framework of Construction Grammar to the description of discursal categories, e.g., text types and genres (Östman 2005: 121).

- (23) *Rutsch mir doch den Buckel runter!*
lit. ‘Slip down my back’
‘Drop dead’
- (24) *Du kannst mir mal den Buckel runterrutschen!*
lit. ‘You can slip down my back’
‘Drop dead’

As becomes clear from (23)–(24), there are (exactly)²² two sentence type variants allowed for this idiom, namely imperative (23) and declarative with a modal verb (24). However, this is not an arbitrary fact. Rather, the observed sentence type variation can be nicely explained by the regular interaction of speech act assignment and sentence type, as based on Searle’s notion of ‘illocutionary force indicating devices’ (Searle 1969, 1979; cf. also Meibauer 2013). As the idiom is used to express a request (of some fictional action), only those speech act types are possible that are compatible with this speech act force. Thus, what the example shows is that even if pragmatic aspects of meaning may become conventionalized, we still need an independent pragmatic component that is responsible for speech act assignment. In the “Construction Discourse” approach sketched above, it is unclear where the component of speech act assignment should be localized, and how it interacts with ‘grammar’.

More generally, the problem with this approach is that it equates the pragmatics of constructions with conventionalized aspects of discourse (in a very broad sense) that are associated with a construction. However, the core domains of pragmatics – e.g., deixis, speech act assignment, implicature – deal with aspects of meaning that are derived in context. While it certainly is a necessary move to include aspects of conventionalized discourse into the description of constructions, this does not excuse us from systematically describing also those aspects of meaning of a construction that are context-variable, and from including in our theory an idea about how conventionalized and inferred aspects of meaning interact.²³ This also includes an idea about how the semantics/pragmatics distinction is to be drawn. An approach that does not distinguish between

²² Other sentence types are excluded, cf. **Rutschst du mir mal den Buckel runter?* (V1-interrogative); **Wann rutschst du mir den Buckel runter?* (w(h)-interrogative); **Ach, würdest du mir doch den Buckel runterrutschen!* (optative).

²³ Thus, I do not agree that a “discursicon” (Östman 2005: 141) would do the trick. There is more about pragmatics than learned discourses, otherwise we could not explain the flexibility and dynamics of communication.

semantics and pragmatics is not compatible with standard assumptions developed in mainstream semantics and pragmatics (e.g., Maienborn et al. 2011; Allan and Jaszczolt 2012).

In the following section, it will be further detailed for the case of *X hin, X her* in what ways pragmatic processes play a role in the meaning constitution of SpCR. It will be argued that an approach is needed that includes an idea about how constructions interact with more general pragmatic principles. Such an approach will be sketched in Section 5.

4 Pragmatics of SpCR: The case of *X hin, X her*

I have argued above that SpCR patterns can be described as schematic constructions in the sense of Construction Grammar. That means that they are form-meaning pairings, syntactic constructions that are associated with a certain, in part idiosyncratic conventional meaning. However, this is not to say that the patterns are totally conventional. That is, not every meaning aspect relevant to the patterns is a coded aspect, or part of grammar. Rather, the meaning of utterances containing the patterns is largely determined by pragmatic aspects that speakers infer in context. In particular, the following pragmatic domains play a role in the interpretation of SpCR: (i) explicature, (ii) implicature, (iii) deixis, (iv) information structure, and (v) referential coherence. For reasons of space, I will analyse the case of *X hin, X her* only. However, the analysis might be easily extended to other SpCR constructions.²⁴ In my analysis, I draw on a collection of newspaper examples of *X hin, X her* that were drawn from the Cosmas Corpus (Institut für deutsche Sprache, Mannheim).²⁵

The pattern *X hin, X her* can be described as a syntactic construction conventionally associated with a concessive conditional meaning ‘regardless P, Q’. Thus, by using *X hin, X her*, a speaker conveys that a certain state of affairs alluded to by X is irrelevant to the truth of another state of affairs Q. However, for the proper interpretation of utterances containing this construction, additional inferences are necessary at different stages of interpretation.

²⁴ Cf. Finkbeiner (2012), Finkbeiner and Meibauer (2014). For a more detailed conversation analytic study on Swedish *X och X* (‘X and X’), cf. Lindström (1999), Linell and Lindström (2007); for a (rather sketchy) analysis of English *X or no X*, cf. Pullum and Rawlins (2007).

²⁵ The corpus (W-archive of written language) was searched for strings containing *hin* and *her* in close approximation (2–5 words). The result list was manually checked for noise, resulting in 55 relevant examples. See also Finkbeiner (2015a).

(i) First, we need to identify the proposition P, which is only fragmentarily provided in *X hin*, *X her*. In other words, a hearer/reader interprets *X hin*, *X her* as a full proposition, despite the fact that it is not a full sentence. For example, a reader of (25) must modify and enrich *Mindestlohn hin*, *Mindestlohn her*.

- (25) *Mindestlohn hin, Mindestlohn her, unser Hauswein bleibt weiterhin gewohnt günstig.*
 ‘Minimum wage here, Minimum wage there, our house wine will continue to be a bargain.’

In this context, she may infer that the conveyed proposition amounts to something like ‘regardless of the fact that a minimum wage has been established (in Germany)’.

One may conceive of the process at work here as an explicature, or more specifically, as the enrichment of an ‘unarticulated constituent’ (Carston 2002; Recanati 2010), in analogy to cases such as (26) and (27).

- (26) *It’s raining [in London].*
 (Perry 1986)
- (27) *Jane can’t continue [with university study].*
 (Carston 1988, cited in Borg 2005: 239)

The idea is that in order to arrive at a truth-conditional proposition for (26) and (27), the hearer must add the constituents in brackets. These are not part of the linguistically encoded meaning, but must be inferred pragmatically. The recovery of unarticulated constituents, in relevance-theoretic terms, is an explicature, or, in Recanati’s terms, an instance of ‘pre-propositional pragmatics’, i.e. a pragmatic enrichment process influencing truth conditions.

(ii) Second, a hearer must draw further inferences to arrive at a full comprehension of what stance the speaker of an utterance such as *Mindestlohn hin*, *Mindestlohn her* intends to take. Generally, by using *X hin*, *X her*, a speaker/writer positions herself with respect to a certain state of affairs that is part of the discourse universe, creating the expectation in the hearer that a contrasting attitude will be presented in the subsequent utterance (the juxtaposed main clause). While this general schema is an aspect conventionally attached to the use of the construction, utterances of *X hin* *X her* differ with respect to what the exact attitude is that a speaker conveys. The different attitudes conveyed by utterances of *X hin*, *X her* can be modeled as implicatures.

For example, in the context of (25), here repeated as (28), there is an implicature of mere concessivity, i.e., that a certain normal expectation – that the establishing of a minimum wage may lead to increasing prices for consumers – has not been fulfilled.

(28) *Mindestlohn hin, Mindestlohn her, unser Hauswein bleibt weiterhin gewohnt günstig.*

‘Minimum wage here, Minimum wage there, our house wine will continue to be a bargain.’

+>²⁶ ‘p, anyway q’

By contrast, in (29), the reader can infer a fatalistic interpretation, the writer intending to convey that it does not play any role whether the minimum wage will be raised or not, the employer still is in charge when it comes to the question how much the employee will earn.²⁷

(29) [Context: Secretary of Labor Valeriano Gómez announced in Santander, northern Spain, on Tuesday that the minimum wage will be raised by 1,5 to 2,5 percent in 2012.]

*Mindestlohn hin, Mindestlohn her. Was will der Arbeitnehmer denn machen, wenn der Boss weniger zahlt?*²⁸

‘Minimum wage here, minimum wage there. What can the employee do (after all) if the boss pays less?’

+> ‘It’s no use’

In (30), the implicature that arises is neither concessive nor fatalistic. Here, we have an echoic use by which the writer expresses a derogatory stance towards those that have argued in favor of an arts museum in Graz (alluded to by the catch phrase ‘culture’).

²⁶ +> = ‘implicates’

²⁷ Thus, the prime interpretation of (29) is a fatalistic interpretation. This is not to say that a concessive meaning aspect may not be present as well, as pointed out by a reviewer. Certainly, different meaning aspects can overlap in one and the same utterance. The point here is that the fatalistic implicature is the most salient interpretation in this context.

²⁸ <http://www.spanien-treff.de/topic/1182-mindestlohn-soll-in-spanien-erh%C3%B6ht-werden/>; accessed 14 September 2015

- (30) [From a letter to the editor] *Kultur hin, Kultur her! Wir hatten List, Puch, Boltzmann, Wegener, Schrödinger, Hess, Schmiedl usw. in Graz, eine Lokomotivfabrik, die Brüder Renner ... Wo bleibt das Technische Museum? Im Gegensatz zu den Künstlern waren diese Leute nicht zweitklassig!*
Kurt-G. Strohmaier
 (Kleine Zeitung, 16.04.1997)
 ‘Culture here, culture there! We had [it follows a list of technicians or technical innovations originating in the city of Graz] List, Puch, Boltzmann, Wegener, Schrödinger, Hess, Schmiedl and so on in Graz, a locomotive factory, the brothers Renner ... When are we going to have a technical museum? In contrast to the artists, these people were not second-rate.’ Kurt-G. Strohmaier
 +> ‘What you say about X is pointless’

The examples show that in different contexts, different meaning aspects arise from utterances of *X hin*, *X her*. This is a good indication for their status as implicatures. Conversational implicatures come about by the exploitation or observation of the cooperative principle and certain conversational maxims. For our cases, we might consider Grice’s maxim of relation as the relevant maxim. If the speaker is cooperative, she will not juxtapose P (represented by the fragment *X hin*, *X her*) to the subsequent sentence if there is no relevant thematic relation between P and Q. Thus, assuming that the speaker observes the maxim of relation, the hearer will search for this relevant thematic link, and she will be able to infer the actual implicature (e.g., ‘p, anyway q’, ‘What you say about X is pointless’, ‘It’s no use’, ...). Another maxim that possibly plays a role here is the maxim of quantity. Utterances of *X hin*, *X her* may be regarded as tautological, because the second conjunct is in a contradictory relationship with the first, exhausting the space of possibilities (cf. Haspelmath and König 1998: 603). Assuming that the speaker did not want to make an uninformative statement, the hearer can infer the additional content.

(iii) Third, the meaning of *X hin*, *X her* is in part determined by the deictic adverbs *hin* (‘thither’) and *her* (‘hither’). *Hin* and *her* point into two opposite directions relative to the position of the speaker. What is indicated pragmatically is an oscillating movement between two positions with the speaker as an observer (one may think of the side-to-side movement of a pendulum). Because of *hin* and *her* being indexicals, they are inherently tied to the speaker’s perspective. One may assume that *hin* and *her* iconically point to two opposite perspectives which the speaker weighs up against each other, hinting at an interpretation of ‘you may look at it whatever way you want’. Thus, it seems that the deictic aspect is crucial for the interpretation of *X hin*, *X her* as a stance marker.

(iv) Fourth, the usage of *X hin*, *X her* brings about specific information structural properties. The part of information that is encoded in the *X hin*, *X her* component is assigned the status of a discourse topic (van Dijk 1977; Krifka 2008), while the part of information that is encoded in the juxtaposed main clause is assigned comment status, cf. (31).

- (31) [TOPIC *Mindestlohn hin*, *Mindestlohn her*]. [COMMENT *Was will der Arbeitnehmer denn machen, wenn der Boss weniger zahlt?*]

While the discourse topic component is assigned a status of minor informational relevance, the comment component is assigned a status of major informational relevance. Crucially, the comment component is correlated with the speaker's (or a third person's) own argumentative position, while the topic component is correlated with someone else's position which the actual speaker (partly) rejects. This specific structural-semantic property of *X hin*, *X her* may be used by discourse participants as a means of structuring argumentation in interaction.

(v) Finally, *X hin*, *X her* fulfills important functions in the construal of referential coherence. By the *X*-element, the speaker takes up a discourse entity that is part of the preceding context, be it the linguistic co-text or the shared background knowledge of reader and writer. Referential coherence may be achieved, e.g., by recurrence, i.e. exact repetition of a preceding element, or by substitution (cf. Bublitz 1998). Thus, in (32), the noun *Krieg* ('war'), which occurs in the co-text preceding the example, is repeated in identical form in the construction, establishing coherence between the recurrent text elements involved.

- (32) *Der **Krieg** auf dem Balkan hat – zumindest in Brüssel – ein artiges Gesicht. CNN überträgt täglich um 15 Uhr das Briefing der Nato zum Balkan-**Krieg**. Wer die Presse-Briefings im Weißen Haus oder auch bei der UNO kennt, der wird sich über das Nato-Briefing – **Krieg hin**, **Krieg her** – nicht wundern.*

'The war in the Balkans has – at least in Brussels – a well-behaved face. Daily at 3 p.m., CNN broadcasts the NATO briefing about the Balkan war. Everyone who knows the press briefings at the White House or even at the UN will not be surprised – war here, war there – about the NATO-briefing.'
(*Die Presse*, 05.05.1999)

In contrast, in (33), coherence must be construed with the help of conceptual knowledge about thematic relations between the referents of the preceding text elements *Preise* ('prices') and *40 Mark* and those of the substituting nouns in the construction (*Geld* 'money').

- (33) *Nichts spricht dagegen, die **Preise** anzuheben, wenn ein großer Gegner wie der FCK zu Gast ist. Aber für einen unüberdachten Holzstuhlplatz hinter einem Tor **40 Mark** zu verlangen, treibt selbst mir als altem 05er die Zornesröte ins Gesicht. **Geld hin, Geld her**, so verliert der FSV Mainz 05 ganz schnell neu gewonnene Freunde.*

‘There is nothing to be said against increasing the prices if a great rival such as the [soccer club] FCK is in town. But requesting 40 Mark for a non-roofed wooden seat behind a goal makes even myself as a faithful fan of Mainz 05 gnash my teeth in anger. Money here, money there, in this way, the FSV Mainz 05 will lose newly attracted friends very quickly.’ (*Rhein-Zeitung*, 12.12.1996)

Taken together, what these considerations show is that the interpretation of SpCR patterns like *X hin*, *X her* is to a considerable degree context-dependent and inferential. A constructionist analysis which simply writes a certain meaning representation into the constructional template cannot differentiate between those aspects of meaning that are part of the constructional schema, i.e. conventional, and additional aspects that are (more or less regularly) derived in the utterance context. In the next section, I suggest an approach along the lines of Ariel’s (2008, 2010) theory of the grammar/pragmatics interface, who clearly distinguishes between conventional (coded) and inferred (contextual) aspects of grammatical constructions.

5 Outline of a pragmatic account

I have argued that a comprehensive theory of reduplication should be able to account for the case of SpCR patterns as a subtype of syntactic reduplication. We have seen that the prevalent constructionist approaches to syntactic reduplication and to “Construction Discourse” cannot systematically deal with context-variable aspects covered within the component of pragmatics. A pragmatic theory that can fruitfully account for the complexity of constructional meaning is the approach to the grammar/pragmatics divide developed by Mira Ariel (2008, 2010). Ariel (2010) argues that the criterion of code or inference is at the basis of the grammar/pragmatics division of labor. According to Ariel, coded aspects of meaning

correlate specific linguistic forms [...] with their meanings and/or distributional patterns. The association is direct and rule-governed. [...] No inferencing is required, since the form-function relation is stipulated as a grammatical convention of the language, generated

automatically, no high-level cognitive process is involved. Crucially, coded meanings are not cancelable. (Ariel 2010: 101)

Recall that coded (discoursal) meanings are also the prime object of interest in Östman's approach. The complementary counterpart of codes, in Ariel's model, are inferences. Contextually inferred aspects of meaning

do not make reference to any specific linguistic form. [...] Rather, it is the content and/or discoursal status [...] that serves as a basis for the inferential process. [...] In order to arrive at such interpretations/uses, assumptions relevant in the specific context are heavily relied upon. [...] Since the connection is only plausible, such interpretations are cancelable. (Ariel 2010: 102)

Contextually inferred meanings are the ones that have been described above with reference to processes such as explicature and implicature. As Ariel (2010: 193–197) shows for the case of Hebrew *ma* ('what?'), part of the meaning associated with a certain construction may be encoded, while some other part may be inferred and added to the encoded constructional meaning. That is, the two processes do not exclude, but rather complement each other.

If we apply this grammar/pragmatics distinction to our case of SpCR patterns, we may account for their (abstract) semantic meaning, e.g., the 'irrelevance' meaning of *X hin*, *X her*, as grammatical, encoded meaning, while deriving further enrichment processes and implicatures as inferential aspects. As we have seen, pragmatic enrichment processes are necessary, e.g., to arrive at a full proposition of the syntactically fragmentary pattern, further implicatures are necessary, e.g., to properly interpret what stance a speaker intends to convey.

However, Ariel (2010) emphasizes that not everything that is traditionally assumed to be 'pragmatic', simply because it belongs to the traditional canon of pragmatic topics, necessarily is an inferential aspect of meaning. There are also context-dependent aspects of use/interpretations that are mediated by rules, which are grammatical, as they are defined over specific linguistic forms (Ariel 2010: 101). Thus, we have to differentiate between 'pragmatic' aspects that are coded (and thus are truly grammatical), and 'pragmatic' aspects that are inferred (and thus are truly pragmatic). For example, the implicatures triggered by the use of expressions such as *X hin*, *X her*, on the one hand, are cancelable aspects of meaning, and therefore inferential. On the other hand, the information structural restrictions seem to be rather closely associated with the pattern. One can hardly cancel the information structural aspect that *X hin*, *X her* fragment is the (discourse) topic component and the juxtaposed main clause is the comment component. Rather, we may write a pragmatic rule on this information structural aspect and include it into the constructional pattern.

There are several pragmatic theories on the market that can account for the inferential parts relevant in SpCR. Three influential theories are the Gricean theory of conversational implicatures, Neo-Gricean accounts such as Levinson (2000) and Horn (1984), and Relevance Theory (Sperber and Wilson 1995). I will not make an attempt to choose between these pragmatic theories here. All of them assume that there are general, rationality-based pragmatic principles that enable hearers to draw additional inferences. For our cases, it is clear that there is a crucial formal aspect shared by all patterns, namely, the iteration of a lexical element. More generally, we may conceive of this iteration as the ultimate trigger of inferential processes in syntactic reduplication. One general theoretical option would be to account for this via Levinson's (2000) M-Principle.

(34) M-Principle

Speaker's maxim: Indicate an abnormal, nonstereotypical situation by using marked expressions that contrast with those you would use to describe the corresponding normal, stereotypical situation.

Recipient's corollary: What is said in an abnormal way indicates an abnormal situation, or marked messages indicate marked situations.

Iteration of the same lexical item can be regarded as marked language use, compared to the unmarked use of the single item. This marked language use may guide the hearer to the derivation of a specific implicature in the actual usage context. Another option would be to account for the effects of reduplication via an interplay of two principles (R- and Q-principle), similarly to Horn's (1993; this volume) approach to lexical clones (e.g. *dog dog*). Yet another option to model the pragmatic principles guiding the inferential processes can be found in Relevance Theory. In relevance theoretical terms, one could perceive of the function of iteration as a trigger of a specific non-truthconditional procedural meaning (Sperber and Wilson 1995).

The important point here is that not only coded aspects, but also inferential processes play a crucial role in the development of the meaning of SpCR. A (constructionist) theory of syntactic reduplication should provide a systematic way to deal not only with the coded aspects, but also with the inferential aspects. While some of the meaning aspects worked out above should be included into the constructional schema, others clearly should not, but they should be derivable from the regular interaction of constructional meaning with context. In order to adequately account for the meaning of SpCR, our theory of syntactic reduplication must adopt a model of language competence where the syntactic, semantic and pragmatic components are thought of as independent, but systematically interacting modules.

6 Summary

Syntactic reduplication is a widespread phenomenon in the languages of Europe, yet it is still a heavily underresearched area. This is in part due to its status as a ‘borderline’ case of reduplication. In this paper, I have concentrated on a subtype of syntactic reduplication hitherto not identified as such: Sentence-peripheral Coordinative Reduplication (SpCR). My aims were twofold: First, examining the case of German, I aimed at demonstrating that SpCR is a relevant category of reduplication that is worth deeper investigation. Second, I argued that constructionist approaches to syntactic reduplication are incomplete as long as they do not incorporate an interface with pragmatics. Elaborating on this idea, it was shown that the meaning constitution of SpCR patterns is heavily determined by inferential aspects. These aspects are developed in utterance context and thus cannot altogether be included, in a constructionist framework, into the conventional meaning representation of the pattern. Still, it is clear that we can make generalizations about the development of these pragmatic aspects, i.e., by relating them to general pragmatic principles. Thus, to be able to model this within a theory of reduplication, we need to adopt a concept of linguistic competence that makes a clear distinction between semantic and pragmatic aspects of meaning. What this may lead to, ultimately, is a “Modular Construction Grammar”.²⁹

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²⁹ For further discussion, cf. Finkbeiner (ed.), *to appear*.

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Claudia Poschmann

Focus on repetition: On the role of focus and repetition in echo questions

Abstract: The repetition of a preceding utterance can serve very different functions in discourse, from signaling comprehension and acknowledgment of a previous utterance to initiating discourse repair strategies. In this paper, I focus on a very special phenomenon of repetition in discourse, namely echo questions. Investigating the restrictions holding on the relation between echo questions and their preceding utterances, I argue against a grammatical (phonetic or syntactic) analysis and for a rather weak pragmatic discourse based analysis of repetition in echo questions.

1 Introduction

1.1 Repetition in discourse

At first glance, repeating the content or wording of someone else's utterance in the context might seem a quite uninformative and hence redundant move to make in a conversation. Nevertheless, repetition is a very frequent and highly productive pattern in discourse structure. As for example Deborah Tannen (2007) illustrates with vivid examples from a corpus of natural spoken conversations with her students, the repetition of a preceding utterance can serve very different functions in discourse, from signaling comprehension and acknowledgment (1) or (in the case of (2) humorous) dissociation from a previous utterance to initiating discourse repair strategies (3).

- (1) Deborah: *Like you all see the same thing but people in one culture might notice and talk about one aspect while people in another culture might notice and talk about another one.*
- David: *Yeah. And which would have ... nothing to do with language.*
- Deborah: *It's expressed in language.*
- Chad: *It's expressed in language.*
- David: *It's expressed in language.*
- (Tannen 2007: 70)

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- (2) (Following Deborah's request for permission to tape record the conversation)

Peter: *Just to see if we say something interesting?*

Deborah: *No. Just to see how you say nothing interesting.*

Peter: *Oh. Well. I hardly ever say nothing interesting.*

(Tannen 2007: 71)

- (3) Deborah: *Do you read?*

Peter: *Do I read?*

Deborah: *Do you read things just for fun?*

(Tannen 2007: 73)

Whereas in (1) Chad's and David's repetitions of Deborah's utterance are used to signal "understanding [...] and also ratification and acceptance of [her] wording" (Tannen 2007: 70), in (2) Peter and Deborah make use of partial repetitions of each other's wordings to create humorous reversals of each other's utterances. In (3), by contrast, Peter repeats Deborah's utterance to signal that he doesn't exactly understand the purpose of her question. What did she mean by her utterance? Did she ask whether he can read at all, or whether he is reading at the moment etc.? To answer his question, Deborah then repeats her initial question and expands it as an explanation.

This paper will focus on the latter type of repetition in discourse, namely so-called *echo questions*, which repeat the form or content of a preceding utterance to ask for clarification. Among other things, I will discuss under what conditions a repetition can be used as an echo question, to what degree the "echo" is bound to the exact (phonetic, syntactic or semantic) repetition of the previous utterance and what repercussions the fact that echo questions can repeat a preceding utterance can have on both the form and interpretation of this utterance type. In Section 1.2, I will very briefly introduce the special syntactic and semantic properties of echo questions, before discussing to what degree echo questions can deviate from the exact repetition of the previous utterance (Section 2.1). In Section 2.2, I will introduce the analysis of Artstein (2002), which will be discussed and modified in Section 3. Note, however, that this paper is not intended to offer a full analysis of echo questions. The main interest of this paper is to investigate the relation between echo questions and the utterances they echo. The syntactic and semantic properties of echo questions are only discussed where necessary to distinguish echo questions from other utterance types with similar structure or similar use. An analysis in line with the proposals made here is presented in much more detail in Poschmann (2015).

1.2 Syntactic and semantic properties of echo questions

Standard examples of echo questions include utterances such as (4) and (5), in which the speaker takes up a previous utterance to clarify its form or content.

- (4) A: *Did Peter call Mary?*
 B: *Did Peter call WHOM?* (wh-EQ)
- (5) A: *Peter called Mary.*
 B: *Peter called MARY?* (non-wh-EQ)

In (4) and (5), B repeats (parts of) A's utterance and marks by means of rising intonation^{1,2} and/or insertion of a wh-phrase that she didn't understand the preceding utterance correctly. The position in question is obligatorily accented (focus marked), and the rest of the utterance is typically deaccented. Most prominent in the linguistic literature are wh-echo questions with a strong pitch accent on an unfronted (in situ) wh-phrase.³ However echo questions are also possible as non-wh-questions. In this case the characteristic pitch accent is placed on the word or phrase that is being questioned.

The main differences between echo questions and other types of clarification requests, such as standard y/n-questions (6a), wh-questions (6c) or question particles (6b), include their possibly non-interrogative sentence structure, their special focus accent and the fact that they can repeat the form of a previous utterance. Note that echo questions take the form of standard interrogative sentence types only if, as in (4), they repeat a previous interrogative utterance (Meibauer 1987; Rost-Roth 2006).

- (6) A: *Peter called Mary.*
 a. B: *Did you say that Peter called Mary?*
 b. B: *Sorry? / Hm?*
 c. B: *Who is Mary?*

1 According to Bartels (1999: 158), the intonation contours in echo questions can range from (H* H-H%) and (H* L-H%) to (L* H-H%) in the system of Pierrehumbert (1980), where the "low rise (L* H-H%) is somewhat more likely than the high rise or fall-rise to be used if incredulity or surprise are involved." More on the intonation of non-wh-echo questions will be presented in Section 3.1.

2 An exception to this generalization is the so-called reference question, a wh-echo question such as in (i), in which the speaker asks the hearer to specify a referent she has mentioned in her utterance. These are typically falling (Bartels 1999, Truckenbrodt 2012):

(i) A: Where did he go? B: Where did WHO go (↓) (H* L-L %) (Truckenbrodt 2012: 2060).

3 This special accentuation pattern of echo questions will be marked in the following examples by setting the accented part in capitals.

Standard descriptions of echo questions involve the following aspects (cited from Noh 1998: 603): “(A) Echo questions are full or partial repetitions of a prior utterance. (B) The prior utterance may be of any syntactic type. (C) Echo questions have more in common syntactically with these prior utterances than with standard interrogatives. (D) The main function of echo questions is to clarify a preceding utterance in the context.”

The fact that echo questions can repeat (the structure of) a previous utterance indeed has deep repercussions for both the form and meaning of this utterance type. Although interpreted as questions, echo questions differ syntactically and semantically from ordinary interrogatives, which makes them resistant to standard linguistic treatment. First, when repeating the previous utterance, echo questions can take the form of all different types of sentences, including y/n-interrogatives (cf. (7), (8)) and imperatives, cf. (9).⁴

(7) A: *Have you met the epidemiologist?*

B: a. *Have I met the epidemiologist?*

b. *Have I met WHO?*

(Janda 1985: 107)

(8) A: *Have you read ‘Great Expectations’?*

B: a. *Have I read ‘Great Expectations’?*

b. *Have I read WHAT?*

(Noh 1998: 604)

(9) A: *Go to see the archaeologist.*

B: a. *Go to see the archaeologist?*

b. *Go to see WHO?*

(Noh 1998: 604)

In contrast to standard assumptions according to which sentence types are mutually exclusive (e.g. Gazdar 1981; Sadock and Zwicky 1985; Cheng 1991), echo questions seem to be able to combine interrogative with non-interrogative

⁴ For the interested reader: Epidemiology is the study of the patterns, causes and effects of health and disease conditions in defined populations. When there is an outbreak of a disease, epidemiologists search for the cause of the disease, identify people who are at risk and determine how to control or prevent the spread of the disease (adapted from Wikipedia).

features. Most particular is the behavior of the obligatorily accented wh-phrases. These are compatible with sentence types which usually exclude interrogative wh-phrases (e.g. imperative clauses or y/n-interrogatives). Moreover, unlike standard interrogative wh-phrases, these echo-wh-phrases do not have to be fronted but can be interpreted in situ (10b), and always take wide scope. In contrast to what we observe in embedded interrogatives such as (10a), wh-echo questions are invariably interpreted as questions even if the echo-wh-phrase is situated in an embedded position (10b) or even occurs below the NP-level (11b).

- (10) a. *He knows exactly when I go where.* (embedded interrogative)
 b. *He knows exactly when I go WHERE?* (echo question)
- (11) a. **What did he call the epidemi-?* (interrogative)
 b. *He called the epidemi-WHAT?* (echo question)

Last but not least, echo questions differ crucially in interpretation from standard interrogatives. Unlike standard interrogatives, echo questions do not ask for new information, but for context-given information.

- (12) A: *Peter called Mary.*
 B: a. *#Who did Peter call?* (interrogative)
 b. *Peter called WHO?* (echo question)
- (13) A: *Peter called Mary.*
 B: a. *What did she say?* (interrogative)
 b. *#She said WHAT?* (echo question)

In classic echo question contexts such as (12), in which the answer to the question is already entailed by the preceding context, a standard interrogative question is unsuitable. Echo questions, by contrast, are quite unsuitable for asking for new information, cf. (13). This property is closely related to an aspect which I will call in the following the *attributive* or *speech report* character of echo questions. In (14), B doesn't ask who Peter called, but of which Person A it was said that Peter called her. Likewise the echo question in (15) is intended to clarify of which Person A it was asked whether Peter called her.

- (14) A: *Peter called Mary.*
 B: a. *Peter called WHO?* (echo question)
 b. *Of which person did **you say** that Peter called her?* (interrogative)

- (15) A: *Did Peter call Mary?*
 B: a. *Did Peter call WHO?* (echo question)
 b. *Of which person **did you ask** whether Peter called her?*
 (interrogative)

Due to these differences between echo questions and standard interrogatives it is usually assumed that echo questions are not standard interrogatives. Most accounts assume that echo questions involve a sort of quotation or speech-report component by means of a phonetic (Janda 1985), syntactic (Sobin 2004) or semantic (Artstein 2002) copy of the previous utterance, over which they form a question. Before we discuss how this question formation can be derived, we will briefly investigate the nature of this “copying” process.

2 Repetition in echo questions

2.1 Repetition as phonetic or syntactic copying?

Due to the special syntactic and semantic properties of echo questions, Janda (1985) for example assumes that echo questions are metalinguistic questions which do not ask for the content but for the form of the previous utterance. According to his analysis, echo questions create an exact *phonetic copy* of the previous utterance (as far as understood by the speaker) and ask for an unperceived string of syllables within it.

- (16) a. John likes WHOM?
 b. For which x, x a continuous string of one or more syllables, did the last speaker say: “... x ...”?
 (Janda 1985: 180)

This view is problematic in at least two respects. First, by assuming a purely phonetic copying process, Janda (1985) predicts that echo questions are insensitive to the syntactic properties of the echoed string and the missing material in it. As for example Reis (1992) points out, speakers, however, usually seem to have an understanding of the syntactic role of the missing part. For example, only full-fledged syntactic phrases may be substituted by echo-wh-insertion. Substitution of a string of syllables representing a non-maximal constituent results in ungrammaticality. The echo question in (17) is marginally acceptable only under the assumption that the speaker herself has no understanding of the language of the quoted utterance.

- (17) a. U: *Er hat Peter ein Eis gegeben.*
 ‘He has Peter an ice-cream given.’
 b. E: **Er WAS gegeben?*
 ‘He WHAT given?’
 (Reis 1992: 231)

Exact quotes of the previous utterance may even lead to unacceptable wh-echo questions. For example, wh-expressions are invariably singular. Hence, substitution of a plural noun phrase by an echo-wh-phrase is grammatical only if the verb’s inflection is adapted accordingly. Moreover, since wh-phrases are pronouns, which can be neither extraposed nor left-dislocated, the insertion of an echo-wh-phrase can even require changes in word order.

- (18) a. A: *Das haben Zwerge gemacht.*
 ‘Dwarfs have done that.’
 b. B: **Das haben WER gemacht?*
 c. B: *Das hat WER gemacht?*
 Intended: ‘WHO did that?’
 (Reis 2012: 6)
- (19) a. A: *Karl hat behauptet, dass Tim Drogen nimmt.*
 ‘Karl has claimed that Tim takes drugs.’
 b. B: **Karl hat behauptet WAS?*
 c. B: *Karl hat WAS behauptet?*
 Intended: ‘Karl claimed WHAT?’
 (Reis 2012: 6)

If the repeated material in echo questions really consisted only of a copy of the phonetic string of the previous utterance, such changes should be ruled out. As Sobin (2004) points out however, there are restrictions on how far an echo question can depart in structure from the previous utterance. While (20d) is a suitable echo question in the context of (20a), (20b) and (20c) are not.⁵

⁵ Note that in Sobin (2004), the echo-wh-phrases are not capitalized. The capitals have been added, as suggested by one of the reviewers, to make the examples more easily comparable regardless of the source.

- (20) a. U: [CP [C Did] [IP Mary meet Mozart at the party]]?
 b. *E: [CP WHO did [IP Mary meet at the party]]?
 c. *E: [CP -WH [IP Mary met WHO at the party]]?
 d. E: [CP [C Did] [IP Mary meet WHO at the party]]?

According to Sobin (2003: 506), echo questions may reformulate the previous utterance as long as they keep an “exact copy of the LF (/post-spellout) CP structure of the utterance being echoed” (an effect he calls “COMP-freezing”). While the CP-structure of (20d) is identical to that of the echoed utterance, (20b) and (20c) depart from the CP-structure of the previous utterance, which, according to Sobin (2004), explains the contrast in acceptability. Non-CP-elements, by contrast, do not have to be frozen. They can involve only a (possibly very) loose “copy” of the non-CP-elements of the previous utterance. This explains why for example an active-passive-change like the one in (21) is acceptable, whereas it is ungrammatical in examples such as (22). Only in (22) does the active-passive-change directly affect the CP-structure; in (21) it only has an impact on non-CP-elements.

- (21) a. U: *Bill said that Mary was kissed by Mozart.*
 b. E: *Bill said that Mary was kissed by WHO?*
 c. E: *Bill said that WHO kissed Mary?*
 (Sobin 2003: 508)

- (22) a. U: *Bill wondered who was kissed by an oyster.*
 b. E: *Bill wondered who was kissed by WHAT?*
 c. *E: *Bill wondered WHAT kissed who(m)?*
 (Sobin 2003: 508)

This differentiation between CP- and non-CP-elements allows Sobin (2004) to account for a broad range of reformulation effects in echo questions. Yet his syntactic proposal is still too restrictive. Unlike predicted, the examples in (23) and (24) all represent acceptable echo questions in their contexts although they directly affect the CP-structure of the previous utterance.

- (23) U: *Could you please close the door?*
 a. E: *I should WHAT?*
 b. E: *You're asking me to do WHAT?*

- (24) U: *Call the police!*
 a. E: *I should call WHO?*
 b. E: *You're asking me to call WHO?*

These counterexamples raise the question whether the contrasts observed by Sobin (2004) are indeed syntactic effects or rather semantic or pragmatic in nature. As the examples in (25) and (26) show, echo questions may not only depart in structure, but also in wording from the previous utterance. Indeed, echo questions may relatively freely paraphrase the echoed utterance, for instance by adapting deictic elements to the context of the actual speaker or substituting proper names by equivalent definite descriptions; they are even allowed to change the sentence type when paraphrasing the preceding utterance, as shown in (23) and (24). Restricting repetition effects in echo questions to phonetic or syntactic copies of the previous utterance obviously falls short of an adequate explanation.

(25) A: *My mother and father are coming tonight.*

B: *Your parents are coming WHEN?*

(Banfield 1982: 125)

(26) A: *My parents will be arriving tonight.*

B: *They'll be arriving WHEN?*

(Blakemore 1994)

Artstein (2002: 86) for example assumes that echo questions are only suitable if they keep an entailment relation to the previous utterance such that “the disputed part of an echo question is entailed by the preceding utterance.”

(27) a. A: *I gave Jill a chihuahua for her birthday.*

B: *You gave Jill a DOG for her birthday?*

b. A: *I gave Jill a dog for her birthday.*

B: (?) *You gave Jill a CHIHUAHUA for her birthday?*

(Artstein 2002: 86)

According to Artstein (2002), the echo in (27a) is felicitous because giving Jill a chihuahua entails giving her a dog; the echo in (27b) sounds odd because the entailment doesn't work the other direction. As Artstein (2002) points out, this entailment relation is highly context-sensitive: the echo question in (27b) improves significantly if we imagine a context in which we can make the additional assumption that in any case in which speaker A gave Jill a dog, it was a chihuahua that he gave her. If we follow Artstein (2002), repetition in echo questions boils down to this highly context-sensitive (and hence pragmatic rather than semantic) entailment relation between echo questions and the echoed utterances. In the following, we will discuss how this entailment relation can be specified, where it

might come from and what impact it can have on the form and interpretation of echo questions. As a starting point, we will briefly discuss Artstein's analysis of echo questions, which will be modified slightly in the final section.

2.2 Artstein (2002): Focus, repetition and implicature

According to Artstein (2002), the entailment relation between echo questions and their utterances is at the heart of any explanation of why these utterances are interpreted as questions at all. Due to the aforementioned differences between wh-echo questions and ordinary wh-interrogatives (Hockey 1994; Artstein 2002; Poschmann 2015), Artstein assumes that echo questions are not syntactically (by a wh-operator) licensed interrogative sentences (unless they echo an interrogative sentence), but are only interpreted as questions as an instance of focus marking and pragmatic reasoning. Building on the observation that in both wh- and non-wh-echo questions the questioned part is obligatorily accented (Hockey 1994), he analyzes the characteristic pitch accent in echo questions as a focus accent and interprets echo questions within Rooth's (1992) alternative semantics of focus. Roughly stated, he argues that, due to the special context conditions, in the case of echo questions, the set of alternatives derived from the focus structure of the echo utterance is interpreted as the set of possible answers that constitutes the meaning of a question. Hereby, Artstein (2002) draws on the close relation between the semantics of focus and that of questions.

According to Rooth (1992), each syntactic phrase α is assigned a focus semantic value $\llbracket \alpha \rrbracket^f$ in addition to its ordinary semantic value $\llbracket \alpha \rrbracket^\circ$. Roughly, the focus value $\llbracket \alpha \rrbracket^f$ of a proposition is the set of all propositions obtained by replacing the focused constituent with alternatives of the same semantic type. Consider the declarative sentences (28) and (29). Both sentences have the same semantic value $\llbracket \cdot \rrbracket^\circ$; they both denote the proposition that Peter gave flowers to George. They only differ in their focus value $\llbracket \cdot \rrbracket^f$. If we replace the focused constituent in (28a) by alternatives of the same type (in this case $\langle e, t \rangle$), we derive the set of propositions in (28c). For (29a), however, we derive an alternative set such as (29c).

- (28) a. *Peter gave FLOWERS to George.*
 b. $\llbracket (28) \rrbracket^f = \lambda p. \exists x \in D_e [p = \lambda w. \text{Peter gave } x \text{ to George in } w]$
 c. {Peter gave flowers to George, Peter gave chocolate to George, ...}
- (29) a. *Peter gave flowers to GEORGE.*
 b. $\llbracket (29) \rrbracket^f = \lambda p. \exists x \in D_e [p = \lambda w. \text{Peter gave flowers to } x \text{ in } w]$
 c. {Peter gave flowers to George, Peter gave flowers to Jill, ...}

Note that this is exactly the Hamblin (1973) interpretation for the corresponding standard interrogative as denoting a set of propositions (namely the set of possible answers).

- (30) a. *What did Peter give to George?*
 b. $\lambda p. \exists x \in D_e [p = \lambda w. \text{Peter gave } x \text{ to George in } w]$
 c. {Peter gave flowers to George, Peter gave chocolate to George, ...}

Standardly, this close relationship between the semantics of focus and of questions is used to explain information-structural effects in discourse, such as the close correlation between questions and the position of focus in answers. According to Rooth (1992), the contrast in the question-answer-pairs in (31) and (32) can be explained if we assume that the set of alternatives denoted by the focus semantic value of an answer has to form a proper subset of the set of possible answers denoted by the corresponding question in discourse.

- (31) a. *What did Peter give to George?*
 b. *Peter gave FLOWERS to George.*
 c. #*Peter gave flowers to GEORGE.*
- (32) a. *Whom did Peter give flowers?*
 b. #*Peter gave FLOWERS to George.*
 c. *Peter gave flowers to GEORGE.*

Artstein (2002) now argues that in the case of echo questions the focus value $\llbracket \cdot \rrbracket^f$ of the utterance is not used for such information-structural purposes as question-answer-congruence, but serves as the question meaning of the intended echo question. Artstein (2002: 82) points out: “The alternative set $\llbracket \cdot \rrbracket^f$ of an echo question is the set of possible answers, which constitutes the meaning of the question.” According to his proposal, the echo question in (33a), just as the plain assertion in (28), is of declarative sentence-type and hence denoting the proposition that Peter gave flowers to George. The focus value of (33a) denotes the set of alternatives in (33d) and hence exactly the same set of alternatives as the focus value of the declarative utterance in (28), which is equivalent to the set of propositions denoted by the corresponding interrogative *wh*-question in (30). The only difference between the echo question in (33a) and the assertion in (28) is that in case of the echo question the focus value is (pragmatically) interpreted as the meaning of a question and not as the focus background of an assertion.

- (33) A: *Peter gave flowers to George.*
 B: a. *Peter gave FLOWERS to George?*
 b. $\llbracket (28) \rrbracket^{\circ} = \lambda w. \text{Peter gave } x \text{ to George in } w$
 c. $\llbracket (28) \rrbracket^f = \lambda p. \exists x \in D_e [p = \lambda w. \text{Peter gave } x \text{ to George in } w]$
 d. {Peter gave flowers to George, Peter gave chocolate to George, ...}

Wh-echo questions, such as (34b), are treated completely analogously to non-wh-echo questions. Roughly, Artstein (2002) assumes that focus marking transforms the marked element into a variable over the corresponding domain of denotations. Wh-phrases, however, can be seen as lexical variants of such variables. Thus, wh-phrases can substitute for all kinds of focused material (even material below the NP-level), as long as the interpretation is kept constant.⁶

- (34) A: *Peter gave flowers to George.*
 B: a. *Peter gave FLOWERS to George?*
 b. *Peter gave WHAT to George?*
 c. {Peter gave flowers to George, Peter gave chocolate to George, ...}

The assumption that wh- and non-wh-echo questions indeed have the same question meaning might be strengthened by the observation that non-wh-echo questions, similar to wh-echo questions but unlike y/n-interrogatives, allow pure term answers (e.g. Meibauer 1987). The fact that non-wh-echo questions, unlike wh-echo questions, may be answered additionally by *yes* or *no* can be explained if we consider that non-wh-echo questions, in contrast to wh-echo questions, offer a proposition as their normal semantic value $\llbracket \rrbracket^{\circ}$ which can be accepted or rejected by *yes* or *no*.

- (35) non-wh-echo question
 A: *Ich habe Klaus getroffen.*
 'I met Klaus.'
 B: *Du hast Klaus getroffen?*
 'You met Klaus?'
 A: *Ja. / Nein. / Ich habe Klaus (nicht) getroffen. / Klaus.*
 'Yes. / No. / I met (didn't meet) Klaus. / Klaus.'
 (Meibauer 1987: 336)

⁶ For a detailed discussion of how such in situ wh-phrases can be licensed by focus see Poschmann (2015).

(36) y/n-interrogative

A: *Hast du Klaus getroffen?*

‘Did you meet Klaus?’

B: *Ja. / Nein / Ich habe Klaus (nicht) getroffen / *Klaus.*

‘Yes. / No. / I met (didn’t meet) Klaus. / *Klaus.’

(Meibauer 1987: 336)

Artstein’s (2002) analysis has many advantages, especially with respect to the deviant syntactic behavior of echo-wh-phrases. According to his proposal, the accented wh-phrase is not licenced by a syntactic wh-operator, but only semantically by focus. As all clause types allow for focusing, it is correctly predicted that echo questions can be formed independently of the clause type of the sentence they echo. Furthermore, the analysis explains straightforwardly why echo-wh-phrases and interrogative-wh-phrases have different distributional properties. It falls out naturally that, like focused phrases, echo-wh-elements (but not interrogative wh-elements) have to carry the main accent in echo questions. Last but not least, the particular constituency facts of echo-wh-elements are also accounted for naturally: it is well known that focus not only projects from maximal projection to maximal projection but can also mark simple nouns or even elements below the word-level.

On the other hand, at least at first sight, his analysis leaves two issues under-specified: First, why in the case of echo questions should focus alternatives be interpreted as the answer alternatives of a question (the question interpretation problem)? And secondly, how can we account for the fact that echo questions unlike ordinary information questions do not ask for the proposition that is true, but for the proposition that was asserted (the attribution problem)? Note that Artstein’s (2002) analysis assigns the same meaning to echo questions as to standard wh-interrogatives. Both (34a) and (34b) denote the same alternative set (34c) as the standard interrogative in (30).

According to Artstein (2002: 90), “the difference lies in the pragmatics: a direct question asks for a true proposition, while an echo question asks for the proposition that was asserted or intended.” Artstein (2002: 87) suggests that echo questions are interpreted as questions only because they repeat the content of the preceding utterance. He assumes that the question interpretation of an echo question is derived via a Gricean inference: since the proposition expressed by the echo is already entailed by the preceding utterance context, it offers no new information and should be deaccented. By focus marking part of the utterance, however, the speaker “indicates that she considers part of it not to be given, so the interlocutor infers that the speaker intends to question this information.”

The question meaning of wh-echo questions is derived by a very similar inference in Artstein (2002). Following Schwarzschild's (1999) account of focus and givenness, wh-phrases are interpreted as existentially quantified indefinites (Karttunen 1977), which are always given and hence deaccented. Indeed wh-phrases are generally not focused in standard wh-interrogatives. In wh-echo questions, however, the wh-expression is obligatorily accented and thus marked as non-given. The hearer must infer that the speaker intends to question the position marked by the wh-expression.

This type of implicature and the contextual entailment relation it is built upon are not unproblematic, at least in the case of non-wh-echo questions. As we have already seen in the introduction, not every repetition is interpreted as an echo question (see examples (1) and (2)). And as we will see in the following section, even utterances which are not entailed by the preceding context can be interpreted as echo questions under certain very specific context conditions. In the following, I will adopt Artstein's focus-based analysis of echo questions but argue that the context conditions under which an echo question interpretation can arise must be analyzed more carefully. Since for the topic of this paper, non-wh-questions are more interesting because they fully repeat the previous utterance, I will concentrate in the following on this type of echo question.⁷ More specifically, I will ask under what context conditions a declarative sentence can be interpreted as an echo utterance and, as the case may be, as an echo question.

3 Modifying Artstein

3.1 Intonation and attribution

Artstein (2002) presumes that the echo question interpretation is triggered in one step by focusing repeated and hence context-given content. In the following, I will argue that it is necessary to tease apart more neatly the *echo* (speech report) and the *question* component of the echo question interpretation. More specifically, I will argue that repetition of content already given in the preceding context does not directly trigger an echo *question* interpretation but only favors an *echo* (speech report) interpretation, which means an attributive interpretation in which the content of the utterance is not attributed to the actual speaker but to some previous speaker in the context.

⁷ For a corresponding discussion of wh-echo questions, please refer to Poschmann (2015).

A first observation is that an echo *question* interpretation only shows up if the utterance is realized with a rising intonation pattern. Consider first the utterances in (37) and (38) and how their interpretations differ depending on whether they are realized with a rising (↑) or falling (↓) intonation pattern.⁸

(37) A: *Rita married Jim Montague today.*

B: *She married JIM MONTAGUE* (↑)

A: *Yes. That's what I said.*

(adapted from Bartels 1999: 158)

(38) A: *Rita married Jim Montague today.*

B: *She married JIM MONTAGUE* (↓) (*I always thought she loathed him*)

A: *#Yes. That's what I said.*

(adapted from Bartels 1999: 158)

Both of B's utterances repeat the content of the previous utterance. But only B's utterance in (37) invites an answer or another repetition of the original utterance. Taking answerability as a diagnostic, Bartels (1999) assumes that only (37) is interpreted as an echo question, whereas (38) by contrast is more likely to be interpreted as a sort of echo assertion or echo exclamation. Unlike presumed by Artstein (2002), repeated focusing, and hence context-given content, is not sufficient to trigger a question interpretation.

Both (37) and (38), however, allow B to dissociate from the content of the previous utterance. This distinguishes B's repetitions from A's original utterance.

⁸ Following Truckenbrodt (2012), falling intonation contours are characterized by a high pitch accent and one or two lower edge tones (H* L-) in the system of Pierrehumbert (1980), whereas rising intonation contours are marked by a low pitch accent and one or two higher edge tones (L* H-). According to these definitions, high-rise (H* H-H%) and fall-rise contours (H* L-H%) are not strictly spoken rising, yet they have in common with the rising (H* L-) pattern the fact that they end with a higher tone than the pitch tone they started with. Since the variety of intonations in non-wh-echo questions can range from (H* L-) to (H* H-H%) or (H* L-H%), and since these contours are all characterized as rising in the echo literature (e.g. Bartels 1999; Gunlogson 2003), I follow Gunlogson (2003) in subsuming high-rise and fall-rise contours under the rising pattern for the purposes of this paper. It must be pointed out, however, that in the phonological literature the distinct pitch accents (H* versus L*) and edge tones (e.g. H- versus L-) are conceived as abstract morphemes, which each bring a different semantic impact to the utterance (Pierrehumbert 1980; Bartels 1999; Truckenbrodt 2012). Differences in the intonation pattern will be noted in the following by footnotes. A more detailed analysis of the intonation pattern, however, would go beyond the scope of this paper. For a more detailed discussion of the relevant data from a phonological perspective, see Hirschberg and Ward (1995), Bartels (1999), and Truckenbrodt (2012).

- (39) A: *Rita married Jim Montague today.* (#I don't believe this.)
 a. B: *She married JIM MONTAGUE* (↑) (I don't believe this.)
 b. B: *She married JIM MONTAGUE* (↓) (I don't believe this.)

But why can B dissociate from the content of her utterance while A cannot? Unlike A, B doesn't seem to have a commitment to the content of her utterance. Apparently, the content of B's utterance is not attributed to B (the actual speaker) but to A (the previous speaker in the context), similarly to what happens in regular speech reports. Indeed, both (39a) and (39b) can be paraphrased by indirect speech reports.

- (40) A: *Rita married Jim Montague today.* (#I don't believe this.)
 a. B: **You say** *she married JIM MONTAGUE* (↑) (I don't believe this.)
 b. B: **You say** *she married JIM MONTAGUE* (↓) (I don't believe this.)

What repetition seems to favor, hence, is not an interpretation of an utterance as a question but an interpretation of an utterance as an echo, e.g. as an instance of speech report, whose content is attributed not to the actual speaker but to another speaker in the context.

Note that, contrary to what is sometimes presumed (Gunlogson 2003), this attributive (context shifting) effect is not bound to rising intonation. Both (39a) and (39b) allow the speaker to dissociate from the content expressed with her utterance, independently of which intonation pattern is used. By contrast, rising intonation seems to be quite obligatory to mark an attributive (echo) utterance as a question. As already Bartels (1999: 157) observes, "what unites echo questions as a group, and sets them off from other echo utterances, is their final intonation, which is obligatorily rising." Note, however, too, that intonation is a necessary but not a sufficient condition to interpret a rising declarative as an echo question. As is well known (e.g. Féry 1993; Gunlogson 2003), regular assertions can be performed with either falling or rising intonation.^{9,10}

9 In (41), the speaker seems to assert the content of the utterance, but at the same time ask an additional question. According to Hirschberg and Ward (1995: 408) an intuitive interpretation of the caller's utterance in (41) might be "I'm calling from Skokie. Have you heard of that place?"

10 In contrast to standard y/n-questions or confirmation questions such as in (42) below, which are typically marked with *L* H-*, this special type of assertion is typically marked by a high-rise contour *H* H-H%*. See Truckenbrodt (2012) for a discussion.

- (41) Chicago radio station DJ: *Good morning Susan. Where are you calling from?*
 Caller: *I'm calling from Skokie (↑) (*I don't believe that.)*
 (Gunlogson 2003: 65, adapted from Hirschberg and Ward 1995: 408)

Even so-called “confirmation questions” such as (42a) and (42b) can be realized with rising or falling intonation. In these cases, the speaker does not try to clarify a preceding utterance but to confirm one of her own assumptions (43).

- (42) Robin is sitting in a windowless computer room when another person enters. The newcomer is wearing a wet raincoat and boots. Robin says:
 a. *It's raining (↑) (*I don't believe that.)*
 b. *It's raining (↓) (*I don't believe that.)*
 (Gunlogson 2003: 65)
- (43) Robin is sitting in a windowless computer room when another person enters. The newcomer is wearing a wet raincoat and boots. Robin says:
 a. *#You say it's raining (↑)/(↓)*
 b. *I guess it's raining (↑)/(↓)*

Similarly to echo questions, confirmation questions invite an answer from the addressee. Unlike echo questions, however, they invite an answer even if realized with falling intonation.¹¹ Moreover confirmation questions, unlike echo questions, but similarly to assertions, commit their speaker to the content expressed with the utterance. In Poschmann (2008) and Poschmann (2015), I therefore argue that such confirmation questions are not echo questions but a special type

¹¹ Crosslinguistically, experimental intonation studies suggest that declarative questions with falling intonation are more common than often assumed. In his experimental study on declarative questions in Dutch, Beun (1990: 312) finds that almost 20 percent of all declarative questions are realized with falling intonation. In so-called expert contexts (confirmation question contexts par excellence), in which the addressee can be considered to know the answer for sure, falling declarative questions even surpass their rising counterparts: “only 48% of the declarative questions in [Beun's] corpus of recorded telephone dialogues [at Schiphol Airport Amsterdam] had a rising intonation at the end” (ibid.). In follow-up studies using spontaneous speech corpora of southern British English, Geluykens (1988) comes to a similar result: a majority of declarative questions occurred with a fall (57% of the data, with the overall frequency of falls – 64%).

of assertion (so-called tentative assertions), with which the speaker asserts an assumption and asks the addressee for confirmation of it.^{12,13}

Gunlogson (2003), by contrast, doubts that a speaker can use a declarative question to confirm a private assumption. Based on examples such as (44), she assumes that declaratives are suitable as questions only in contexts in which the context is already biased towards the proposition expressed in the declarative; more specifically, she assumes that declaratives are suitable as questions only in contexts in which the addressee already has a public commitment to the proposition expressed in the declarative (Contextual Bias Condition).¹⁴ In some sense, she suggests that declaratives are suitable as questions only in contexts in which the declarative repeats or echoes information already entailed by the preceding context. Indeed, the declaratives (44a) and (44b) both seem quite awkward in a completely neutral context.

- (44) Robin is sitting in a windowless computer room when another person enters. There is no evidence that it's raining outside. Robin says:
- a. #*It's raining* (↑)
 - b. #*It's raining* (↓)

12 Following Zeevat (1997) and Nilsenová (2000), I assume that a speaker's assertion "does not bring an update (of the Common Ground) with the proposition *p* expressed by the utterance but rather with the proposition *BSpkr* (*p*) – the speaker believes that *p*. In order for the proposition to become part of the Common Ground (that means a commitment of both, speaker and hearer), the hearer has to acknowledge it, with the update *BH* (*p*). Only by virtue of this acknowledgement, *p* becomes Common Ground" (Nilsenová 2000: 34). According to this definition, the addressee has to "answer" not only questions but also standard assertions. In normal assertion contexts, in which the proposition conveyed is informative for the addressee, this acknowledgment is usually given implicitly (by not denying it). But it can be made explicit (*hmm, yes, okay, ...*), especially in situations in which it is difficult to establish Common Ground (instruction dialogues, noisy situations ...). In confirmation question contexts it is the addressee not the speaker who is known to be in a position to judge whether the proposition is true or not. Moreover, the speaker does not assert what he believes but only what he assumes to be true or what he takes as probable. Everything depends on the addressee's judgment. This is why acknowledgment is obligatorily explicitly given in confirmation question contexts – giving us the characteristic question-answer impression. Rising intonation might favor an explicit acknowledgment by the addressee, but it is by no means sufficient to induce an explicit reaction.

13 For a contrary position, cf. e.g. Meibauer (1987), Noh (1998), and Gunlogson (2003).

14 Gunlogson (2003: 58): "An utterance of a declarative sentence (rising or falling) with descriptive content *p* is interpretable as a polar question in context *C* only if the proposition that *p* is already known to the addressee and mutually known to be known – i.e. *p* must be a public commitment of the addressee."

But why, then, are (42a) and (42b) suitable as questions? Strictly spoken, (42a) and (42b) do not fulfill the “Contextual Bias Condition” either, since the addressee has not really committed himself to the proposition that it is raining. The speaker only infers from the wet raincoat that it might be raining. Still, the declaratives are acceptable in this context. Gunlogson (2003: 58) argues that in this case non-linguistic evidence is mutually available for the discourse participants which can be repeated by the speaker, thus licensing the declarative bias. In Poschmann (2015) and Poschmann (2008), by contrast, I argue that it makes a difference whether linguistic or non-linguistic information given in the context is repeated. Only in the former case can the speaker dissociate from the proposition expressed in her utterance and attribute its content to another speaker in the context (compare (43) to (39)). Note, moreover, that declarative questions are not completely ruled out in neutral contexts. As Gunlogson (2003) concedes, the declaratives in context (45) are completely natural, although there is no hint at all as to the truth of the proposition expressed.

- (45) Airport official: *Schiphol Information.*
 Client: *Hello, this is G.M. Can you tell me which flights leave next Sunday from Amsterdam to Helsinki?*
 Airport official: *Yes, there are several flights. One leaves at 9.10 and one at 17.30.*
 Client: *And the flight takes about three hours (↑)/(↓)*
 (Gunlogson 2003: 63)

In what way do the contexts of (44) and (45) differ from each other? Context (45) is a so-called expert context, in which the addressee can be considered to know the answer for sure. Moreover, it is a context in which a client is most typically trying to elicit information from the airport official. In this case, it is rather certain that the client’s utterance is intended as a confirmation question and not as a full assertion, which means that the client is making her commitment dependent on the answer of the airport official.¹⁵

In context in (44) the status of the declarative utterance is less clear. Sitting in a windowless computer room, the speaker probably has no information about

¹⁵ Note, however, that “the public assumption about the addressee’s general knowledgeability does not provide any clue as to the truth or falsehood of a particular claim”, Gunlogson (2003: 63). In this case, it can only be the speaker’s expectation that the proposition expressed is true that licences the declarative bias.

the weather conditions outside. But perhaps she is surfing in the internet and watching a webcam outside. Is her utterance now intended as a full assertion or as a confirmation question? Does she want to assert that she knows the actual weather conditions or does she want to check some private assumptions? This means that what seems to be wrong with the declaratives in (44) is not that there is no evidence in the context for the truth of the proposition expressed, but that there is no hint about the status of the speaker's utterance in this context. Interestingly, the declaratives in (44a) and (44b) significantly improve as questions even in this neutral context if we give Robin a reason for asking a question (imagine that Robin is just about to leave and is reaching for her umbrella), or if Robin marks explicitly that she is only uttering an assertion:

- (46) Robin is sitting in a windowless computer room when another person enters. There is no evidence that it's raining outside. Robin says:
- a. *I guess it's raining* (↑)/(↓)
 - b. *It's probably raining* (↑)/(↓)

Note, however, that in (46a), we couldn't substitute *I guess* by *You said*, which could be expected if it were indeed the case that declarative questions are only licensed in contexts in which the addressee already has a public commitment to the proposition expressed. Only if the proposition expressed by the speaker's utterance is entailed by a previous utterance in the context, as in (39), can the speaker dissociate from the content expressed and attribute it to another speaker in the context, giving rise to the typical echo question interpretation. We will come back to this difference in the next section.

What we can retain from this section is that neither repetition nor rising intonation alone is sufficient to trigger an echo question interpretation. Repetition only favors the interpretation of an utterance as an echo utterance, that means as an utterance whose content is attributed not to the actual speaker but to another speaker in the context. An echo question interpretation is only available if such an echo utterance is realized with a rising intonation pattern.¹⁶ In the following

16 A possible reason why echo questions, in contrast to for instance confirmation questions, are necessarily marked by rising intonation might be that in attributive utterances (where the speaker has no commitment to the proposition expressed with her utterance), the content of the utterance cannot give any hint as to the intended speech act. Intonation thus is the only hint for the hearer to figure out which speech act is being performed by the speaker of the echo utterance. This seems to be quite similar to what happens in elliptical utterances such as (i), where the speech act interpretation "comes directly from the intonation, since there is no other source for it in sight" (Truckenbrodt 2012: 2058).

we will, hence, only consider utterances with rising intonation and ask under what conditions such utterances can be interpreted as echo questions.

3.2 The entailment relation

As we have seen in the last section, repetition of content already entailed by the previous context favors an echo (attributive) interpretation. But how can this entailment relation be specified? Under which circumstances does the content of an utterance count as entailed by a preceding context? As Noh (1998) and Iwata (2003), for example, have already observed, echo questions can repeat not only the propositional content of a previous utterance, but also its presuppositions and even implicatures. But how can entailment then be defined? Poschmann (2008) argues that an utterance (with rising intonation) can only be interpreted as an echo question if the information content of the utterance (IC) is already entailed by the previous context. According to van der Sandt (1991: 336), the information content IC of an utterance φ in a given context c consists of the entire propositional content provided by the previous utterance including the proposition itself, its presuppositions PRES and its implicatures IMP, but excluding all other kinds of free inferences: $IC(\varphi, c) = \{[\varphi]_c \cup PRES(\varphi, c) \cup IMP(\varphi, c)\}$. Now consider examples (47)–(51):

(47) Echo word-by-word

A: *There's a leopard in the living room.*

B: *There's a leopard in the living room* (↑) (*I don't believe that.*)

(48) Entailment

A: *Gina went skydiving yesterday.*

B: *She jumped out of an airplane* (↑) (*I don't believe that.*)

(49) Presupposition

A: *Maria's husband was at the party.*

B: *Maria's married* (↑) (*I don't believe that.*)

(i) John and Mary are taking a break from work. John is getting up and looks at Mary.

a. John: *Coffee* (↑) (expressing: 'Do you want coffee?')

b. Mary: *Coffee* (↓) (expressing: 'I want coffee.')

(Truckenbrodt 2012: 2042)

(50) Generalized Conversational Implicature

A: *(It is) quite nice here.*B: *It is quite nice (↑) (I don't believe that.) It's fantastic.*

(51) Inference

A: *John has to leave early.*B: *He will miss the party then (↑) (*I don't believe that.)*

In (47)–(50), B's utterance takes up a part of the information content of the previous utterance, either its propositional content or one of its presuppositions or implicatures. In (51), B makes an inference which is not directly entailed by the information content of A's utterance. In contrast to the contexts (47)–(50), context (51) does not allow B to dissociate from the content expressed in her utterance. Taking (lack of) speaker commitment as a diagnostic, Poschmann (2008) argues that only utterances (with rising intonation) whose content is entailed by the information content (IC) of a previous utterance can be interpreted as echo questions. Utterances such as (51) by contrast are analyzed as confirmation questions with which the speaker tries to confirm one of his own assumptions. Unlike in echo question contexts, speakers of confirmation questions take at least a weakened commitment to the proposition expressed with their utterance.^{17,18}

Similar to what Artstein assumes, Poschmann (2008) suggests that the attribution (or commitment-shift) is derived by implicature. In (47)–(50), B utters a proposition which is already entailed by the IC of A's utterance. B's utterance is hence uninformative for the addressee and thus violates Grice's maxim of quantity. This violation triggers an implicature from which results the observed attribution in echo questions: B's utterance is uninformative. Let us assume that B is cooperative. Why should B make such a redundant move? A possible explanation would be that B is unsure whether she understood A's utterance correctly and wants to check this. In this case, B's utterance has to be interpreted as a clarification question referring to A's utterance and not as an assertion of a new proposition. In (51), by contrast, no such implicature is derivable. A's previous utterance

17 For an analysis of such confirmation questions, cf. Poschmann (2015).

18 One of the reviewers objects that (51)B does not necessarily commit the speaker to the proposition expressed. If B presupposes that A wants to make the inference that if John has to leave early, he will miss the party, B can dissociate from the content, giving rise to an echo reading. Indeed, both readings (an echo reading as well as a confirmation question reading) seem to be available in this context. For an examination of why this distinction might be gradient, see the discussion in Section 3.3 and the detailed analysis in Poschmann (2015: 186).

does not entail that John will miss the party. The content of B's utterance is hence informative in the context and does not violate the maxim of quantity.

There are some problems for the assumption of this or similar implicatures, however. First, repetition of the content of a previous utterance is not necessarily uninformative. Consider the following example.

(52) Echo word-by-word

A: *There's a leopard in the living room.*

B: *(Indeed.) There's a leopard in the living room. (* I don't believe that.)*

In (52), B repeats the content of A's utterance to agree with and not to dissociate from A's utterance. In contrast to what happens in (47), B is making a full commitment to the proposition expressed with her utterance. Why does repetition not necessarily have an echo effect? Let us assume, as for example Zeevat (1997), Nilsenová (2002) and Gunlogson (2003) do, that an assertion "does not bring an update (of the Common Ground) with the proposition *p* expressed by the utterance but rather with the proposition *BSpkr (p)* – the speaker believes that *p*. In order for the proposition to become Common Ground (that means a commitment of both speaker and hearer), the hearer has to acknowledge it, with the update *BH (p)* (the hearer believes that *p*)" (Nilsenová 2002: 34). In this case, B's utterance is not necessarily uninformative. With her utterance in (52), A informs B that she believes that there is a leopard in the living room. The context, hence, only entails that A believes the proposition expressed by her utterance. If B now agrees to the proposition expressed by her, this move is still informative, since B's utterance adds the information that B believes the proposition expressed, too, making the proposition Common Ground. Repeating a proposition entailed by a previous utterance does not necessarily violate the maxim of quantity.

Even more problematic is the observation that in some cases utterances whose content is not entailed by the previous context can be perfectly suitable as echo questions. Assume that the following discourse takes place at a station where a train is just coming in. Due to all the noise around them, B doesn't correctly perceive A's utterance and guesses that what A said was that she gave Jill a cigar for her birthday. Although B's utterance is in no way entailed by the context of A's utterance, it forms a perfectly suitable echo question. In contrast to correct echoes of previous utterances, these echo questions are answered by no and/or a correction, but not with yes.

(53) A: *I gave Jill a chihuahua for her birthday.*

B: *You gave Jill a CIGAR?*

A: *No, a CHIHUAHUA.*

- (54) B: *What's your name, please?*
 A: *My name is Poschmann.*
 B: *Your name is Froschmann?*
 A: *No. Poschmann.*

In both cases, B can dissociate from the content expressed in his utterance. What goes wrong with the assumed entailment condition (and resulting implicatures) is that it presumes that the speaker of the echo question has correctly understood the previous utterance. This is by no means the standard case. As we mentioned already in the introduction, the standard function of an echo question is asking for clarification of a previous utterance, which might have been misperceived.

- (55) A: *I gave Jill a chihuahua for her birthday.*
 B: *You gave Jill a CIGAR? (I can't believe this.)*
- (56) B: *What's your name, please?*
 A: *My name is Poschmann.*
 B: *Your name is FROSCHMANN? (I can't believe this.)*

But under what conditions, then, can an utterance which is not entailed by the previous context be interpreted as an echo question? Or put differently, how far can an echo question depart from the information content entailed by the previous utterance? A case in point seems to be the focal structure of the utterance. Consider the following examples:

- (57) A: *Peter met Kim yesterday.*
 B: a. *Peter met TIM?*
 b. *#PETER met Tim?*
- (58) A: *My name is Poschmann.*
 B: a. *Your name is FROSCHMANN?*
 b. *#YOUR name is Froschmann?*

In contrast to (57a) and (58a), (57b) and (58b) are unsuitable as echo questions to the previous utterance. What is the difference between (57a) and (58a) on the one hand and (57b) and (58b) on the other? Let us have a look at the contrast in (57) and compare the focal structures of (57a) and (57b). Both denote the same semantic value (the proposition that Peter met Tim), but differ in their focus value. Whereas (57a) has the focus value in (59a), (57b) has the focus value in (59b).

- (59) a. $\llbracket (57a) \rrbracket^f = \lambda p. \exists x \in D_e [p = \lambda w. \text{Peter met } x \text{ in } w]$
 b. $\llbracket (57b) \rrbracket^f = \lambda p. \exists x \in D_e [p = \lambda w. x \text{ met Tim in } w]$

Let us now reconsider Schwarzschild's (1999) definition of givenness. According to Schwarzschild (1999: 150), "an utterance counts as GIVEN iff it has a salient antecedent A and modulo \exists -type shifting, A entails the Existential F-Closure of U." If we now follow Schwarzschild (1999) and replace the focused constituents in (57a) by variables and existentially bind all the unsaturated arguments in it, the resulting proposition is (60a), which is indeed given by A's previous utterance. For (57b), by contrast, we get the proposition in (60b), which is not given by A's utterance.

- (60) a. $\exists x \in D_e [p = \lambda w. \text{Peter met } x \text{ in } w]$
 b. $\exists x \in D_e [p = \lambda w. x \text{ met Tim in } w]$

What we apparently have to do is to weaken Artstein's (2002) context entailment condition to a much weaker focus based givenness requirement for echo questions. Let us call the proposition which we get after \exists -type shifting and Existential F-Closure of an utterance its "focal frame". Then, we can describe the conditions under which an utterance with rising intonation is suitable as an echo question to a preceding utterance as follows: (i) An utterance ψ with rising intonation is suitable as an echo question only in contexts in which the focal frame of the utterance is already given by a preceding utterance φ in the context or by one of φ 's presuppositions or implicatures. (ii) The echo question is answered by *yes* if the $\llbracket \rrbracket^0$ value of the echo question corresponds to the proposition of φ or to one of φ 's presuppositions or implicatures. (iii) The echo question is answered by *no* if (i) holds but (ii) doesn't hold.¹⁹

This definition is indeed quite weak. It only describes under which context conditions an utterance with rising intonation is suitable as an echo question, not under which context conditions an utterance is indeed interpreted as an echo question. Note that (61) has the same focal frame as (57) without being interpreted as an echo question. We will come back to this problem in the next subsection.

19 A counterexample to this claim are contexts such as (i). The focal frame of B's utterance (i) implies the proposition that someone met Kim yesterday, which obviously is not entailed by A's utterance. In this case the givenness requirement is not fulfilled. However, B presupposes that it is, which apparently suffices to make the echo question suitable.

(i) A: *Nobody met Kim yesterday.* – B: *NOAM met Kim yesterday?*

- (61) A: *Peter met Kim yesterday.*
 B: *And Peter met TIM.*

But if givenness does not trigger directly the echo interpretation, why should givenness play a role for the suitability and the answer conditions of echo questions? This can be explained if we follow Artstein's focus-based analysis of echo questions. Usually focus only plays a role for information-structural purposes. As Artstein (2002: 82) assumes, "a focus strategy is available for echo questions precisely because they 'echo' a preceding statement – the entire echo question is given, so none of its parts needs to be marked with focus; therefore focus can serve the purpose of indicating disputed (rather than new) material." What Artstein (2002) seems to miss is that in the case of echo questions givenness itself seems to be related to the focus alternatives in question. Unlike what is assumed by Artstein, echo questions do not seem to presuppose that the proposition expressed in the question is already given in the previous context but only that one of the focal frames is given by the previous context.

3.3 The preference problem

The focus constraints formulated at the end of the last section describe rather neatly the answer conditions of an echo question. But there is a sticky problem left open. Why are the utterances in (57b) and (58b) simply unsuitable as reactions to their preceding utterance? Why, for example, can't (57b) be interpreted as an assertion of B that he assumes that Peter (in addition to Kim) met Tim, too? If the echo question interpretation is derived by a violation of the maxim of quantity, it simply should not arise in (57b). But (57b) seems to be interpreted as an unsuitable echo question instead of a simple assertion. Why should this be the case? Let us consider a case in which the content of the echo question stands in no relation to the content of the echoed utterance.

- (62) A: *Peter met Kim yesterday.*
 B: *#He told her about his new girlfriend (↑)*

The proposition that Peter told Kim about his new girlfriend is not entailed by the information content of A's utterance, not even under the focus-modulated form. Hence, it is completely unsuitable as an echo question. Even in this case, B's utterance cannot be interpreted as a plain assertion that B believes that Peter told Kim about his new girlfriend or as a confirmation question with which B tries to confirm one of his own assumptions. B's utterance is simply unsuitable as a

reaction to A's preceding utterance. Things change, however, if the echo question reading is explicitly blocked.

- (63) A: *Peter met Kim yesterday.*
 B: a. *And he told her about his new girlfriend* (↑)
 b. *Then he told her about his new girlfriend* (↑)
 c. *I guess he told her about his new girlfriend* (↑)

If the echo question reading is blocked explicitly, an interpretation as an assertion or confirmation question suddenly becomes available. In (63a) and (63b), B signals by the conjunctions *and* and *then* that he understood and accepted A's utterance and now opens up a new topic in the conversation. This blocks an interpretation as a clarification question. In (63c), B explicitly takes a commitment to the proposition expressed (even if it is rather weak), which also blocks an interpretation as a clarification question. Without such an explicit blocking of the echo question reading, the hearer apparently tries to interpret the rising declarative sentence as an echo question and to enrich the context such that he can establish a relation to the information content of the preceding utterance. This, however, is quite difficult in a context such as (62). Hence, the utterance sounds very unsuitable in this context.

Apparently, there is a strong preference for interpreting utterances with rising intonation as echo questions if they are uttered as a reaction to a preceding utterance – even if they do not fulfill the abovementioned focus entailment condition. But why should the interpretation as an echo question be preferred for utterances with rising intonation? Let us have a look at what moves are possible in reaction to a preceding utterance. Let us assume that A asserts a proposition *p*. Now B has several possibilities to react to A's utterance. If B has misperceived A's utterance or is unsure whether she understood it correctly, her only option is to ask a clarification question, either in the form of an echo question or in the form of a clarification question.

- (64) A: *Peter is in Paris.*
 B: a. *Peter is in Paris?*
 b. *Did you say Peter is in Paris?*

If B has understood A's utterance correctly, she has several options: First, she can explicitly signal that she understood A's utterance, for example by uttering *hmm*, *oh*, *ok* etc. and/or repeating A's utterance with falling intonation. Or she can signal her understanding implicitly by accepting, denying or discussing the content of A's utterance.

- (65) A: *Peter is in Paris.*
 B: a. *Ah. / Hm. / Oh. Peter is in Paris.*
 b. *Right. Peter is in Paris.*
 c. *Peter isn't in Paris. He is in London.*
 d. *Peter is in Paris? Are you sure? I thought Peter was in London.*

Another option is that B directly opens up a new question for discussion. This, however, presumes that B has understood and accepted the content of A's utterance.

- (66) A: *Peter is in Paris.*
 B: a. *Yes. He is there for a conference.*
 b. *Oh. He is there for a conference?*

Note that the repetition of A's utterance can serve very different functions in this context, from acknowledgment or acceptance of the proposition asserted by A to different uses of a clarification question. An utterance with rising intonation, however, can only be interpreted as either an echo question, an assertion of a new question under discussion or a confirmation question. Acknowledgment or acceptance are usually marked by falling intonation. Now let us consider what the most immediate and hence most salient moves for a rising declarative in direct reaction to a previous utterance are. According to Clark and Brennan (1991: 128), each utterance first has to be "grounded": "In communication, common ground cannot be properly updated without a process we shall call grounding [...]. In conversation, for example, the participants try to establish that what has been said has been understood. In our terminology, they try to ground what has been said – that is, make it part of their common ground." In the case of A's assertion in (65), this means that only if A and B have established a mutual understanding of A's assertion can the Common Ground be updated with the proposition that A believes that Peter is in Paris. To establish this mutual understanding of A's assertion, B has to acknowledge A's assertion (by signaling understanding) or, if the understanding fails, B has to ask a clarification question to initiate a repair sequence in the discourse. If A's utterance is grounded, A and B have to reach Common Ground over the proposition expressed with A's utterance. That means that B has to signal whether she accepts or refuses the proposition expressed with A's utterance. Only if A and B agree about the proposition expressed with A's utterance or at least establish Common Ground that they disagree about it can B open up a new topic in the conversation. In some cases, acknowledgment and acceptance can be made implicit. But opening up a new topic in the discourse without explicitly grounding or accepting the last one in the discourse

presumes several implicit intermediate steps. This might explain why an echo question interpretation of an utterance with rising intonation is preferred as a direct reaction to a previous utterance. It is simply the most immediate and most salient move to make with a rising declarative in this situation.

Interestingly, a very similar effect turns up with regular assertions and falling intonation. In direct reaction to A's assertion, B's utterance (67a) can only be interpreted as a correction or denial, but not as an assertion that Mary met Tim in addition to Peter. Just like echo questions, corrections and denials are more immediate steps in the conversation than the assertion of a new proposition. Only if B explicitly marks that he intends to open up a new question for discussion can this preference for a correction interpretation be overruled, cf. (67b) and (67c).

- (67) A: *Maria met Peter.*
 B: a. *Maria met Tim.*
 b. *And Maria met Tim.*
 c. *Maria met Tim, too.*

The strong preference for an echo interpretation hence seems not to be due to a special echo presupposition, nor due to special properties of rising intonation, but is the result of a much more general default-rule at the semantics-pragmatics interface.

Let's summarize: In direct reaction to a preceding utterance φ in the context there is a strong preference for an utterance ψ with rising intonation to be interpreted as an echo question, unless the echo interpretation is explicitly blocked by signaling update of the Common Ground and/or explicit speaker commitment. (i) An utterance ψ with rising intonation is suitable as an echo question only in contexts in which the focal frame of the utterance, equivalent to the utterance's focal existential presupposition, is already given by a preceding utterance φ in the context or by one of φ 's presuppositions or implicatures. (ii) The echo question is answered by *yes* if the $\llbracket \]^{\circ}$ value of the echo question corresponds to the proposition of φ or to one of φ 's presuppositions or implicatures. (iii) The echo question is answered by *no* if (i) holds but (ii) doesn't hold.

3.4 Deriving the echo question interpretation

In the previous sections we have seen that repetition favors but not necessarily triggers the echo interpretation of an utterance. In particular, we have seen that the echo interpretation cannot in all cases be derived by implicature. How then can the echo question interpretation be derived? One option is to derive

the echo (speech report) interpretation of an utterance with rising intonation by its use as a clarification question. In direct reaction to a previous utterance, there is a strong preference for a rising declarative sentence to be interpreted as a clarification question. Clarification questions however do not ask open questions but questions with respect to the utterance to be clarified and hence involve an implicit speech report component. In this case the echo (speech report) interpretation is derived by the speech act interpretation as a clarification question.

Note however that this does not mean that echo questions are restricted to being used as clarification questions. In the following example, A tells B that she is going to Paris next Sunday and B signals that he has understood and accepted her assertion. Several days later, however, B has forgotten on which day A is leaving. He pops into her office and asks her again.

- (68) A: *I am going to Paris next Sunday.*
 B: *Oh. How nice.*
 (Several days later B pops into A's office:)
 B: *(You said) You're going to Paris on SUNDAY?*

In this case, the echo interpretation cannot be derived from the speech act interpretation as a clarification question. B opens up a completely new conversation. In this case the interpretation indeed seems to be derived by implicature. A had already given the information about on which day she will go to Paris and B had acknowledged and accepted it. The information about when A is going to Paris, hence, is already Common Ground. If B opens up this question again in the conversation, this can only mean that he has forgotten what A has told him and wants to verify it.

3.5 Echo questions and other types of clarification requests

In the previous sections, I have tried to show that the role of repetition in echo questions is rather weak. Echo questions contain neither phonetic, syntactic nor semantic copies of the previous utterance (unless they involve direct quotes of the previous utterance). As I have argued, repetition in echo questions boils down to a quite weak focus givenness condition which licenses the special interpretation of focus value as question meaning. Given that in prior literature repetition has often been considered a crucial factor for categorizing an utterance as an echo question (see Section 1.2 and references therein), it is quite appropriate to ask, as one of the reviewers did, whether the examples discussed at the end of this paper

are still echo questions or whether they constitute other forms of, for example, clarification requests. Let us, hence, take another look at the data in this paper in which the relevant questions depart farthest from a direct repetition of the previous utterance, and check whether these utterances still share the characteristics of standard echo questions outlined in Section 1.2. Let us begin with example (57), repeated here in a modified form as example (69).

- (69) A: *Peter met Kim yesterday.*
 B: a. *Peter met TIM?*
 b. *Peter met WHO?*
 c. **You say** *Peter met TIM?*
 d. **Did you say** *that Peter met Tim (of all people)?*
- (70) A: *Peter met Kim yesterday.*
 B: a. *Peter met KIM?*
 b. *Peter met WHO?*
 c. **You say** *Peter met Kim?*
 d. **Did you say** *that Peter met Kim (of all people)?*

In (69a), B misperceived A's utterance and asks whether A said that Peter met Tim. The proposition expressed in B's utterance (the proposition that Peter met Tim) is not entailed by the previous context, yet the utterance is still interpreted as an echo question. To check this, compare (69a) to (70a), a standard echo question. Just as in (70a), (69a) has a non-interrogative sentence form and is only marked by rising intonation and focusing of the disputed or misperceived question part. It clearly deviates in form from the standard interrogative clarification request (69d). Just as in (70b), the focus-marked part in (69a) can be replaced by an accented echo-wh-phrase (69b). Moreover, (70a) shares with (69a) the characteristic echo (speech report) interpretation. This clearly distinguishes (69a) and (70a) from other types of declarative questions, such as for instance confirmation questions (see Section 3.1).

More difficult to decide is the case of examples such as (48a) and (49a), repeated here in a modified form as (71a) and (72a).

- (71) Entailment
 A: *Gina went skydiving yesterday.*
 a. B: *She jumped out of an airplane?*
 b. B: *WHAT?*
 c. B: *You mean she jumped out of an airplane?*
 d. B: *Do you want to say she jumped out of an airplane?*

(72) Presupposition

- A: *Maria's husband was at the party.*
- a. B: *Maria's married?*
- b. B: *WHAT?*
- c. B: *You mean she is married?*
- d. B: *Do you want to say she is married?*

In (71a) and (72a), the proposition expressed by the utterance is entailed by the content of the previous utterance, but both questions depart quite strongly from the wording of the preceding utterance. Moreover, (71a) and (72a) do not share the typical echo accent of the examples (69a) and (70a). Are these examples still echo questions? I would argue that they are. They share with standard echo questions the non-interrogative sentence structure (which distinguishes them from interrogative clarification requests such as (71d) and (72d)) as well as the typical speech report interpretation (which sets them off from other types of declarative questions such as confirmation questions). The fact that the typical echo question accent seems to be missing can be explained if we consider that the focus in echo questions can take wide scope and place an entire utterance under question, such as in (71b) and (72b). To assume for this type of example of a non-interrogative clarification request an independent analysis to derive the question meaning would be, from my point of view, more costly than to assume that such examples are echo questions which take wide scope and put a whole proposition into question.

4 Conclusions

Different from what has been assumed in prior literature (e.g. Janda 1985; Sobin 2004), the role of repetition in echo questions is rather weak. Echo questions contain neither phonetic nor syntactic or semantic copies of the previous utterance (unless they involve direct quotes of the previous utterance). Repetition seems to boil down to a quite weak focus condition. An utterance with rising intonation is suitable as an echo question in any context in which the proposition expressed by the echoed utterance (or one of its presuppositions or implicatures) forms part of the focus alternative set denoted by the echo question. This focus-based context restriction falls out quite naturally if we adopt Artstein's (2002) focus-based analysis of echo questions. According to Artstein (2002), echo questions are focus generated questions. Whereas the focus value of an utterance is usually only evaluated with respect to the focus-background structure of its context, in the case of echo questions, it is taken as the semantic value of the question itself. This focus

strategy for echo questions, however, is available only in contexts in which it is presupposed that the focal frame of the echo question is given in the context. Only in this case is focus available for marking disputed rather than new material.

Note, however, that the abovementioned focus restrictions only decide whether or not an utterance is suitable as an echo question in a certain utterance context, not whether or not an utterance is interpreted as an echo question at all. In direct reaction to a previous utterance, however, even utterances which do not fulfil the focus conditions are interpreted as (however unsuitable) echo questions, as long as they are marked with rising intonation. In this case, the expectation that an utterance with rising intonation is intended as an echo question seems to be so strong that the echo interpretation does not need to be triggered by any repetition.

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Repetition versus implicatures and presuppositions

Abstract: The exact repetition of linguistic material has a range of pragmatic consequences, many of which can be understood as involving a weakening of the speaker's commitment towards the meanings that the material would usually be understood to convey. In this chapter I argue that exact repetition can lead to the loss of implicatures and the non-projection of presuppositions, for principled reasons involving consideration of the preceding context and the speaker's intention. In support of this, I present novel experimental data concerning sentences which appear to trigger but then cancel presuppositions: participants infer that the presupposition triggers are repetitions, even in the absence of explicit evidence of prior use. I also consider the relevance of pragmatic considerations for the conventionalised use of repetition.

1 Introduction: accounting for variability in pragmatic meanings

Certain aspects of pragmatic meaning are characteristically unstable between different communicative contexts. This is true, for instance, of conversational implicature, although the robustness of such implicatures can itself differ between items. Consider (1)–(3).

- (1) A: *Did you visit the Eiffel Tower and the Louvre?*
B: *I visited the Louvre.*
- (2) A: *Did you meet Jane's parents?*
B: *I met her father.*
- (3) A: *Did you enjoy your theatre trips?*
B: *Some of the shows were excellent.*

In each case, B's utterance gives rise to a quantity implicature that consists of the negation of some stronger proposition. In (1), this stronger proposition is that B

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visited both locations; in (2), that B met both of Jane's parents; and in (3), that the speaker thought that all the shows were excellent. In each case, the quantity implicature could be conceived of as arising from the same process of reasoning: there exists a stronger statement that B could have made, B is knowledgeable about the truth or falsity of that statement, that statement would have been relevant to the discourse purpose, and there is no obvious reason why B (assumed to be cooperative) should not have made that statement (it would not, for instance, have been face-threatening to do so). A plausible explanation for B's refusal to make that stronger statement is that B knows it would have been false, and as a cooperative interlocutor is debarred from making it.

A difference between the three cases, however, is that the precise content of the stronger statement in question – and hence the content of the implicature – is not specified by B's utterance alone in (1), although in some sense it is in (3). Taken out of this precise context, *I visited the Louvre* would not normally convey that the speaker did not visit the Eiffel Tower, whereas *Some of the shows were excellent* can readily convey that (in the speaker's opinion) not all of the shows were excellent. (2) is perhaps an intermediate case.

This observation has a relatively straightforward and theory-neutral explanation: the implicature from (1) arises because the stronger assertion (that the speaker visited both the Louvre and the Eiffel Tower) would be relevant in this particular circumstance, but under other circumstances it might not (for instance, if A just asked whether B had visited the Louvre). By contrast, in (3) – as observed by Horn (1984) – sentences with the informationally stronger quantifier *all* are generally highly relevant alternatives to the corresponding sentences with the weaker quantifier *some*, thus licensing the implicature. This appears to be bound up with the presumed fact that a sentence with *all* not only entails the corresponding sentence with *some*, but is also just as easy to utter as that informationally weaker sentence: it is no more verbose, and it is no harder to process. In the language of Relevance Theory (Sperber and Wilson 1986), it achieves at least as great a cognitive effect as the weaker sentence at the cost of no extra cognitive effort, and is therefore more relevant.

Nevertheless, a cooperative and informed speaker can apparently use *some* even when they know *all* to be the case, and are indeed willing to say so: examples such as (4) seem uncontroversially to be regarded as felicitous, even though they involve the speaker first making a weaker commitment than they could, and only subsequently strengthening it.

(4) *John ate some of the cake; in fact, he ate all of it.*

There is also evidence that hearers can interpret *some*, uttered by a knowledgeable and cooperative speaker, just to mean 'some' and not additionally to convey

‘not all’, under certain discourse conditions. Breheny, Katsos and Williams (2006) document one such example: they argue that the use of *some* does not give rise to an implicature in a context such as (5), where the purely existential interpretation is sufficient for the discourse purpose.

- (5) *Mary was surprised to see John cleaning his apartment and she asked the reason why. John told her that he intended to host some of his relatives. The rest would stay in a nearby hotel.*

Recent work by Van Tiel, et al. (2016) has also illustrated a considerable diversity in the availability of implicatures from putative weak scalar terms. Their results suggest that many weak scalars that are analysable in principle as having stronger scalemates (such as <*pretty, beautiful*>) do not in fact reliably give rise to the expected implicature. This suggests that hearers do not take the use of just any potential weak scalar to trigger pragmatic inference about stronger alternatives. However, even for Van Tiel et al., *some* quite reliably (> 80% of responses) triggers the implicature ‘not all’, and this also applies to a number of similar cases (*sometimes* +> ‘not always’, *possible* +> ‘not certain’, *may* +> ‘not will’, etc.)

The question therefore persists of why it is sometimes possible to use *some* felicitously when the speaker knows ‘all’ to be the case, despite the apparent danger of giving rise to the miscommunication of an unwanted implicature. In this chapter I develop the idea that the admissibility of such usage is connected to the exact repetition of preceding lexical material, and that the hearer avoids any communication problem by modulating their inferences in such a way as to take into account the pressures on the speaker. But before exploring this, I turn to the potentially similar issue of presupposition projection from under the scope of operators such as negation.

2 Limitations of presupposition projection

A standard test for presupposition is whether the meaning conveyed by a potential presupposition trigger can project from under the scope of other operators, canonically negation, which would modify the meaning of the asserted content. For instance, *stop* is argued to presuppose that a particular state of affairs was the case at some point prior to the time of utterance. In support of this, both (6) and (7) could normally be interpreted as conveying (8).

- (6) *Mary stopped smoking.*

(7) *Mary didn't stop smoking.*

(8) *Mary used to smoke (at some point prior to the time of utterance).*

However, readings are also accessible in which the presupposition fails to project from under the scope of negation. The continuation in (9) appears to be acceptable and fails to give rise to the presupposition (8), just as the classic (11) fails to project the obvious existential proposition.

(9) *Mary didn't stop smoking; she never used to smoke.*

(10) *The King of France is not bald; there is no King of France.*

This observation is potentially problematic for the hearer, given that presupposition can be used as a linguistic device to introduce new information. For instance, (11) can be used to convey (12), even though the content of (12) is presupposed rather than asserted.

(11) *I realised that Jamie and Susan are having an affair.*

(12) *Jamie and Susan are having an affair.*

In such cases, the speaker can achieve communicative effects by acting as though the presupposed information was already part of the common ground, thereby causing it to be accommodated. This process of presupposition accommodation enables presupposition to be used communicatively. When the presupposition appears outside the scope of any operator, accommodation does not present a problem. But when, for instance, the presupposition appears under the scope of negation, it is in principle unclear whether or not the hearer should take the presupposition to have been communicated and therefore add it to her discourse model. An utterance such as (13) could serve to convey (12), but it need not do so: the continuation (14) is also possible.

(13) *I didn't realise that Jamie and Susan are having an affair.*

(14) *I didn't realise that Jamie and Susan are having an affair, because they're not.*

In such cases, it appears that the hearer is in danger of being misled, and may have to cancel presuppositions that have already been understood as true, unless there are additional heuristics specifying more precisely whether

a presupposition introduced under the scope of negation should be taken to have been communicated (that is, to project from under the scope of negation). In what follows, I explore the idea that exact repetition is a relevant cue to the non-projection of presupposed content.

3 Exact repetition and the speaker's commitment

Both in the case of scalar implicature and that of presupposition accommodation, the hearer has a potential problem to solve: the use of a particular form of words would typically license a particular inference, but under special circumstances, that inference is not appropriate. The challenge for the hearer is to correctly identify those circumstances and modulate the inferences appropriately. This appears to be a tractable problem in practice, in that there is no evidence of widespread miscommunication here: speakers continue to use scalar terms and presupposition triggers flexibly, to convey or not to convey the additional pragmatic enrichment, confident that they will be correctly understood without any need for subsequent clarification.

It is not a new idea that linguistic material can be uttered felicitously by a speaker without that speaker intending the full gamut of meaning that that material would normally convey. Perhaps the most widely discussed example is that of metalinguistic negation (Horn 1985), in which negation serves not (necessarily) to object to the truth-conditional content of the utterance, but to object to some other aspect(s) of it *qua* utterance: for instance, its insufficiency of strength (as in (15)) or its inappropriateness of register (as in (16)).

(15) *This isn't a problem, it's a catastrophe.*

(16) *He isn't a gofer, he's a personal assistant.*

Carston (1996) argues that the essential feature of metalinguistic negation is that it represents an instance of (implicit) echoic use, in the sense of Sperber and Wilson (1986). On this analysis “a representation is being used not to represent an object or state of affairs in the world but to represent a representation” (Sperber and Wilson 1986: 320). Negation, in such a case, does not cancel a predication or deny a state of affairs, but instead denies the appropriateness of the linguistic representation that was previously used to describe that predication or state of affairs. Carston extends this account to cases in which presuppositions fail to project from under the scope of negation, similar to (9), (10) and (14). From this perspective, the issue of discerning whether a presupposition should project from

under the scope of negation is essentially a matter of determining whether it is being used in a truth-functional way or a metarepresentational way. In the latter case there is no reason to project the presupposition, as the speaker cannot be seen as committed to the truth-functional content of their utterance.

As Burton-Roberts (1999) points out, the metarepresentational use of language need not involve exact repetition of any explicitly uttered material. Nevertheless, it seems to be a reasonable generalisation that cases of exact repetition particularly strongly invite the inference that they might be metarepresentational. Consider the exchange (17):

- (17) A: *Did Mary manage to pass the exam?*
 B: *She didn't manage to pass the exam...*

To the extent that this is felicitous, I would argue that it suggests a continuation in which the presupposition associated with the word *manage to pass the exam* (that the exam would be difficult for Mary to pass) is denied – for instance, “she breezed through it”. Relatedly, it seems natural to read B’s contribution to (17) with some form of focal stress placed on *manage* (and, as a reviewer pointed out, with corresponding stress on *breezed* in the second clause of this example).¹ Given that B’s utterance exhibits such extensive repetition of A’s utterance, these observations are unsurprising. If B had no objection to the presupposition of *manage*, B could simply respond “yes” or “no”; assuming that B is cooperative, the verbosity of B’s utterance suggests that B’s communicative goal is more than merely truth-functional. Focal stress on *manage* would further underline this point, for the benefit of the hearer.

In this case, B’s utterance is ostensibly a negation of material that A introduces into the discourse, but it fails to convey the full meaning that would normally be conveyed by a negation of that material, which in this case would include the factuality of the presupposition. According to Carston’s (1996) analysis, this is because it is a case of echoic use. In that respect, the presupposition fails to project from (17) for essentially the same reason that the compositional semantic content fails to arise in cases such as (15).

It is not just under negation that echoic use can result in attenuation of meaning, as Carston (1996) also notes. She cites the following example, which is readily (although not obligatorily) analysable as the speaker “attributing [the

1 An alternative would be to read B’s utterance with focal stress placed on *she*, *pass* or *exam*, in which case it might convey a quantity implicature. As a reviewer suggested, it might be possible to place the stress on *didn't*, in which case I have the impression that B’s utterance is intended as an especially ‘weighty’ denial.

definite description] to someone else and expressing an attitude to it, conceivably one of endorsement, but more likely one of dissociation/rejection” (Carston 1996: 320).

(18) *That obnoxious beady-eyed woman is my wife.*

A similar interpretation appears to be available for utterances containing exact repetitions of presupposition triggers, even when these are not negated. For instance, we might consider (19) and (20) as potential responses of B to A’s utterance in (17), neither of which appears to commit B to the presupposition.

(19) *Did she manage to pass? She breezed through it.*

(20) *“Manage to pass” (he says). She breezed through it.*

It is not surprising that B can repeat a presupposition trigger in these circumstances without being judged to commit to the presupposition. In this dialogue fragment, A has already used the presupposition trigger, and thereby acted as though the presupposition were part of the common ground between A and B. There is no risk of B conveying that same presupposition to A, as A – by hypothesis – already considers it to be true. At worst, B has temporarily declined to correct an erroneous belief that A holds. And given that presupposed material is in any case informationally backgrounded and not easily addressable, it would be unfair to expect B to correct A’s error in any case: the information has been packaged in such a way as to defy any easy attempt at correction.

The possibility of metarepresentational use of language appears to offer language users the opportunity to say essentially anything without their being committed to its factuality. Consider (21).

(21) A: *We were only having a laugh.*

B: *You were only having a laugh.*

B’s utterance could occur with a questioning intonation, in which case it would be pragmatically interpretable as conveying scepticism about A’s claim. Produced with a flatter intonation (sometimes described with the words “repeated tonelessly”), B’s utterance appears to serve a different communicative purpose, possibly to signal that B is contemplating A’s statement or that B considers A’s statement to be inadequate for the discourse purpose for which it has been used (for instance, as an explanation or an excuse). Even when ostensibly a statement, B’s utterance does not seem to commit B to acceptance of its truth-functional content – B can

make this utterance even while retaining deep scepticism about the truth of A's claim – let alone signalling that B intends to convey this content to A.

If the above analyses are along the right lines, the exact repetition of material that would normally convey certain meanings can lead to it being interpreted as metalinguistic, or metarepresentational, and thus excuse the (new) speaker from commitment to its presuppositions or even its declarative content. I wish to argue that the same is true for scalar implicature. Consider example (4), repeated below as (22).

(22) *John ate some of the cake; in fact, he ate all of it.*

The felicity of this type of utterance is evidence that the semantic meaning of *some* is not 'some but not all': if it were, (22) would be self-contradictory. However, given that *some* in fact has a purely existential semantics, and is therefore entailed by *all*, (22) is no more informative than (23), which seems preferable on the basis of its brevity.

(23) *John ate all of the cake.*

Under what circumstances would it be acceptable to utter (22) in place of (23)? Intuitively, where the content of the weaker proposition in *some* is particularly central to the current communicative purpose. (22) appears felicitous in response to (24) or (25), but somewhat strange in response to (26).

(24) *Did you eat some of the cake?*

(25) *Who ate some of the cake?*

(26) *How much of the cake did John eat?*

In these felicitous cases, content that is relevant to the weak scalar has been introduced in the prior context, and its subsequent use is in fact reuse, and echoic, in Carston's (1996) sense. But here, the aspect of meaning that is lost is the scalar implicature. This can be explained on principled grounds. Recall that scalar implicatures putatively arise because of the use of an informationally weaker term rather than its informationally stronger scalemate. However, this notion of scale structure makes no sense when scalar terms are being used metarepresentationally: for instance, the concept of ALL stands in an entailment relation to the concept of SOME, but the word *all* doesn't stand in any such relation to the word *some*. We can therefore interpret the echoic use of *some* as doing something other

than picking out a range of values on a quantity scale (and thereby giving rise to implicatures about the falsity of higher values on that scale).

This develops a point made by Cummins, Sauerland and Solt (2012) concerning the interpretation of comparative quantifiers. They note that, for instance, (27) is odd out of the blue, but felicitous in response to a question such as (28) (but not (29)). They also show experimentally that B's utterance in (30) attracts a narrower range of interpretation than B's utterance in (31), which they argue is because the latter is construed as answering A's implied question (about the suitability of the item) in the negative (without supplying additional pragmatic information about the precise range of values concerned).

(27) *London has more than 1000 inhabitants.*

(28) *Name a city with more than 1000 inhabitants.*

(29) *Name a city with more than 500 inhabitants.*

(30) A: *This case holds CDs. How many do you have?*

B: *I have more than 60 CDs.*

(31) A: *This case holds 60 CDs. How many do you have?*

B: *I have more than 60 CDs.*

Cummins et al. (2012: 162) also note that there is a difference between the interpretation of examples like (30) depending upon whether or not the number is round. Where a non-round number (such as 77) is used, they suggest that this invites the inference that that number is contextually salient, and is being used for that reason, even if the reader/hearer has no direct evidence that this is the case. Consequently, the distinction between examples such as (30) and those such as (31) is blurred in the case of non-round numbers. This argument relies on the assumption that readers/hearers draw rich inferences about aspects of the context to which they are not privy. The experiment discussed later in this chapter explores this idea, with reference to non-projecting uses of presupposition.

In summary, then, both for materials that would normally trigger scalar implicatures and materials that would normally trigger presuppositions, the pragmatic enrichments fail in certain cases involving exact repetition. One potential explanation for this is that, in such cases, the repeated material is recognised by the hearer as being echoic or metarepresentational in character. Nevertheless, such usages give rise to ambiguities about the speaker's intended interpretation – did they or did they not intend to convey the presupposition/implicature? – which

could presumably be avoided. In the following section I consider the speaker's potential justifications for undertaking exact repetition and thus setting the hearer this task of disambiguation.

4 Speaker motivations for exact repetition

All the examples of echoic use discussed so far give rise to potential ambiguities as to the speaker's intention which need to be resolved in order for the speaker's intended discourse contribution to be successfully understood. Given the apparent complication that this introduces, why should a speaker engage in exact repetition of material that might normally trigger implicatures or presuppositions? We can attempt to answer that question in two ways: by appeal to the discourse functions that the speaker intends to perform, or by appeal to the constraints acting upon the speaker as they do so.

Taking the functional considerations first, it has long been noted that the use of exact repetition can serve high-level discourse management functions, such as the maintenance of discourse coherence (Tannen 1987). This can comprise such things as showing acceptance of others' contributions to a discourse and fulfilling one's own participatory obligations. In some of the cases I discussed earlier (for instance (21)), the effect of repetition may be to acknowledge what someone has said, to invite the previous speaker to confirm or revise that utterance, or to signal that the speaker considers it worthy of further scrutiny.

As Brody (this volume) argues, each instance of repetition is an instance of doing and saying something new: "each iteration carries meaning, e.g., I hear you, I am repeating you, I am listening, I understand, this is what you said, do go on, etc." Although the utterance is the same, the discourse context against which it is to be interpreted has changed, and consequently the function that it performs will differ.

In the case of declarative content, the change of context between the initial utterance and its repetition is especially striking. I take it that a typical declarative utterance is used to inform the hearer of something that the speaker currently knows but the hearer does not. If the hearer then repeats that utterance, the same conditions are not met and the utterance can have no such effect.² To put it more positively, we could see this as freeing up this particular linguistic

² For simplicity I ignore cases of deixis, where for instance two discourse participants may utter the same words and mean different things by them, as a consequence of picking out different referents ("I love you", etc.)

material to carry other meanings or perform different discourse functions (for instance, as a discourse marker, as proposed by Brody (this volume) for Tojola-ab'al) – assuming, of course, that the hearer has some way of understanding this intention.

In a similar spirit, given that the presence of exact repetition frees the speaker from some of the commitments that the utterance of specific linguistic material would otherwise impose upon them, there may be cases in which exact repetition allows the speaker to say precisely what they want to say and no more. This is perhaps the case for speaker B in (31), and could allow B in (32) and (33) to avoid a face-threatening continuation, in cases where Mary respectively passed the exam effortlessly and is an outstanding pianist (but where these facts are unwelcome to A).

(32) A: *I suppose Mary managed to pass?*

B: *Yes, she managed to pass.*

(33) A: *Is Mary a good pianist?*

B: *Yes, she's a good pianist.*

It may be possible to consider Horn's (this volume) lexical clones in a similar way. The repetition in a series like *DRINK-drink* or *LIKES HIM likes him* can be seen, following Brody, as a case in which the repetition is interpreted against a different context than the initial instance. In these cases, we could see one instance of the expression as picking out a relatively vague or large set of entities or situations, and the repetition serving the function of zooming in further on a precise set of canonical or central entities or situations. Under certain circumstances, we could see the repetition as changing the speaker's commitment: for instance, the speaker of (34) is committed to accepting any drink, while the speaker of (35) is not.

(34) *I just need a drink.*

(35) *I just need a DRINK-drink.*

In short, exact repetition can be used to perform a wide range of functions, both at the level of discourse management and at that of conveying specific content. But even given that this is the case, why might exact repetition be an attractive option for the speaker? If practical considerations sometimes free up a repetitious usage from performing its usual discourse function, that may enable the usage to be co-opted for some other purpose (as in Brody's chapter), but there are many

other potential utterances that are not associated with discourse functions and could be used instead: so what is special about repetition?

From the perspective of interactive alignment approaches to dialogue, repetition can be seen as a manifestation of priming effects. As Pickering and Garrod (2004: 5) put it, “encountering an utterance that activates a particular representation makes it more likely that the person will subsequently produce an utterance that uses that representation”, a process which they argue is “essentially resource-free and automatic” (Pickering and Garrod 2004: 5). On this account, it is cognitively less costly to repeat material than it would be to utter that same material anew: indeed, repeated material generally is relatively cheap to use. Alignment between interlocutors at lexical and syntactic levels is, in their view, instrumental in bringing about alignment at higher levels, ultimately including the situation level, and thus allowing communication to take place.

The extent to which priming could be responsible for communication in general has been disputed on several grounds. As explored by Howes, Healey and Purver (2010), there is very limited evidence for above-chance levels of syntactic alignment in natural dialogue, and the clearest demonstrations of syntactic priming (such as Branigan, Pickering and Cleland 2000) involve very little informational load. Cannava and Bodie (this volume) also demonstrate that the quantity of lexical repetition in typical dialogue is modest, especially if we exclude function words whose use might be obligatory and not simply a reflection of priming (such as articles and determiners). Altogether, it seems unlikely that priming conveys sufficient information for it to underpin alignment in situation models, as brought about through dialogue. It has also been argued that repetition can be a signal of misalignment, and an initiator of explicit repair, rather than just a manifestation of alignment. For instance, (21) could be used in this way.

Nevertheless, if we accept the modest premise that classical priming effects might be evident in dialogue, these should suffice to promote the use of exactly repeated material. The effect of priming would be merely to reduce the cognitive cost associated with reusing the primed material. This is surely not a sufficient effect to induce speakers to produce utterances that are entirely mismatched with their communicative intentions – someone who means “no” won’t say “yes” just because they’ve been primed to say “yes” – but it may be sufficient grounds to prefer repeated material to novel material that would express a similar communicative intention. Indeed, if we assume that the speaker is trying to balance the achievement of communicative effects with the expenditure of the minimal amount of effort, the speaker may be willing to reuse material even at the cost of some communicative effect. The lexical clones discussed by Horn (this volume)

could conceivably be viewed as cases of the speaker choosing to reuse highly accessible material in order to pursue their discourse goals, rather than using less ambiguous material that would be available to speaker and hearer only at a higher cognitive cost.

Alongside low-level priming effects, we could construe some cases of exact repetition as being related to current discourse goals, for instance as expressed through the notion of Question Under Discussion (QUD; Roberts 1996/2012). Consider again the following exchange:

- (36) A: *Who ate some of the cake?*
 B: *John ate some of the cake; in fact, he ate all of it.*

B's utterance seems to fulfil two goals in turn: first to answer A's question, and secondly to clarify the precise meaning that B intends. Given that A's question is the QUD, B first provides a partial answer, and then an elaboration, which incidentally confirms that the partial answer provided by the first clause is in fact a complete answer to A's question (in that no-one else ate any of the cake).

I think this analysis is essentially correct, but it runs into a potential problem in QUD terms: why should B not simply have said (37)?

- (37) *John ate all of the cake.*

(37) would have been simpler than B's utterance in (36), even if the repetitious first clause of the latter is cognitively relatively inexpensive. Moreover, (37) conveys exactly the same meaning as B's utterance in (36), including the fact that "only John" is a complete answer to A's question. The only possible defence of (36) is that B provides in some sense a more direct answer to A's question: we might conjecture that the process by which A deduces an answer to her QUD based on B's utterance is more economical than would be the case if B had uttered (37). From a relevance-theoretic point of view, the first clause of B's utterance in (36) provides the required cognitive effects at a lower cost in cognitive efforts than would have been the case if (37) had been uttered, and would therefore be more relevant.

The idea that a less informative statement which minimally answers the QUD is easier to process than a more informative statement which entails an answer to the QUD seems plausible in principle. Indeed, if the former is a case of exact repetition and is therefore susceptible to priming effects, these may also facilitate processing on the part of the hearer. However, in the absence of data about the costs associated with deductive inferences of the kind that (37) would require, this explanation remains conjectural. One of the potential advantages of studying

the pragmatic effects of exact repetition is the prospect that such work might enable us to distinguish priming effects from those related to more strategic discourse considerations such as QUD. In this direction, the experiment presented in the following section makes a relatively simple attempt to distinguish exact repetition at a lexical level from repetition at the content level. However, I do not attempt to adjudicate between these explanations in this chapter.

5 Inferring metarepresentational use and inferring repetition

As discussed earlier, in order to understand the speaker's intended meaning, the hearer must establish whether given usages are metarepresentational (and subsequently to determine which aspects of the representation the speaker is addressing, a question that I shall not attempt to address here). In cases where the speaker is, for instance, repeating the hearer's own words back to them, it is a reasonable inference that the intention may be metarepresentational, for reasons discussed earlier (for example, that it would not be a felicitous discourse move to attempt to communicate the same meaning back to a person who previously communicated it³). However, as Burton-Roberts (1999) notes, such usages need not involve exact repetition. Moreover, in practice, interlocutors do not precisely share their experience of the prior discourse, and something that a speaker uses as an exact repetition may not be immediately identifiable as such to the hearer.

Considering a case such as (38), the task of the hearer is to establish as rapidly as possible that the apparent presupposition of the first clause should not be added to her discourse model. Relevant cues might include the focal stress pattern of the utterance (Beaver and Clark 2008; Cummins and Rohde 2015): for instance, if stress falls on *regret*, the presupposition may be more likely to persist than if the stress falls on *John* or *boss*.

(38) *John doesn't regret arguing with his boss, because he didn't.*

In the absence of cues that *regret* is being used metarepresentationally – for instance, when encountering (38) out of context and without the benefit of audible

3 On this definition, “mansplaining” – explaining something back to someone who already clearly knows about it – is not a felicitous discourse move.

stress – the hearer may believe that the speaker intends to commit to the presupposition of *regret*. However, this view becomes untenable at the second clause, where the speaker explicitly denies this presupposition. At this point, there are several possibilities as to how the hearer could respond. They could judge the sentence as a whole to be incoherent; they could assume that the speaker has changed commitments mid-sentence; or they could reanalyse the presupposition in the first clause as an instance of metarepresentational use, thus avoiding a clash between the speaker's commitments in the two clauses.

If a hearer were to arrive at a reanalysis of the first clause as metarepresentational, they would be entitled to draw additional inferences about the prior context. As discussed earlier, for a usage to be metarepresentational it must, by definition, be about a representation, hence this understanding presupposes the prior availability of the corresponding representation. In the case of (38), this representation might be the word(s) *regret* (*arguing with his boss*) or the associated meaning. Presented with (38) out of the blue, a hearer who interpreted *regret* metarepresentationally might reasonably infer that the appropriate representation was introduced in the immediately preceding discourse to which the hearer was not privy.

In what follows, I present a small experiment that aimed to use this idea in order to investigate participants' responses to items such as (38). Participants were presented with items that would normally carry presuppositions, with or without subsequent cancellation of the presupposition in a second clause. They were asked to guess what the preceding question was that gave rise to the utterance. The rationale for this was that, if participants came to interpret the presupposition trigger usage as metarepresentational, then they should infer prior contexts which introduced the corresponding representations. A secondary question was whether participants inferred that the metarepresentational usages were likely to involve exact repetition: for instance, whether they would infer that (38) arose as a response to a question including the words "regret arguing with his boss". If so, this would constitute evidence that participants closely associate the exact repetition of lexical material and the availability of metarepresentational readings.

5.1 Materials

Two lists of 16 items were created. List 1 comprised eight simple sentences with presupposition triggers under the scope of negation (*again, too, still, continue, stop, only, regret*, and the comparative construction *is a better X than*), along with eight filler items. In list 2, the eight simple sentences were extended to deny the

presuppositions, and were presented along with the same eight fillers. The sentences were listed in a pseudorandom order.

In each case, all 16 items were presented simultaneously. Each item was presented as a dialogue fragment in which participant A's contribution was blank, and the critical sentence was indicated as participant B's contribution. Participants were instructed that "In this short experiment, you will read a series of dialogue fragments. Please fill in the gaps with your best guess as to what person A said in each case."

A full list of materials is presented in the results section.

5.2 Participants

34 participants were recruited via the University of Edinburgh: 12 completed list 1 of the experiment, 22 completed list 2. Subsequently, 40 participants were recruited via Amazon Mechanical Turk and completed an online version of the experiment, with the same instructions. 20 participants completed each list.

5.3 Results

Responses were coded as "repetition" if the utterance suggested for A used the same presupposition-bearing material as B's given utterance. They were coded as "presupposition" if the utterance suggested for A expressed the presupposition that B's utterance required. (39) gives an example of each of these response types, along with an example of a response that falls into neither category.

(39) (B: *John didn't stop smoking.*)

A: *Did John stop smoking?* (REPETITION)

A: *Is John still smoking?* (PRESUPPOSITION)

A: *Does John smoke?* (NEITHER)

For each item in the experiment, presented with and without continuations (shown in parentheses), Table 1 reports the percentage of responses that were coded as repetitions by the above criteria. Table 2 reports the corresponding percentages of responses that were coded as either repetition or otherwise presuppositional.

Broadly, there were no striking differences between the responses elicited online and those obtained in the lab, although there were appreciable differences between items. For each item, participants produced more instances of exact repetition in the continuation case than in the simple case, both in the lab and

online. This demonstrates a significant overall preference for exact repetition in the continuation case compared to the simple case (sign test, $p < 0.01$ for each setting). By the broader measure of whether the presupposition was already present in the discourse (including cases of exact repetition), participants again produced more instances in the continuation case than the simple case, for every item, in the lab, and for 7 out of 8 items online (sign test, $p < 0.01$ for lab, $p < 0.05$ online).

5.4 Discussion

In cases in which an utterance appears first to endorse a presupposition and then denies it, participants were strongly disposed to assume that the presupposition in question had already been introduced in the prior context. As shown in Table 2, this applies to a majority of participants for each item. In many cases, as shown in Table 1, participants posited more specifically that the form of words used by

Table 1: Percentage of responses involving exact repetition.

| Item (optional continuation) | Lab experiment | | Online experiment | |
|---|----------------------|-------------------|----------------------|-------------------|
| | Without continuation | With continuation | Without continuation | With continuation |
| Brian didn't lose his wallet again; (he never lost it before). | 25 | 64 | 20 | 70 |
| John didn't stop smoking; (he didn't use to smoke). | 42 | 73 | 40 | 60 |
| Ian didn't win a prize too; (no-one else won a prize). | 0 | 27 | 15 | 20 |
| Vicky doesn't continue to read novels; (she never used to read novels). | 0 | 27 | 0 | 35 |
| Liz isn't a better teacher than Bob; (Bob isn't a teacher). | 8 | 77 | 25 | 85 |
| Lee didn't make only one phone call; (he didn't make a phone call). | 8 | 45 | 25 | 50 |
| Laura doesn't still write poems; (she didn't use to write poems). | 25 | 82 | 50 | 85 |
| Ben didn't regret arguing with his boss; (he didn't argue with her). | 33 | 64 | 15 | 70 |

Table 2: Percentage of responses involving exact repetition or prior introduction of the presupposition.

| Item (optional continuation) | Lab experiment | | Online experiment | |
|---|----------------------|-------------------|----------------------|-------------------|
| | Without continuation | With continuation | Without continuation | With continuation |
| Brian didn't lose his wallet again; (he never lost it before). | 25 | 73 | 25 | 70 |
| John didn't stop smoking; (he didn't use to smoke). | 75 | 91 | 70 | 95 |
| Ian didn't win a prize too; (no-one else won a prize). | 75 | 73 | 85 | 70 |
| Vicky doesn't continue to read novels; (she never used to read novels). | 8 | 73 | 35 | 65 |
| Liz isn't a better teacher than Bob; (Bob isn't a teacher). | 42 | 100 | 50 | 95 |
| Lee didn't make only one phone call; (he didn't make a phone call). | 58 | 68 | 50 | 70 |
| Laura doesn't still write poems; (she didn't use to write poems). | 50 | 95 | 75 | 90 |
| Ben didn't regret arguing with his boss; (he didn't argue with her). | 50 | 82 | 50 | 80 |

B, which would normally carry a presupposition, was an exact repetition of the words used by the previous speaker.

The distribution of responses varied considerably between items. These results are compatible with research suggesting that there is heterogeneity in the way presupposition projection is computed, depending upon the properties of the trigger and presupposition concerned (Cummins, Amaral and Katsos 2012). However, given that only one item was presented per presupposition trigger, it would be premature to take this as evidence that the way prior context is inferred differs between presupposition triggers. Several other methodological considerations might come into play. First, in some of these cases, there are multiple ways to express essentially the same presupposition, some which involve exact repetition and some which do not. Secondly, some of the items, and triggers in general, have much more specific presuppositions than others: for instance, *too* is notably vague in what it presupposes, and many assertions are possible presuppositions for the corresponding item, which may have artificially inflated its results.

Nevertheless, comparing the results for items with and without the presupposition-denying continuation presents a clear picture: participants assume that when B utters an item such as (38), it is in a context in which the presupposition of the first clause has already been introduced, and that this presupposition is likely to have been introduced using the same words that B uses. They also infer that this is likely to have happened during the previous conversational turn.⁴ This pattern is not so strongly evident in the absence of the presupposition-denying continuation: that is, when the speaker may or may not intend to convey the presupposition.

These results suggest that a hearer who processes (38) out of the blue, without any access to the prior discourse context, is disposed to reason as follows. First, the presupposition triggered by the first clause is subsequently negated: a likely explanation for this is that the speaker intended the first clause metarepresentationally. Then, a likely justification for the speaker's production of a metarepresentational utterance was that the presupposition had already been introduced at the time of utterance of (38). Finally, the speaker's decision to use a particular form of words is somewhat likely to reflect the fact that these words were used in the previous utterance that introduced the presupposition – although the extent to which this is likely depends upon whether the language provides convenient alternative means for conveying this presupposition.

I take these results to suggest that hearers are quite strongly disposed to infer that exact repetition may underlie cases of metarepresentational usage (at least as far as presuppositions are concerned): where the speaker is not ultimately considered to be committed to the presupposition, participants tend to posit that the use of the presupposition trigger is an instance of repetition. The strength of this association might suggest that exact repetition is in some sense privileged as a device for signalling metarepresentational usage. Note that this experiment did not intrinsically involve exact repetition and invite participants to draw inferences about its discourse purpose: rather, the exact repetition of lexical material is a solution devised by participants to the problem of explaining a particular discourse move.

If hearers (or readers) are generally strongly disposed to assume that instances of exact repetition are metarepresentational, it would be reasonable to expect them not to project presuppositions or derive implicatures based on linguistic material that would normally trigger these enrichments, if that

⁴ This methodology, of course, fails to determine whether or not the participants who did not think that the presupposition was introduced in the previous discourse turn actually think that the presupposition was introduced earlier on. In that sense, the figures quoted in Tables 1 and 2 are a conservative measure of the belief that the presupposition was already present in the discourse.

material surfaces in the form of an exact repetition of previously-introduced material. In that respect, exact repetition could be expected to behave as one cue, among several, to the hearer's correct understanding of the speaker's metarepresentational intention in these theoretically ambiguous cases. However, it must be acknowledged that off-line experiments of the kind presented here do not offer us insight into the processes by which the materials are interpreted at first pass.

From a broader methodological point of view, these results do suggest that participants are able to draw highly sophisticated and detailed inferences about the content of the prior context when processing utterances that are presented out of the blue. The materials that were presented to participants could, for instance, have been used in an experiment looking into the on-line processing of presupposition projection and cancellation. I surmise that the participants in such an experiment would have been equally inclined to draw inferences about the content of the previous discourse, and these inferences might in turn influence their reasoning about the meaning of the current sentence. It would then be unclear whether the cancellation of a presupposition was due to the form of words in the continuation clause or to the inference drawn by the participant about the content of the preceding discourse turn. A more thorough understanding of participants' inferences about prior discourse might be necessary to avoid confounds such as these.

6 Conclusion

The exact repetition of lexical material weakens speaker's commitment to the usual content of declarative utterances, in ways that are broadly predictable given certain assumptions about the motivations of the speaker and the constraints that act upon them when they select their utterances. Considerations of priming or Question Under Discussion offer possible explanations of utterances that otherwise appear to be redundant or self-contradictory. At the same time, this redundancy opens the possibility for exact repetition to be used as a means to express other meanings. Hearers are aware that apparently anomalous utterances, which encode inconsistent attitudes towards presuppositions, are potentially explicable by seeing these as metarepresentational, and in some cases infer that these are instances of exact repetition, even when they have no access to the prior discourse context, as in the experiment reported here. Future work will examine whether this also holds for other species of exact repetition, and whether this offers some way of explaining some of the broader discourse functions of repetition from a semantic/pragmatic perspective.

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Exact Repetition in Tojol-ab'al Maya

Abstract: Tojol-ab'al Mayan is an indigenous language spoken in the state of Chiapas in Mexico. The language in use is characterized by extensive self- and other-repetition across all discourse genres. Through analysis of an extended everyday conversation that contains a number of conversational narratives, I demonstrate that repetition functions as a discourse marker of topic change. Specifically, accumulations of exact and reduced other-repetitions occur at junctures of change of topic in this conversation. It is argued that these sequences of other-repetition function as discourse markers of topic change at the global level. This involves a pragmaticalization of the process of other-repetition; such a process could also be understood as a contextualization convention, or as thetical.

1 Introduction

Tojol-ab'al Mayan is an indigenous language spoken by around 50,000 people in the state of Chiapas in Mexico, near the border with Guatemala. Like most indigenous languages of the Americas, it is endangered; increasingly, many of these speakers are bilingual with Spanish, the national language of Mexico. Tojol-ab'al is primarily a spoken language, with what I have characterized elsewhere as an “incipient literacy” (Brody 1988); that is, an increasing number of speakers are learning to be literate in Tojol-ab'al, although there is not as yet much literature available to read, and writing in Tojol-ab'al typically reflects speech. Tojol-ab'al discourse is characterized by repetition in all genres (Brody 1986, 1994). I concentrate here on conversational discourse,¹ considered from an interactive, dialogistic perspective. Arguing from a dialogic theory of language, I will demonstrate that the occurrence of multiple self- and other-repetitions serve as a discourse marker (DM) of topic change in Tojol-ab'al conversation.

Chafe defines discourse topic as “a coherent aggregate of thoughts that may be introduced by a participant in a conversation and developed either by that participant or by another, or by several participants jointly” (2015: 393). Similarly,

¹ A similar phenomenon occurs in Tojolab'al monologic discourse.

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Bublitz (1988: 42) acknowledges that “topic determination and topic handling occur with the *mutual consent* of the discourse participants ... The principle of mutual consent in handling a topic is most obvious when changing a topic” (emphasis in original). This is a complex negotiation:

If a speaker CHANGES A TOPIC then he REPLACES THE previous, old TOPIC by INTRODUCING A new TOPIC with the prerequisite that the CLOSING of THE old TOPIC has already taken place or is performed simultaneously.

(Bublitz 1988: 63; orthographic conventions in the original)

In interactive discourse, it is the shared responsibility of all interlocutors to negotiate topic continuity and shift in real time; this is part of maintaining conversational coherence. Lenk (1998) points out that every time there is a change of speaker there is an opportunity for change of topic. For Lenk “*conversational topic*” is “what the participants are talking about at any given time, i.e. persons, events, states, objects etc. Any utterance beyond backchannel items contributes to a conversational topic” (1998: 25). She goes on to say that “[a] topic can be brought to an end properly so that every participant has the feeling that everything necessary has been said” (Lenk 1998: 26). One way that Tojol-ab'al interlocutors accomplish topic termination is through making a series of exact and partial self- and other-repetitions of each other. These clusters of repetitions signal mutual willingness to change topic.

Discourse markers are defined by Schiffrin as “sequentially dependent elements which bracket units of talk” (1987: 31). Although this definition has been refined by subsequent scholarship (see below for some of these modifications), it serves to introduce the general function of this category of linguistic items. However, repetition has not, as far as I know, been proposed as serving a DM function in any language other than Tojol-ab'al (Brody 2010).² I show here how repetition of an interlocutor, or other-repetition, and self-repetition function in Tojol-ab'al conversation and conversational narrative to offer an opportunity for change of topic. I agree with Tannen (1987) and Lenk (1998) that repetition contributes to the global coherence of conversational discourse. I also agree with Jucker and Smith that “discourse markers are a way for conversationalists to negotiate their common ground” (Jucker and Smith 1998: 197).

I engage here a dialogist perspective on language, one that that rejects the traditional monologic linguistic model of speaker – message – hearer in preference

² Howe (1991) has found that repetition plays a role in English conversational topic change, sometimes involving alteration of what was repeated.

for the understanding that language is emergent, based in mutually negotiated interaction between interlocutors in a social context (Bakhtin 1981; Bublitz 1996; Du Bois 2014; Linell 1998 and 2009; Marková and Foppa 1990; Voloshinov 1986; Wertch 1991; Wold 1992; and others). The units of analysis taken into consideration are utterances, not sentences (while utterances may be sentences, often they are not, as in, e.g., so-called fragments). I concur with Linell that topics (he uses the term “topical episodes”; Linell 1998: 193) are jointly produced, engaged, and terminated dynamically by interlocutors.

2 What counts as repetition, and how does it function in Tojol-ab'al conversation?

As stated in the introduction to this volume, repetition is a process that is carried out at the pragmatic level. Tannen (1987) and others (see Aitchison 1994, Bazzanella 1993, Brown 1977, Norrick 1987) have offered classifications of types of repetition. Candidates for these kinds of classification necessarily involve the replication of all or part of an interlocutor's or one's own previous utterance. Repetition is a frequent and normal part of spoken language (Bazzanella 1993; Brown 1977; Bublitz 1996; Norrick 1987; Tannen 1987). The longer the segment replicated, the more the repetition is highlighted; we will see cases of repetition of full utterances below, as well as cases of partial utterance replication. Tojol-ab'al interlocutors are more specific than those characterized by Aitchison (1994), quoted in the introduction; they engage in conversational “reiteration” for topic change. Tojol-ab'al conversational repetition of topic change is not “obligatory” in Aitchison's (1994) sense, in that topics can and do change without repetition, in a more abrupt fashion. However, it would also not quite serve to call it “optional” (Aitchison 1994), because this label obscures the fact that conversational topic-change repetition is strongly preferred in Tojol-ab'al interactive discourse.

In consideration of the process of repetition itself, I do not find that repetition consists in saying the same thing over and over. Thus I am inclined to disagree with Aitchison (1994), cited in the introduction to this volume, that conversational repetition is merely “reiteration” – it is reiteration that accomplishes something else. In this way, I favor Bazzanella's view that “from the very moment something is repeated, it ceases to be the same, not only on a semantic level, but also on a pragmatic one” (2011: 248). The interactive, dialogic perspective I take on repetition fortifies my claim that each iteration of a repetition involves the process of saying and doing something new in each context of iteration; otherwise, interaction is not furthered. A reviewer suggests a reconciliation of Aitchison's and

Bazzanella's perspectives by recognizing that exact repetition inevitably consists of formal reiteration, such that each iteration can be seen to enhance meaning by accomplishing something new in discourse. Repetition is not saying the same thing all over again; each iteration carries meaning, including, e.g., I hear you, I am repeating you, I am listening, I understand, this is what you said, do go on, etc. I would add to this, for Tojol-ab'al: <<we can change the topic now>>.

I concur with Tannen (1987) that repetition

functions in production, comprehension, cohesion, and interaction – and that the congruence of these levels of discourse creates coherence [...] which in turn contributes to a sense of coherence in the world. (Tannen 1987: 576)

Halliday and Hasan (1976) include repetition in their taxonomy of cohesive devices in English, as part of a more general phenomenon of REITERATION, which includes lexical cohesion by repetition; see my caveat about mere reiteration above. This type of repetition creates discourse cohesion by tying references to previous mentions. However, the interactive discourse repetitions in Tojol-ab'al are, as seen in 4.1 below, generally larger units than single lexical items, and they operate to create dialogical discourse cohesion.

The functions of repetition in conversation are numerous. Overall, repetition functions at the interactive level to enhance coherence in conversation (Bublitz 1996; Tannen 1987). According to Tannen,

Repeating the words, phrases, or sentences of other speakers (a) accomplishes a conversation, (b) shows one's response to another's utterance, (c) shows acceptance of others' utterances and their participation, and them, and (d) gives evidence of one's own participation. (Tannen 1987: 584)

In this way, “repetition in discourse conveys both message and meta-message” (Ishikawa 1991: 575; see also Maschler 1994).

3 What are DMs and what is their relationship to repetition?

The label “discourse marker” was first put forth by Zwicky (1985) to distinguish discourse functional words (e.g., interjections) from clitics and particles. Schiffrin's (1987) classical definition quoted above does not stipulate the nature of the element functioning as a DM. However, she does offer conditions for what can be considered as a DM (Schiffrin 1987: 328):

- it has to be syntactically detachable from a sentence
- it has to be commonly used in initial position of an utterance
- it has to have a range of prosodic contours [...]
- it has to be able to operate at both local and global levels of discourse, and on different planes of discourse
- this means that it either has to have no meaning, a vague meaning, or to be reflexive (of the language, of the speaker)

Although she confines her analysis to lexical items (e.g., *oh*, *well*) or brief phrases (e.g., *I mean*, *y’know*) with pragmatic functions, Schiffrin recognizes that DMs can bracket “tone groups, sentences, actions, verbs, and so on” and that “metalinguistic brackets, for example, can mark a discourse unit as long as a conversation or as short as a word” (Schiffrin 1987: 36), which would leave room for consideration of a topic-change marker as a DM. Most treatments and definitions restrict DMs to single lexical items; some, e.g., Lenk (1998), include phrases (see Schourup 1999 and Dér 2010 for detailed reviews of definitions of and designations for DMs). As more in-depth investigation and more cross-linguistic research is done on DMs, their scope has broadened from particles to include phrases, and from exclusively left-margin elements to those that are medial and right-margin in location (Brody 2010; Traugott 2003).

In syntactic and propositional terms, DMs are optionally occurring items, in that their presence or absence does not change the truth condition of a sentence. “The term discourse marker typically refers to a more or less open class of syntactically optional, non-truth-conditional connective expressions” (Schourup 1999: 242). DMs operate in the realm of discourse on the pragmatic level, not at the sentence level. At the level of discourse, pragmatic coherence is lost if DMs are lost; DMs contribute heavily to the coherence of the discourse (Lenk 1998).

From another perspective, Fraser’s (1999) definition of DMs would preclude consideration of repetitions, since he excludes any element that can stand on its own, like *oh*, which he considers to be an “interjection” (Fraser 1999: 943), not a DM. Repetitions can and do, of course, stand on their own. Schourup (1999), however, takes a broader picture, saying that DMs grammatically constitute a class that should be seen as “more or less open” (Schourup 1999: 242) and that they “comprise a functionally related group of items drawn from other classes” (Schourup 1999: 236). While more expansive than other definitions, Schourup’s definition does not help to include repetition as a DM since it is difficult to consider counting entire utterances as a grammatical class.

Maschler (1994: 325) defines DMs as “a subcategory of metalingual expressions: those used to mark boundaries of continuous discourse” which are “tied to the contextual constraints that shape the text” (Maschler 1994: 333) and function

in “framing various parts of the text, not referring to the extralingual world” (Maschler 1994: 334); this definition would not exclude repetitions as DMs. Maschler deals with conversational data, and identifies language shifts from English to Hebrew as functioning as metalingual mechanisms of demarcating discourse boundaries, including those of topic change (Maschler 1994: 349). Calling for repetition to be considered as a DM requires a similar extension of the basic definition of DMs to include an interactive metalingual process undertaken by interlocutors. I concur with Maschler’s characterization of DMs and use it below.

4 What is repetition in Tojol-ab'al conversation like?

Conversation follows culturally characteristic patterns: for example in English conversations there are response replies (i.e., back-channels, minimal response), or what Bublitz (1988) calls hearer signals, and what Schegloff (1981) calls continuers. In Japanese, making conversational responses is referred to as “mutual hammering” (White 1989). Tojol-ab'al conversation has back-channel or minimal responses (Brody 2001), but it is also characterized by extensive repetition, both self- and other-repetition; Tojol-ab'al conversation is replete with repetition (Brody 1993, 1994). Some of the repetition is exact complete repetition of what oneself or an interlocutor has previously said; in other instances, the repetition takes a reduced form (Brody 1986; see below). Tojol-ab'al does of course have its own set of lexical and phrasal DMs, enhanced by and often used in conjunction with DMs borrowed from Spanish (Brody 2010; also see below).

4.1 The data

The data I use here to illustrate exact repetition functioning as a DM of topic change comes from a conversation published in the journal *Tlalocan* (Brody 2001). It took place in 1978, between two 20-something cousins, and was recorded in my absence. They speak for about a half an hour on various topics, which can be defined as “segments of discourse during which [...] speakers ‘talk about the same thing’” (Chafe 2015: 394). Their conversation is altogether typical of Tojol-ab'al conversation in general; there is nothing about the repetition patterns that is distinctive to these two particular interlocutors or to the specific topics they engage. Throughout the conversation, each topic shift between global topics, or what Chafe (2015) calls super-topics (see discussion below), involves a sequence of exact or partial repetitions of utterances between the interlocutors before a new topic is embarked upon. West and

Garcia identify change in topic as “turns at talk that were neither sequentially nor referentially related to prior on-topic turns” (West and Garcia 1988: 560); this definition is useful here. The agreement to switch topics in Tojol-ab'al conversation is brought about by a “collaborative topic-bounding exchange” (West and Garcia 1988: 560) that is mutually negotiated by the interlocutors in the accumulation of repetitions, which are, in some cases, accompanied by other DMs (like *eso* borrowed from Spanish *eso*, ‘right’ in the transition from Topics 1 and 2, *pwes*, borrowed from Spanish *pues* ‘well’ in the transition from Topic 8 to 9, and the use of *pero*, borrowed from Spanish *pero* ‘but’ in the transition from Topic 11 to Topic 12). Many discussions of topic (e.g., Chafe 2015) focus on topic initiation, noting that topics tend to “peter out” at their ends. In Tojol-ab'al conversations, it is the termination of topics that are clearly marked by the repeated elements. What follows is an outline of the global conversation topics and their negotiated terminations; the conversation ranges across recent past events and into the anticipated future:³

(1) **Topic 1.** Two Acquaintances Passed By

| | | | |
|----|----|------------------------------------|--------------------------------------|
| 6 | H: | <i>scha`wanile`</i> | ‘the two of them’ |
| 7 | J: | <i>scha`wanile`</i> | ‘the two of them’ |
| 8 | H: | <i>scha`wanile`</i> | ‘the two of them’ |
| 9 | J: | <i>yi`ojni sb`aje`a</i> | ‘they were together’ |
| 10 | H: | <i>yi`ojni sb`aje`scha`wanile`</i> | ‘they were together the two of them’ |
| 11 | J: | <i>eso</i> | ‘right’ |

Topic 2. H Missed the Bus

| | | | |
|----|----|---|---|
| 12 | H: | <i>ja este...ja esteja...ja ek...ja eke`i</i> | ‘este, este, ye, yesterday’ |
| 13 | J: | <i>a?</i> | ‘eh?’ |
| 14 | H: | <i>wa xjk`ana oj jekyi`span ja yal untikili</i> | ‘I wanted to send bread to my children’ |

[...]

| | | | |
|----|----|-----------------------------------|--------------------------|
| 54 | H: | <i>este jachuk kumxiyon k`ena</i> | ‘um then I came back up’ |
| 55 | J: | <i>eso</i> | ‘right’ |
| 56 | H: | <i>kumxiyon k`ena</i> | ‘I came back up’ |

Topic 3. Going to the Movies

| | | | |
|----|----|---|--------------------------------------|
| 57 | H: | <i>i...</i> | ‘and’ |
| 58 | J: | <i>jaxa sine jastal jawilakon ja wa`anto?</i> | ‘and the movies, how were they now?’ |
| | | [...] | |

³ H and J represent the names of the interlocutors, and the numbers assigned to their utterances indicate their sequential appearance in the conversation.

- 93 H: *tixa ochsje'a`a* 'then they began to show it (the movie)'
 94 H: *pwes jelni alegre`a* 'well it was very nice'
 95 J: *je alegre* 'it was very nice'
 96 H: *jel alegre* 'it was very nice'
 97 H: *tixa yajni jawi* 'that's how it was'

Topic 4. Finding Humberto's Father

- 98 H: *cho wan pensar sok ja stati* 'he started thinking about his father again'
 [...]

130 J: *tajkixa* 'he was mad'
 131 H: *tajkixa* 'he was mad'
 132 J: *tajkixa* 'he was mad'

Topic 5. What That Man Told Us Yesterday

- 133 H: *je* 'a lot'
 134 J: *m* 'm'
 135 H: *pwes jawi jel lek ja jastal* 'well it was very good what that
wa xyala ja tan winik k'e`a man told us up there'
 [...]

170 J: *mixa ayuk modo* 'now there's no way'
 171 H: *mixa ayuk modo* 'now there's no way'
 172 J: *mix ayuk modo* 'now there's no way'
 173 H: *mix ayuk modo* 'now there's no way'

Topic 6. Our Drinking Yesterday

- 174 H: *pwes ka`atik t'usan yu`jeli ja ja* 'well we had a little bit to drink
eke`i ja jultiki yesterday when we arrived'
 [...]

216 J: *yakb'elotiknia* 'we were really drunk'
 217 H: *yakb'elotiknia* 'we were really drunk'
 218 J: *yakb'elotiknia* 'we were really drunk'
 219 H: *yakb'el* 'drunk'

Topic 7. It Would Be Good To Get Work

- 220 J: *pwes janek`jel lek wanukto* 'well it would be good if we
alb'el ja a`teli ja ili could continue working here'
 [...]

246 H: *kechtania* 'just that'
 247 J: *kechtania* 'just that'
 248 H: *kechtania* 'just that'

Topic 8. Stuff to Take Home

- 249 H: *oj ki`och t`usan t`un...t`un...
ja yal jastik sb`aj* 'I'm going to take a few things
[...]' for the kids'
- 267 H: *mas lek* 'it's better'
- 268 J: *mas lek* 'it's better'
- 269 H: *mas lek* 'it's better'

Topic 9. Let's Smoke a Cigarette

- 270 J: *mima lek oj ka`tik jun jmaytik?* 'wouldn't it be good if we
[...]' smoked a cigarette?'
- 282 H: *a pwes ojxa ajyuk wajel* 'ah well we'll be going soon now'
- 283 J: *ojxa ajyuk wajel* 'we'll be going soon now'

Topic 10. The Weather and the Crops

- 284 J: *lemanxani wa xchoek`a* 'it (the day) has cleared up again'
[...]
- 292 H: *juts`in oj ka`atikyi`kwando* 'soon we'll do it when it's wet'
ya`xtonia
- 293 H: *juts`in* 'soon'
- 294 J: *juts`in* 'soon'
- 295 H: *juts`in oj ka`atikyi`* 'soon we'll do it'

Topic 11. Getting Cattle to Till the Fields

- 296 J: *m* 'm'
- 297 H: *sikiyera konta ta`xto swakaxili...* 'it would be good to find cattle...'
[...]
- 315 J: *pero b`a mi xljaxiyta* 'but we haven't been able to yet'
- 316 H: *mi xljaxiy* 'we haven't been able to'
- 317 J: *mi xljaxiy* 'we haven't been able to'

Topic 12. Problems with Money

- 318 H: *mix ta`xi ja tak`inxax* 'we haven't found the money yet'

At the beginning of the conversation, in Topic 1, H provides J with some news: that he had seen two mutual acquaintances of theirs pass by just then, but this did not make for an enduring topic. In utterance 7, J repeats what H said in 6; H affirms it in 8 by repeating it, and J makes a clarification in 9, which H repeats along with what he had said before. J again confirms with the DM *eso* from Spanish *eso* 'right' in 11, and in 12–14, H undertakes the new and more enduring and complex Topic 2, a narration of how he missed the bus the day before. This account includes both sides of a reported (constructed) conversation he had

with a man about missing the bus. Within this Topic there are several instances of single back-channel repetitions between J and H, but they continue on this topic until H repeats himself exactly in utterance 56. Utterance 54 represents the end of H's anecdote, with his return to town after missing the bus. After a slight pause, J asks H about going to the movies, initiating a new Topic (3) in 58. It is obvious that H's visit to the movies was already shared knowledge between the interlocutors. H narrates his experience at the theater, and tells that he left early because his companion was worried about his father, which initiates Topic 4 when they found the father, he was drunk, and got mad at them when they gave him advice. The account of the movie and its aftermath encounter exhausts this topic. J and H repeat each other in 130–132, then, after a short pause, H initiates the mutually narrated Topic 5, a recollection about a man who had offered them work the day before. However, that work would have involved going to another town, which they could not do. They even joke about leaving their families, but come to an agreement in utterances 170–173 that there was no way that they could go. H then launches another mutually narrated Topic (6), an account of how much he and J had had to drink the day before after they had been unable to find work, with several topic-internal repetition back-channels, culminating in the topic-ending series of repetitions in 216–219. J then begins a briefly engaged Topic 7 about getting work, terminated by the series of repetitions in 246–248 'just that'. In 249, J begins Topic 8, where they talk about what they need to buy in town with their earnings to take back to their families in the village the next day, ending up with the repetitions in utterances 267–269. In utterance 270, J offers H a cigarette (Topic 9), and they joke about not moving the recording device, which was on a table near the cigarettes. After the repetitions in 282–283, where they anticipate returning to their village, they begin Topic 10, talking about how the weather was affecting the crops, and following the repetitions in 292–294, they move on to Topic 11 – the discussion of a particular agricultural task that awaits them, which has been postponed due to the weather. In 318 a new Topic (12) begins. The recording ends shortly after the repetitions in 315–317.

The between-topic series of repetitions listed above are by no means the only repetitions in the conversation; they are, however, those that accumulate to signal mutual negotiation of topic shift. Other single repetitions (both self-repetitions and other-repetitions) that occur within the topics function as DM backchannels to indicate that the interlocutor may continue. This fact does not present a problem for the analysis, since it is not uncommon for DMs to have multiple functions (Schiffrin 1987). The point is that every major global topic shift in the conversation is marked by these groups of exact self- and other-repetitions. These accumulated repetitions do not exhibit any changes in intonation between

them (e.g., question intonation is not used), although volume may progressively reduce and pauses between the repetitions may increase in length as the interlocutors mutually construct their agreement to end the topic. Parts of the previous utterance that are not grammatically obligatory may be deleted in subsequent repetitions, as with the DMs in Topics 2, 9 and 11; in Topic 6 the final repetition eliminates optional person and number markings on the verb, and in the repetitions in Topic 10, part of the original utterance is deleted, to be partially reinstated in 297.

5 Discussion: How can repetition function as a DM?

I am suggesting here that accumulations of exact or near-exact self- and other-repetition serve as, among other things, a DM of topic change in Tojol-ab'al, where interlocutors mutually enhance coherence in conversational interaction. Schiffrin states that among the functions of DMs is to create coherence in conversation (Schiffrin 1987: 315). West and Garcia (1988) note that topic transitions in conversational talk are negotiated by interlocutors in a process of “collaborative conclusion” (West and Garcia 1988: 556). Topic change in conversation must represent a negotiation between interlocutors. Accruals of self- and other-repetition function as a coherence-making mechanism of topic change that is negotiated among interlocutors while speaking in Tojol-ab'al. Again, the fact that repetition is multifunctional does not exclude it from the category of DMs, which are inherently multifunctional (Schiffrin 1987). However, considering multiple repetitions as a DM does involve moving away from a strict adherence to the notion that DMs can only be particles or single lexical items or short phrases, as discussed earlier, and moving toward considering that DMs can also be processes.

From the interactive, dialogistic perspective in which I am operating, I take as a maxim that conversation is the most basic type of linguistic interaction. So, from a perspective of dialogism, why shouldn't there be interactive discourse markers to enhance coherence in conversation, as DMs do in written or monologic discourse? Considering exact self- and other-repetitions as DMs focuses on their function rather than their form, as is the case for other DMs (Maschler 1994; Schiffrin 1987). The form of a repetition as a DM cannot, of course, be uniform, as each repetition arises directly from a previously articulated utterance. Repetition is, after all, a process, not something that can be tied to a word class, even a relatively indeterminate one like “particle”.

Fraser's (1996) typology of "pragmatic markers" includes the category of "topic change marker" as a "discourse marker"⁴ (Fraser 1996: 187). Lenk also deals with topic change DMs, which she refers to as having scope at a "global coherence level" (Lenk 1998: 49). According to Lenk,

Globally oriented markers express a relationship to segments which were mentioned earlier or are intended to follow in the discourse. Use of discourse markers is thus interactively motivated: the speaker wants to guide her hearer's understanding and indicates the connections between discourse segments so that the hearer's final interpretation will be as close as possible to her intentions. (Lenk 1998: 49)

Accumulated exact and reduced other-repetition in Tojol-ab'al appears to serve this same kind of global topic-change function.

6 Conclusion

Lenk (1998) notes that most DM studies have focused on the local topic level; Tojol-ab'al topic change repetition operates on what Lenk calls the global topic (Chafe's 2015 super-topic) level of coherence. Lenk (1988) finds that the English DMs *incidentally* and *actually*, and *anyway* function to change or shift topics, and that they all can introduce a new global topic. As elaborated above, establishing coherence in interactive discourse is a dynamic process engaged by all participants in interaction. Multiple repetitions accrue in Tojol-ab'al conversation to negotiate global topic change between interlocutors.⁵

As discussed above, "discourse markers in conversation do not contribute anything to the propositional content in the context where they appear, nor do they contribute to the topic as such" (Lenk 1988: 27). Repetition as such cannot be subject to truth conditions; while an utterance may be subject to truth conditions, the occurrence of its repetition is not. Because they function pragmatically, Lenk considers DMs to be "lexical items" that have undergone "a kind of delexicalization which results in a *pragmatization*" (Lenk 1998: 203; italics in original). "Pragmatization is, by definition, a change that involves the pragmatic properties of an expression" (Boye and Harder 2014: 20). For Tojol-ab'al, accumulated repetitions are intersubjectively pragmatized, becoming bleached of their

⁴ Fraser considers discourse markers to be a sub-type of pragmatic marker, one that does "not contribute to the representative sentence meaning, but only to the procedural meaning" (Fraser 1996: 186)

⁵ Maschler notes the accumulation of Hebrew DMs in her data. See Brody (2010) for discussion of accumulation of borrowed and indigenous DMs in Tojolab'al.

grammatical meanings as utterances and taking on the interactively oriented pragmatic function of signal to terminate topic.

I argue that topic-change repetition clusters in Tojol-ab'al operate at the level of what is being said – repeating the remnant of the topic – and also at the meta-discursive level, signaling in multiple interactive repetitions that the topic can now change. This could be considered a pragmaticalization of repetition.⁶ Frank-Job (2006) defines pragmaticalization as “[...] the process by which a syntagma or word form, in a given context, changes its propositional meaning in favor of an essentially metacommunicative, discourse interactional meaning” (Frank-Job 2006: 361). Because repetitions as DMs operate on the meta-discursive level, they do not only accomplish the same kind of lexical cohesion in discourse as those mechanisms discussed by Halliday and Hasan (1976; see above); additionally, multiple exact repetitions as DMs in Tojol-ab'al function pragmatically at a global discursive level, with interlocutors performing repetitions to negotiate an understanding of the emergent organization of their interactive discourse. “The functions of discourse markers when marking [...] topic shift or change are [...] essential for the various interactional and mental processes that take place between participants in a conversation” (Lenk 1998: 207). This kind of function for DMs is referred to as “the negotiation of common ground” by Jucker and Smith (1998: 172), who acknowledge that a single DM (in their case “well”) can function in such mutual negotiation by interlocutors (Jucker and Smith 1998: 174).

A reviewer suggests that the Tojol-ab'al conversational repetitions, especially the reduced repetitions, could be considered as theticals (Kaltenböck, Heine, and Kuteva 2011). Thetical units of language are separable from the sentence with which they are associated, mobile in position, often elliptic, and syntactically independent, with a meaning at the discourse level. As a category, they are separate from Sentence Grammar, forming a distinct Thetical Grammar; the two together comprise Discourse Grammar. Repetition in topic change in Tojol-ab'al fits the dimensions that characterize theticals. This is an interesting notion that deserves further consideration, especially with regard to the pragmaticalization of repetition in Tojol-ab'al.

Another way of understanding this process from a dialogical perspective would be to consider the accumulation of exact repetitions as “contextualization conventions [...] [as] they enter into the conversational management tasks associated with phenomena such as utterance sequencing [and] speaker change” (Gumperz 1995: 104–105). Contextualization conventions (also called contextu-

⁶ I am viewing this process purely in terms of synchronic function, and so use this term without imputing diachronic processes, as historical linguists do when they use the term.

alization cues; Gumperz 1996) are metalinguistic processes with “no isolable ‘meanings’. Rather, by framing talk, they affect the situated interpretation of what is intended” (Gumperz 1995: 118).

Schourup points out that some functions of DMs may have been overlooked because of over-reliance on English data (Schourup 1999: 261; see also Schiffrin 1987: 328). Bazzanella (2011: 252) classifies “Macro- and micro-functions of repetition”, including the category “7. Ethnic 7.1 R[epetition] is used to stress group identity.”⁷ I argue that accruals of exact other-repetitions in Tojol-ab'al fall squarely within that category; elsewhere I have argued that repetition in general functions for Tojol-ab'al speakers as a covert cultural key metaphor for agreement (Brody 2004). Bazzanella's classification offers another type, which includes the category “5. Conversational ... 5.6 R[epetition] is used as a floor-yielding device.” Tojol-ab'al multiple other-repetitions serve exactly this function as well.

Schiffrin's (1987: 31) definition of DMs as “sequentially dependent elements which bracket units of talk” still works for Tojol-ab'al repetition. Schiffrin characterizes DMs as “contextual co-ordinates” of talk which “provide coordinates to the context in which particular verbal and nonverbal moves are produced and designed to be interpreted” (Schiffrin 1987: 327). This is exactly what is going on with Tojol-ab'al topic change repetitions; they constitute “a procedure in which the participants seek agreement about the closure of the previous topic and the introduction of the new one” (Bublitz 1988: 67) and they accomplish a mutually negotiated topic change through two or more exact full or partial self- and other-repetitions.

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7 Another type of ethnic repetition is documented for Japanese with “allo-repetition in a joint idea construction” (Ishikawa 1991: 573), where “participants come to an agreement not by convincing each other with their logic, but by creating a sense of identification between them through repetition” (Ishikawa 1991: 574).

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Kaitlin Cannava and Graham D. Bodie

An analysis of two forms of verbal mimicry in troubles talk conversations between strangers and friends

Abstract: This chapter provides a set of guidelines, known as the Johnstone Boundary Condition Model (JBCM), to model lexical repetition into a dialogic sphere while providing an analysis of two ways to conceptualize lexical repetition and its conversational functions. Drawing from the work on interpersonal coordination and social support, we examined data from 273 dyads (151 strangers, 122 friends) to analyze the action of two types of linguistic coordination, Language Style Matching (LSM) and Local Lexical Repetition (LLR), on perceived understanding. Our results suggest that each measure alone does not predict outcomes (at least in this context); instead both measures together produce increased perceptions of understanding, at least among friends discussing problems. More generally, LSM and LLR were found to be conceptually different and empirically distinct and when paired with the JBCM can provide researchers new ways to understand the boundaries of linguistic repetition and its functions.

1 Introduction

Linguistic coordination takes many forms. Grammatical and syntactical forms of coordination can range from the mostly phonological and morphological domains of reduplication to the pragmatic and interactional domains of repetition. The borderline between these forms of linguistic coordination has been blurry (Stolz et al. 2011), but in recent years linguists have questioned and proposed ways to distinguish among various forms of iteration. The cases of reduplication and repetition on an individual level are of multiple syntactic types and have myriad pragmatic features. Horn (this volume) seeks to uncover the pragmatic motivations of lexical cloning, Stolz and Levkovych (this volume) provides

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a case to outline phonological reduplication and repetition, and Finkbeiner (this volume) examines the pragmatics of borderline cases of exact repetition. In line with these discussions, we provide a set of guidelines to model lexical repetition in dialogue while providing an analysis of two ways to conceptualize lexical repetition and its functions within conversations about personal problems.

In this chapter, we focus on two types of linguistic coordination, local lexical repetition (LLR) (Cannava 2016) and language style matching (LSM) (Ireland and Pennebaker 2010). LLR and LSM represent two patterns of linguistic coordination that likely have important theoretical and practical value to the study of interpersonal communication. In terms of theoretical currency, by studying linguistic coordination we are able to analyze how individuals organize messages together to form meaning, a process ubiquitous and consequential in all types of conversations. Thus, the study of different types of linguistic coordination provides a lens through which to explore fundamental features of human communication. In terms of practical currency, coordination is a ubiquitous behavior, pervasive in most social interactions. Coordination occurs across the lifespan, suggesting its study can inform scholars about how people behave together from the cradle to the grave. Finally, research tells us that interactions are more pleasant and engaging with higher levels of coordination (Chartrand and Bargh 1999). Coordination also influences empathy and prosocial behaviors (van Baaren et al. 2004; Kulesza 2013; Carpenter et al. 2013). These outcomes are only a few of a host of other variables that coordination influences suggesting its study can provide insight into the consequentiality of human interaction. In sum, coordination is a necessary and vital component for interpersonal communication because of its pervasiveness and consequential nature. Individuals coordinate behaviors to cooperate with one another and to preserve relationships.

2 Considering repetition

Repetition is present whenever people interact (Johnstone 1994). People use repetition to be playful, to emphasize a point, or to accomplish some form of connection or group synchrony (Merritt 1994). Such interpersonal coordination functions as a sort of “social glue” that fosters bonding and creates “smooth” interactions (Chartrand and Bargh 1999; Dijksterhuis 2005; Lakin et al. 2003) as well as helps build rapport, show empathy, and produce liking (Chartrand et al. 2005; Lakin et al. 2003). Similarly, individuals who adapt report greater understanding of their partner compared to those who do not adapt (Stel et al. 2008), and adaptation decreases when a person wants to disaffiliate from another (Johnston 2002).

How people interact with each other and ultimately understand one another relies on the ability to coordinate actions, and the ability to coordinate actions is a hallmark characteristic of interpersonal communication (Watzlawick, Bavelas, and Jackson 1967).

Linguistic coordination is related to several outcomes such as rapport (Chartrand and Bargh 1999), prosocial behaviors (Kulesza et al. 2013), and conversational involvement (Ireland and Pennebaker 2010) and serves a variety of different communicative needs including operating as discourse cohesion or the “hanging together” of discourse to convey meaning (Johnstone 1987), as a socialization tool (Moore 2011), and as a way to create mutual knowledge (Svennevig 2004; Cook 2000). Linguistic coordination also can function to gain the front channel of speech in a conversation (Merritt 1994), to express disagreement (Merritt 1977), as a discourse marker (Brody, this volume), to express understanding or misunderstanding (Svennevig 2004), or to inform or be referential (Cushing 1994).

But what exactly counts as repetition? If repetition is universal and a major resource in communication and dialogue, where are the boundaries of repetition? Can repetition be limited to purely syntax, or lexical items, or pragmatic functions (e.g., asking multiple questions)? Although many theorists have studied repetition, each has approached this concept in slightly different ways. We will present the boundary conditions of linguistic coordination, review literature on two different operationalizations of linguistic coordination, and apply the boundary conditions to each instantiation of linguistic coordination in order to model lexical repetition in a dialogic sphere.

2.1 Basics of repetition

In the attempt to provide some boundary conditions for the study of repetition, Johnstone (1994) interrogated the measurement of this potentially elusive but pervasive act. The first, and arguably most important, assumption is that in order for repetition to occur, there must be a prior text; repetition can only occur after an original source.

After an original source is uttered, the repetition of that source can take various forms and be measured in various ways. Research on repetition, therefore, can be quite diverse. In an effort to organize this diversity, Johnstone (1994) outlined what researchers need to consider while analyzing repetition, listing ten factors. Six of these concepts are focused on extralinguistic characteristics such as power and genre, and four are binary concepts that provide the necessary boundary conditions to classify the distinctions among our two types of linguistic

coordination. These four binary concepts are formal/semantic, immediate/displaced, exact/non-exact, and self-repetition/other repetition. Using Johnstone's constructs, we created the Johnstone Boundary Condition Model (JBCM) to provide a cohesive language to talk about repetition (see Table 1).

Table 1: The Johnstone Boundary Condition Model.

| Boundary Condition | LLR | LSM |
|---------------------|-----------|-----------|
| Formal/Semantic | Semantic | Semantic |
| Immediate/Displaced | Immediate | Displaced |
| Exact/Non-exact | Exact | Non-exact |
| Self/Other | Other | Other |

Notes: LLR = Local Lexical Repetition; LSM = Language Style Matching

The first dimension, formal/semantic, refers to the types of linguistic elements that get repeated. Formal repetition is the repetition of forms or patterns, whereas semantic repetition repeats lexical items or intonations. If a speaker uses the same story structure as her partner, then that repetition is considered a formal repetition. Conversely, a case of semantic repetition occurs if a speaker repeats the same coda or uses the same words.

The immediate/displaced distinction considers where in the discourse the repetition takes place. If the repetition occurs in the next turn, then the repetition is considered an immediate repetition. If, however, the repetition occurs in a later place in the discourse (e.g., at the end of a conversation), then the repetition is considered displaced. Immediate repetition typically functions as intensification (i.e., speakers placing emphasis on particular words), and displaced repetition can be conceptualized as textual cohesion (i.e., speakers are continually talking about the same subject). How speakers manage, reference, and use each other's words depends on whence those words originally came within a conversation.

Exact/non-exact repetition is the basic idea of reformulation and refers to the "purity" of repetition. Certain lexical items and phrases can be repeated exactly or inexactly; that is, an individual can parrot back to the speaker using his exact words or paraphrase another's contribution using substitute words. If researchers are interested in analyzing how speakers present similar ideas, then non-exact repetition is useful, but if priming behavior or vocabulary production dependency is important then exact repetition is more useful.

Lastly, self-repetition/other repetition refers to a distinction between the source or creator of the original phrase or word that then gets repeated. Self-repetition is when a speaker repeats her own language, as in reduplication, typically

signaling a repair or intensifying a point. Other repetition is when one speaker repeats the language of another. Other repetition is the main focus of linguistic coordination because coordination requires two people organizing together. This chapter will not focus on self-repetition, or reduplication, as that behavior is more of an intrapersonal behavior; other repetition is interpersonal in nature.

2.2 Local Lexical Repetition (LLR)

We are selecting to operationalize the first measure of linguistic coordination as local lexical repetition (LLR). LLR is a turn-by-turn analysis of exact, semantic repetition. LLR is calculated by analyzing the percent of shared words between speakers after every turn so that for any given conversation, there is a degree to which speakers are using the same words. It is a form of *exact* repetition because LLR only looks at words that are exactly the same. Syntax, saying the same thing in a different way, or using synonyms are not captured by LLR. Likewise, LLR is a *semantic* form of repetition as it takes into account only when one speaker uses the same word as another. LLR does not look at pitch, tone, rhyme or other formal elements of speech; instead LLR is a calculation of vocabulary production and frequency. To date, most of the previous research on what would be considered “exact” repetition has been on memory, retention, and priming (Roediger and Challis 1992; Dewhurst and Anderson 1999; Woltz 1990) and second language acquisition (Jesen and Vinther 2003; Larsen-Freeman 2012). In general, that work has shown the importance of exact repetition training on word identification, correct usage of language, and faster recall of words.

Because LLR considers only words that are repeated in the very next turn, it is also best characterized as an *immediate* form of repetition. LLR does not extend the focus of repetition to more displaced repeated items or items that happen in various locations of a conversation. Instead, LLR only analyzes instances of repetition that happen immediately after the source word was first produced. Finally, LLR is a form of *other* repetition as opposed to self-repetition. LLR needs at least two texts to calculate a percentage.

Given these boundary conditions of LLR, this operationalization serves as the first way to measure linguistic coordination. In particular, LLR serves to analyze instances of repetition that are exact words occurring in the immediate turn between two speakers. LLR is similar to other “turn-by-turn” analyses such as language style synchrony (LSS) (Lord et al. 2014) because of the temporal/immediate aspect, but LSS focuses on categories of words rather than exact repetition of specific words. As such, LLR represents a primitive and basic form of repetition.

2.3 Language Style Matching (LSM)

The second measure of linguistic coordination is language style matching (LSM) which is operationalized by the matching of nine function word categories – auxiliary verbs, articles, common adverbs, personal pronouns, indefinite pronouns, prepositions, negations, conjunctions, and quantifiers – over the entire course of a conversation. LSM is a “marker of engagement, or the degree to which the two are paying attention to each other” (Pennebaker 2011: 200) which could suggest the ways in which conversational partners listen and attend to one another. LSM is explained as “the degree to which two people in a conversation subtly match each other’s speaking or writing style [...] and is thought to map directly onto the interpersonal coordination of psychological states” (Ireland et al. 2011: 39).

Research on LSM has found that conversations marked by higher degrees of function word matching are rated as more supportive (Cannava and Bodie 2017; Rains 2015) and engaging (Ireland and Pennebaker 2010). In addition, some work has shown that dyads with higher LSM scores are more likely to initiate and maintain a relationship (Ireland et al. 2011), and groups with higher LSM scores are considered more cohesive (Gonzales, Hancock, and Pennebaker 2010).

Within the JBCM, LSM, like LLR, is a form of *semantic* and *other-oriented* repetition. LSM only focuses on words and word frequency and a particular subset of all possible words uttered in a conversation (i.e., function words). LSM also is calculated by how similar speakers are to each other rather than how a speaker repeats himself/herself. Unlike LLR, however, LSM is a form of *displaced* and *non-exact* repetition. For LSM, repeating words can happen at any time during a conversation. In fact, LSM is a function of the entirety of each speaker’s produced language; thus matching as indexed by LSM includes all function words used regardless of their placement in the conversation. LSM also does not take into consideration the timing or structure of the matched words in a conversation. Because LSM is calculated by the shared frequency of word categories, speakers “match” each other when they use the same percentage of words from all categories over the entire course of talk. There are countless options that speakers can produce while still being considered matching (e.g., other/whatever, this/those).

In sum, LSM is a form of displaced-semantic-other-repetition. LSM measures the similarity of function word use between speakers. Conceptually, LSM is similar to latent semantic analysis (LSA) (Landauer, Foltz, and Laham 1998) because of the focus on similar word categories, almost synonyms, which occur throughout an entire text (rather than a conversational turn). LSA is more concerned with clusters of words that co-occur with each other in order to model natural language

and the contextual use of words. LSA is not exactly concerned with the measure of similarity between speakers, and is not conceptualized as such. LSM, on the other hand, is theoretically driven by the relationship between speakers.

3 Linguistic coordination in supportive interaction

The study we present below is situated within the context of conversations about personal problems. Such supportive conversations or “troubles talk” interactions provide one context within which to study linguistic coordination patterns. While scholars have acknowledged that social support is an important contributor to health and well-being for decades (Cassel 1976), little research has actually focused on how social support is enacted during the course of conversation (Goldsmith 2004; for exceptions see Jefferson 1980; Jefferson 1978). Scholars interested in the impact of supportive talk on how people cope with stressful events have spent much more time documenting characteristics of more or less helpful supportive messages (MacGeorge et al. 2011); less attention has been afforded to how individuals actually talk about and respond to problems and stressful events and how these patterns of discourse map onto important outcomes (Burleson and Goldsmith 1998; High and Solomon 2016; Jones and Bodie 2014). By ignoring the documentation and analysis of actual supportive conversations, researchers are missing large pragmatic and theoretical resources that will advance the study of social support.

Social support is a dialogic action. Narrative production is a social process involving listeners as co-narrators (Bavelas, Coates, and Johnson 2000); therefore the linguistic coordination and interdependent actions with which two people accomplish social support relies on dyadic collaboration. Goldsmith (2004) explained that “Enacted support occurs in the context of *conversation*, which includes an exchange of messages as well as processes of interpretation and coordination between conversational partners” (Goldsmith 2004: 26; emphasis in original). Social support and coordination both are concerned with dialogic behaviors such as empathy and perspective taking. Research on coordination that is applicable to supportive communication suggests that mimicking the emotions of another can signal involvement and approval (Kendon 1970), enhance bonding (Condon 1980), and help facilitate emotional recognition (Niedenthal 2007). Because engagement, involvement, and perspective taking are accomplished through coordination and are important and influential behaviors in supportive interaction (Jones 2011), focusing on how interlocutors accomplish these actions should provide a distinct and necessary perspective on language use in troubles talk.

3.1 Linguistic coordination and perceived understanding

Especially in supportive conversations, people have a basic need to be understood (Cahn 1990), and research indicates that feeling understood is related to emotional support and being cooperative (Cahn and Frey 1989). Understanding builds over time (Cahn 1984) so that individuals are able to recognize the emotions and thoughts of each other. Previous research on repetition has shown that people repeat each other to communicate understanding or empathy (Bavelas, Black, Lemery, and Mullett 1986).

Not only is repetition a way to show empathy, repetition is a conversational tool used to accomplish basic and foundational aspects of dialogue; it is a pragmatic device that shows involvement, production, comprehension, connection, interaction, and coherence (Tannen 2007; Labov 1972). Because understanding is posited as a core dialogic outcome of repetition, each operationalization of repetition should be a positive predictor. Thus, according to this logic, we formally predict:

- (1) H1: LLR and LSM are positive predictors of perceived understanding reported after a supportive conversation.

3.2 Relationship status

Although repetition should be high and positively beneficial to perceptions of being understood after a supportive conversation, other scholars posit that repetition is not just a conversational tool but an interpersonal tool for creating and displaying closeness. Indeed, higher rates of coordination, both verbal and non-verbal, tend to co-vary with relational closeness (Ireland et al. 2011). Matching one another is connected to outcomes such as perceived empathy (Chartrand et al. 1999), bonding (Dijksterhuis 2005), liking (Lakin et al. 2003), and affiliation (Johnston 2002), all of which are contributors to intimacy. Interaction coordination in general is linked to outcomes associated with connection; in fact, coordination decreases when people want to disaffiliate from each other (Chartrand and van Baaren 2009). Also, mutual acknowledgement of stressors and the mutual storytelling in which that acknowledgement is enacted can serve a positive function in troubles talk and close relationships (Ochs and Capps 2001).

If relationship status does actually play a role in how conversations are constructed and managed (Planalp and Benson 1992), then the status of a dyad's relationship should influence differing linguistic coordination patterns and supportive behaviors. Research documenting the differences in conversational messages between friends and strangers has found that strangers rely more on questions to gain

information, while friends draw on mutual information (Kent, Davis, and Shapiro 1981). Friends also are more descriptive and evaluative regarding their exchanges (Hornstein 1985; Hornstein and Truesdell 1988) and use more mutual knowledge and more content intimacy than do strangers (Planalp 1993). It thus stands to reason that relationship status will impact the ways in which people coordinate linguistically.

Previous research surrounding LSM is in line with this logic; in fact, LSM is thought to be a quantitative representation of relationship engagement and psychological similarity. Pennebaker (2011) claimed that LSM “can illuminate our understanding of marriages, friendships, or alliances in history” (Pennebaker 2011: 218) and that “most conversations with good friends or lovers are characterized by high LSM” (Pennebaker 2011: 224). Although no research to date has looked at whether LLR is impacted by relationship status, the logic outlined above suggests a similar prediction for this form of verbal mimicry.

- (2) H2: LSM and LLR vary as a function of relationship status such that friends exhibit higher levels of both measures of linguistic coordination than do strangers.

4 Methods

4.1 Participants

Our analyses utilize 151 stranger dyads and 122 friends dyads comprised of students enrolled in introductory Communication Studies courses at Louisiana State University and Agricultural & Mechanical College (LSU A&M). Based on voluntarily provided demographic information, students were on average 20.4 years old ($n = 187$, 55 missing, $SD = 3.29$), and the majority were female (43.7%, 25.9% missing). Participants reported predominantly Caucasian identity (54.4%) but also African American (10.7%), Asian American (4.1%), and other (2.5%, 28.1% missing).

4.2 Procedures

Participants were told to bring a friend to the laboratory session or to arrive alone, based on condition. Upon arrival at the laboratory for their appointments, participants were greeted by two research assistants (RAs); in the stranger condition, RAs ensured participants did not know each other. After participants provided written consent, the RAs followed a script, first having participants draw slips of

paper to randomly assign the conversational roles of “discloser” and “listener.” Participants were then briefly separated to complete individual measures. Listeners filled out self-report scales not germane to the present chapter, while disclosers identified and rated two recent emotionally distressing events on a one (“*not at all emotionally distressing*”) to seven (“*very emotionally distressing*”) scale. Instructions indicated that disclosers only write down stressors they were comfortable disclosing. Listed events were primarily everyday stressors relevant to college students, including academic stressors (e.g., failing a test), relationship problems (e.g., roommate spats), family problems (e.g., parents fighting), and health-related issues (e.g., a recent surgery). Research assistants were trained to help select an event that was at least moderately stressful ($M = 5.12$; $Mdn = 5.00$; $Mode = 5.00$; $SD = 1.02$). To ensure the discloser was comfortable discussing the selected stressor, the RA asked a final time, “Are you comfortable disclosing this event?” All participants answered in the affirmative.

Participants were reunited in the observation portion of the laboratory where one of the RAs provided further instructions to both participants. Participants were given one minute to engage in small talk and were signaled by a knock on the wall to engage in a 5 minute video recorded conversation about the selected event. After this conversation, participants were separated for a final time and completed various post-conversation measures including a measure of perceived understanding.

Transcripts were compiled from the videotaped conversations. Decisions were made to capture linguistic content; vocalizations and other non-linguistic elements such as tone and pitch were not transcribed. Transcripts were created by two trained graduate students to capture linguistic content. One student first created the transcript, and the second student checked for mistakes, discrepancies, and missed words after the initial transcript was created.

4.3 Perceived understanding

Perceived understanding is the degree to which a conversationalist perceives or believes that her conversational partner comprehends or understands the meaning of a disclosure. To measure perceived understanding, disclosers and listeners responded to five items from the Active-Empathic Listening Scale (AELS) (Bodie 2011). Disclosers answered items with the prompt “my conversational partner” (a) listened for more than just the spoken words, (b) understood how I felt, (c) was aware of what I implied but did not say, (d) asked questions that showed an understanding of my position, (e) was sensitive to what I was not saying. These items were scaled along 7-points with the endpoints of (1) *Never or almost never true* and (7) *Always or almost always true*.

4.4 Local Lexical Repetition (LLR)

The computer program Discovery of Conversational Text Redundance (DOCTR) (Boyd et al. 2104) was used to produce LLR scores. DOCTR is a software package that can be used to research various turn-by-turn dynamics. DOCTR is able to process text and produce meaningful indices of shared language, allowing for the quantification of language-based group behaviors. Although DOCTR gives output for over 47 variables (total number of responses, total number of words, overall words used once, first contributed word count, etc.), the main variable of interest is the Percent of Total Words Sourced from Previous (the percentage of *total* words for the current response that were sourced from the previous response). DOCTR also provides a list of all the matched words in the conversation. DOCTR calculates variables on both the entire conversation as well as on a turn-by-turn basis.

Consider the following example:

(3) Dyad 109S

A: *Whose **fault** was it?*

B: ***It was** the little girl's **fault**.* (50% LLR)

A: ***It was**, so **it** wasn't your **fault**.* (57.14% LLR)

B: *Yeah **it** wasn't my **fault*** (60% LLR)

In this example, the first turn has a 50% Percent of Total Words Sourced from Previous score because three of the six words were sourced from the previous utterance (i.e., *it, was, fault*). Using this turn-by-turn measure, the turn-by-turn LLR score is then calculated by averaging the total percentage of repetition per turn (Boyd et al. 2014). The aggregate LLR score for this conversation is 55.71% (i.e. the average of 50%, 57.14%, and 60%).

4.5 Language Style Matching (LSM)

LSM is a measure of correspondence across a variety of words classified as function words. In line with the original conceptualization, LSM is calculated by indexing nine different function word categories: auxiliary verbs, articles, common adverbs, personal pronouns, indefinite pronouns, prepositions, negations, conjunctions, and quantifiers. First, the original dyadic text was split into two files, one including all transcribed listener output and one including all transcribed discloser output. The final transcripts were then prepared to undergo analysis by the Linguistic Inquiry and Word Count program

(LIWC 2015) (Pennebaker, Booth, Boyd, and Francis 2015), a program designed to count and classify words into linguistic categories. An LSM score was then calculated by taking the absolute value of the difference between two speakers and then dividing by the total for each category. For example, if we were calculating the degree of matching between two interacting speakers, the equation would be:

$$\frac{1 - (|\text{Person 1's function words} - \text{Person 2's function words}|)}{(\text{Person 1's function words} + \text{Person 2's function words} + .001)}$$

This score ranges between 0 and 1, with scores of .60 reflecting relatively low synchrony and .85 or above representing high synchrony (Ireland and Pennebaker 2010).

5 Results

Table 2 presents the bivariate correlations between all variables included in this study. This table shows that LLR and LSM are two distinct variables ($r = .04$, $p = .50$). Table 3 presents the model statistics for the prediction of perceived understanding and presents coefficients for individual predictors. We conducted a hierarchical linear regression analysis for which we entered dyad type in the first block, the set of language variables in the second block, the two-way interaction terms (with centered variables) in the third block, and the three-way interaction (with centered variables) in the final block.

Table 2: Bivariate Correlations for all Included Variables and Interaction Terms.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---------------------|------|--------|---------|------|---------|--------|---|
| 1. Dyad Type | N/A | | | | | | |
| 2. LSM | .02 | | | | | | |
| 3. LLR | .13* | .04 | | | | | |
| 4. LSM x Dyad | .02 | .94*** | -.007 | | | | |
| 5. LLR x Dyad | .14* | -.01 | .95*** | -.05 | | | |
| 6. LLR x LSM | -.12 | -.14* | -.26*** | -.03 | -.21*** | | |
| 7. LLR x LSM x Dyad | -.12 | -.03 | -.23*** | .07 | -.21*** | .94*** | |

Notes: For Dyad Type, 0 = Stranger, 1 = Friend; Values on diagonal are LSM = Language Style Matching; LLR = Local Lexical Repetition; * $p < .05$; ** $p < 0.01$; *** $p < .001$; all correlations two-tailed.

Table 3: Hierarchical Regression Analysis Predicting Perceived Understanding from Dyad Type, Coordination Variables, and Interaction Terms.

| | Perceived Understanding | |
|-------------------------------|-------------------------|------------------|
| | ΔR^2 | β |
| Step 1 | .04 | |
| Dyad Type | | .21* |
| Step 2: Language Variables | 0.02 | |
| LSM | | .07 |
| LLR | | .11 ⁺ |
| Step 3: Two Way Interaction | 0.01 | |
| LSM x LLR | | -.01 |
| Dyad x LLR | | -.22 |
| Dyad x LSM | | -.20 |
| Step 4: Three Way Interaction | 0.02* | |
| Dyad x LSM x LLR | | .43* |
| Total R^2 | 0.09* | |
| N | 253 | |

Notes: ⁺ $p < .10$, * $p < .05$, *** $p < .001$

H1 predicted that LLR and LSM are positive predictors of perceived understanding reported after a supportive conversation, and results suggest that LLR and LSM alone are not strong predictors of perceived understanding, which does not support H1. Results show that dyad type (Model 1) and the three-way interaction between LLR, LSM, and dyad type (Model 4) influence perceptions of understanding. Although the influence of LLR approached a conventional level of significance in Model 2 ($p=.07$), its influence apart from dyad type is questionable.

The third model that included three two-way interactions between LSM and LLR, LLR and relationship type, and LSM and relationship, also did not add any predictive value to perceived understanding. The fourth model, which included a three-way interaction between LSM, LLR and relationship type, was predictive of perceived understanding.

Inspection of three-way interactions can commence in several ways. For theoretical reasons, we decided to inspect the two-way interaction of LLR and LSM separately for friends and strangers.¹ The two-way interaction was statistically significant for friend dyads, $\Delta F(1, 133) = 1.17, p = .28, \Delta R^2 = .01$, but not for stranger

¹ It is also instructive to note that neither the main effect for LLR nor the main effect for LSM was statistically different from zero in either the stranger or friend model. As a result, it appears that these different forms of repetition (aggregated and turn-by-turn) seem to work together to influence understanding in friends but not strangers.

dyads, $\Delta F(1, 112) = 3.83, p = .053, \Delta R^2 = .03$. Perceived understanding increased with increasing LSM for friends (Figure 1a) but not strangers (Figure 1b). The amount of increase, however, depends on LLR: LSM has an increasingly positive effect on understanding with increasing LLR.

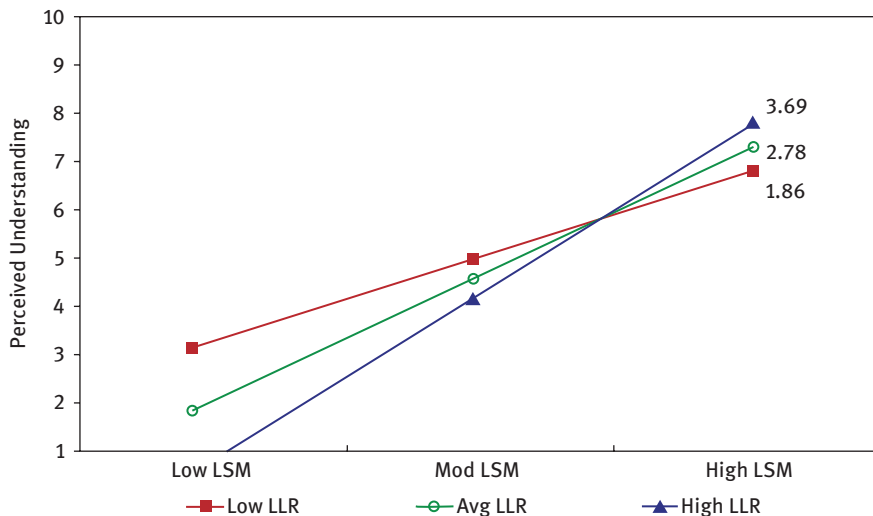


Figure 1a: LLR and LSM Interaction in Friends.

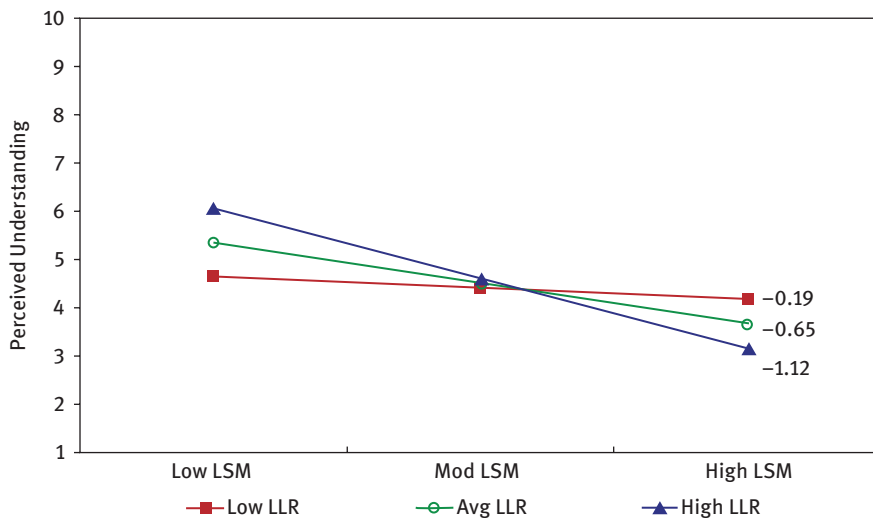


Figure 1b: LLR and LSM Interaction in Strangers.

H2 predicted that LSM and LLR vary as a function of relationship status such that friends exhibit higher levels of both measures of linguistic coordination than do strangers. Results suggest partial support. Table 4 presents the descriptive statistics for strangers and friends on LSM and LLR. Results showed a significant difference between strangers and friends on LLR, $t(254) = -2.07$, $p = .04$, $d = 0.26$, $r^2 = 0.13$, but no difference for LSM, $t(268) = .49$, $p = .70$. Contrary to H2, LLR seems to vary slightly as a function of relationship type but not LSM. This difference is, however, small in magnitude, suggesting any difference may not have a practical consequence. At the same time, results from the three-way interaction suggest that perceived understanding is influenced differently in friend and stranger conversations.

Table 4: Descriptive Statistics between Strangers and Friends on LSM and LLR.

| | Strangers | | Friends | |
|---------------------------|-----------|------|---------|------|
| | M | SD | M | SD |
| Local Lexical Repetition* | 13.02 | 5.13 | 14.35 | 4.78 |
| Language Style Matching | .60 | .20 | .61 | .18 |
| LSM, min | 0.00 | | 0.01 | |
| LSM, max | 0.87 | | 0.88 | |

Notes: * $p < .10$; * $p < .05$, ** $p < .01$

6 Discussion

The purpose of this chapter is to model lexical repetition in dialogues while providing an analysis of two ways to conceptualize lexical repetition and its functions within conversations about personal problems. In general, we found mixed support for our predictions. First, our findings did not provide full support for our first hypothesis, that LSM and LLR were predictors of perceived understanding. Matching or repeating of language alone did not make disclosers in this sample feel understood. We assessed how the interaction between LLR and LSM influenced outcomes along with how relationship status interacted with each coordination measure. Our results suggested that there was a significant interaction between LSM and LLR, but only for friends.

For friend dyads, perceived understanding increased with high LSM, but that increase was only found when LLR scores were high. In other words, a discloser feels more understood when talking with a friend, and this heightened understanding is pronounced when a friend matches the frequency of function words

and matches their language style. It is not enough to *just* immediately repeat someone or *just* repeat the exact words; rather repetition becomes effective when speakers are able to combine these two different aspects of repetition. The interaction of the structural features of LSM and LLR might also lend itself to a priming effect such that when speakers repeat exact lexical items, they can then start to repeat and align in more sophisticated ways. LLR might thus be conceptualized as a baseline of understanding: exact words can be repeated, then function words can start to be repeated, and then perhaps other forms of agreement or mental representations can be shared and repeated. Concepts like alignment or the agreement of stance (Du Bois 2007) or the interactive-alignment model of shared linguistic representations through priming (Pickering and Garrod 2004) can be used to provide evidence of this conjecture.

We hypothesized that LSM and LLR would vary as a function of relationship type (H2). Our results suggest that LSM did not vary as a function of relationship type, while LLR did. LSM values are nearly identical (in terms of central tendency and variability) in strangers and friends. This finding is surprising given claims made by Ireland and colleagues (Ireland and Pennebaker 2010; Ireland et al. 2011) that LSM is supposed to signal relational intimacy, stability, and involvement. Previous research has additionally found that LSM has an inverse relationship with conversational involvement. Babcock, Ta, and Ickes (2014) reported that LSM was highest in conversations in which individuals were disinclined to interact with each other. In addition, Babcock et al. (2014) suggested that LSM might actually be higher in conversations when individuals express higher emotional states; when people are expressing intense emotions, their partners may automatically match their language. These finding presents an interesting inconsistency with the underlying assumptions of LSM.

Our findings also appear to be inconsistent with the original interpretation of LSM, but consistent with our speculation with respect to LLR. In our data, people did not match function words very much at all, and there was no statistical difference between friend and strangers, on average, with respect to LSM. LLR scores, while relatively low in general, were statistically different as a function of relationship history. In particular, friends tended to repeat each other more than strangers, though the effect size was small (14% vs 13% total averaged conversational repetition, respectively). Previous research on repetition suggests that repetition serves a variety of functions within a conversation, namely to generate rapport (Chartrand and Bargh 1999) and as a way to create mutual knowledge (Svennevig 2004; Cook 2000). Although a small effect in our data, the practical significance may be meaningful. Future research should explore the degree to which LLR serves as a way to showcase mutual understanding in troubles talk, thus portraying a form of intimacy and furthering the relational work of these

conversations. Our findings that LLR varies as a function of relationship status, perhaps through the mechanism of shared understanding or intimacy, may indicate that semantic, immediate, and exact forms of repetition play important roles in how friends achieve understanding of problematic events.

Given our results that friends in general tend to repeat each other more and that matching and repetition of language makes friends feel even more understood, we argue that LLR can capture some perception of closeness between partners or conversational involvement/conversational cohesion. First, LLR can capture the degree of closeness between partners over and above LSM. These results are consistent with previous research on behavioral coordination, particularly mimicry. Chartrand and Bargh (1999) observed that people like mimickers more than nonmimickers and rate conversations as going more smoothly when mimicry happens. In addition, people who mimic tend to feel as if they understand their partner more and additionally, people feel more understood when they are mimicked (Stel et al. 2008).

LLR, operationalized as a semantic, immediate, and exact form of repetition, can represent conversational involvement or conversational cohesion. It not only serves a relational function but also a pragmatic function and is an important tool to help structure a conversation. Repetition facilitates new information, indicates a topic change (Brody 1986) and is a boundary marker (Brody 1994). Individuals use repetition to signal that some form of understanding has been reached so the conversation can change direction or continue. Another way repetition is used is to negotiate conversational turns and narrative episodes (Brody 1994). LLR can help capture these moments in a conversation. A conversation with high LLR indicates the agreement or ability to reach mutual understanding so that a new topic can be brought up. This behavior is particularly important in supportive communication. Repetition may thus operate to cue the teller that the listener is attending to important contextual information and not just the plot or time sequence of the events (Bodie, Cannava, and Vickery 2016). In other words, part of genuine listening may be “reading between the lines” or otherwise attending to more than simple statements of fact. Establishing common knowledge is an important part of being a good listener (Planalp 1993; Planalp and Benson 1992), and creating common ground is a vital element in good conversation (Clark 1996).

Although LLR plays an important role in adding to how friends understand each other, it is equally important to acknowledge the combination of LSM and LLR on perceived understanding. LSM, as a displaced, semantic, and non-exact form of repetition, and LLR, as an immediate, semantic, and exact form of repetition, are two theoretically and empirically different concepts; they both attempt to measure coordination in different ways. Our results suggest that each measure alone does not predict outcomes (at least in this context); instead, both measures

together produce increased perceptions of understanding, at least among friends discussing problems. Babcock et al. (2013) conducted a similar interrogation on the LSM construct by analyzing the differences in LSM and Latent Semantic Similarity (LSS) and came to a similar conclusion; that is, LSM and LSS are two distinct constructs that predict conversational outcomes in unique and separate ways. Our results and those of Babcock et al. (2013) indicate that we need multiple measures of repetition to examine outcomes of discourse. When used collectively these measures give us a larger picture of what is happening in an interaction. Measures of coordination need to be conceptually, computationally, and empirically studied in conjunction to understand relational and conversational dynamics.

7 Limitations

Our study extends work on supportive communication in important ways, though there are limitations. First, these conversations took place in a lab setting. Participants were assigned particular roles in this space (either as a discloser or listener), and each conversation was allowed to occur for five minutes. This controlled space could constrict the naturalness of a conversation in that participants might alter conversational habits. At the same time, the laboratory setting is a standard methodological tool for the study of social support and allows us to compare our results with past work. Thus, our conversations, while naturalistic, may or may not be ecologically valid representations of how people talk about problems in their homes, at bars, or in other locations. Second, our data come from college students, and thus most of the problems reported were primarily academic and everyday stressors perhaps unique to this population. The population and nature of the stressors may not be generalizable to larger problems or to relational problems. Future research should try to replicate these results by including samples from a more general population or through a different conversational genre or from longer interactions.

Finally, we used computerized textual analysis software to analyze our data, which are subject to programming differences and researcher subjectivity in variable selection. While an exciting development for handling complex discourse variables, we must take into account how these programs analyze language, how the algorithms are calculated, and whether they are measuring theoretically important variables in an empirically sound way. Programs such as these are, however, providing new opportunities for analyzing research on language in interpersonal communication, providing advanced methodology for handling

large data sets. We need appropriate and sophisticated research to refine the applicability and construct validity that these programs offer.

8 Conclusion

This chapter provides a set of guidelines to model lexical repetition into a dialogic sphere while providing an analysis of two ways to conceptualize lexical repetition and its conversational functions. Through the analysis of interactional, conversational, and language behaviors that occur within the supportive process, we were able to investigate how people come to understand each other through the action of repetition. LSM and LLR are conceptually different and empirically distinct and can provide researchers new ways to understand the boundaries of linguistic repetition and its functions.

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