John Benjamins Publishing Company

Tracking shifts in the literal versus the intensifying fake reflexive resultative construction

The development of intensifying *dood* 'dead' in 19th–20th Century Dutch

Emmeline Gyselinck and Timothy Colleman
Ghent University & FWO-Flanders / Ghent University

This paper explores diachronic shifts in the literal and intensifying uses of *dood* 'dead' in the Dutch fake reflexive resultative construction. Without sufficient context, a clause like *Hij werkte zich dood* (lit. 'He worked himself dead') is ambiguous in that it is unclear whether *dood* expresses an actual result of the activity denoted by the verb or whether it intensifies that verbal activity. We will investigate shifts in the (relative) type and token frequencies of both subtypes over the last two centuries and show that the intensifying use has become predominant. Particular attention is paid to the notion of productivity, which may help us to elucidate the possible pathways along which *dood* – in its function as an intensifier – is moving. By taking into account the variety of verbs that *dood* has occurred with since the early 19th Century, we aim to assess whether the dramatic increase in relative frequency of intensifying *dood* is paralleled by a concomitant extension of its collocational range or, conversely, whether this increase in frequency is mainly due to the rise of some highly frequent collocations.

1. Introduction[1]

In construction grammar, one of the argument structure constructions that has received a good deal of attention is the (English) resultative construction, which

---

pairs the (prototypical) form [Subj V Obj Obl] with the basic meaning 'X causes Y to become Z'. Goldberg (1995, 180–198), Boas (2003), Goldberg & Jackendoff (2004), Iwata (2006) and Luzondo-Oyon (2014), inter alia, provide different constructionist analyses of the formal and semantic properties of this construction.[2] In an attempt to capture the semantic and syntactic variation displayed by different patterns that can be taken to represent the resultative construction (in English), Goldberg and Jackendoff (2004) have established a taxonomy of subconstructions that share certain important properties but differ in other, more specific respects. The subpattern which will be the focus of the present paper is known under the name of the fake reflexive resultative construction, i.e. the formally transitive pattern in which a result is predicated of a reflexive object that is not lexically selected by the verb, see (1) below for an English example.

(1)   We yelled ourselves hoarse.   (Goldberg & Jackendoff 2004, 537)

An intriguing semantic property of the fake reflexive resultative that seems to have gone largely unnoticed in the existing literature is the fact that this pattern is often used to convey an intensifying meaning. Compare the Dutch examples in (2) and (3) below, which are formally similar to the English example quoted above.

(2)   Hij **schoot zich dood** met zijn jachtgeweer.
       'He shot himself dead with his rifle'

(3)   Zij **lachten zich dood/rot/een breuk/een bult**… om die mop.
       'They laughed very hard (lit. laughed themselves dead/rotten/a fracture/a hump… at that joke.'

While *dood* 'dead' is an actual secondary predicate in (2), which denotes the state resulting from the activity denoted by the verb *schieten* 'to shoot', the elements *dood* 'dead', *rot* 'rotten', *een breuk* 'a fracture' and *een bult* 'a hump' in (3) are used as intensifiers, boosting the verbal event of *lachen* 'to laugh' to a higher degree. The same meaning can be conveyed by means of a fake reflexive resultative in English: e.g. *They laughed themselves silly/sick/to death/to pieces*. Such uses are neither limited to the verb *lachen* 'to laugh' nor to the set of adjectives and predicative NPs in (3) (see Section 2 for a sample of observed examples).

 The expressive potential of the fake reflexive pattern in present-day Dutch has been briefly touched upon by Cappelle (2014), but the development of the intensifying fake reflexive resultative has not been systematically investigated from

---

2.   Also see Müller (2006) for a criticism of analyses of the resultative construction based on phrasal (i.e. rather than lexical) constructions. Other lexicalist proposals include Wechsler and Noh (2001) and Rappaport Hovav and Levin (2001).

a diachronic, corpus-based perspective. The present paper is part of an ongoing research project on diachronic changes in the intensifying fake reflexive resultative construction in Dutch from the 19th Century onwards. Rather than wanting to cover the entire history of the construction, the project zooms in on the changes it has undergone over the past two centuries, both in relation to its literal counterpart and in terms of internal development (e.g. relaxation of constraints on the intensifier slot and the emergence of subschemas and micro-constructions that form a complex constructional network). The inherent interest of this construction in particular is further motivated in Section 2. The focus of the present article is on one such intensifying element in particular, viz. the above-mentioned adjective *dood* 'dead'. We will track shifts in the literal versus intensifying uses of *dood* 'dead' in the fake reflexive resultative in 19–20th Century journalistic Netherlandic Dutch. *Dood* makes for an especially interesting case for two reasons. First, there are indications in the historical dictionary *Woordenboek der Nederlandsche Taal* [Dictionary of the Dutch Language; henceforth WNT] that it is one of the very first adjectives to have developed an intensifying interpretation in the fake reflexive resultative pattern. Second, in addition to its function as an intensifier *dood* is still frequently used as an actual secondary predicate in present-day Dutch (see Section 3 below).

The next section will first provide a more detailed overview of the existing literature on the (intensifying) fake reflexive resultative. We will also illustrate what an in-depth investigation of this construction in particular can contribute to the framework of Diachronic Construction Grammar. Section 3 will then elaborate on the question why *dood* is such a suitable candidate for expressing an intensifying meaning. Section 4 presents the methodology of the present corpus investigation. In Section 5, we first describe the diachronic development of *dood* in the fake reflexive resultative construction in general, before moving on to a more detailed comparison of literal and intensifying uses in terms of verb types and productivity. Finally, Section 6 summarizes the main results and outlines some proposals for further research.

2. The fake reflexive resultative construction and its intensifying potential

The term *fake reflexive resultative* was coined by Simpson (1983). It can be seen as a subpattern of the *fake object resultative* construction (or *unselected transitive resultative*), i.e. the pattern with a direct object that does not correspond to any of the semantic arguments of the verb, as in *They laughed him off the stage* or *They drank the pub dry* (examples from Goldberg & Jackendoff 2004, 537). Fake object resultatives, including fake reflexives, nicely illustrate one of the basic principles

of the constructionist view on argument structure: when an argument structure construction fuses with an individual verb, the construction may add additional arguments that are not lexically selected by the verb (see e.g. Goldberg 1995, 180–198, Goldberg 2013). That is, *ourselves* and *zich* in (1) to (3), as well as *him* and *the pub* in the above examples are selected at the level of the construction, rather than at the level of the individual verb. Fake reflexives have been signalled in several languages and are generally described as instantiating a formal subtype of the resultative construction (see e.g. Washio 1997 on Japanese, Huang 2006 on Chinese, Kiss 2006 on Hungarian).

The semantics of such patterns, however, have not received much attention. Most existing accounts are concerned with elucidating how this unusual combination of a non-reflexive verb with a reflexive object is licensed, see e.g. Boas (2003, 23–117) and Hiramatsu (2003) for a confrontation of different views on the matter. In an article that is primarily concerned with another argument structure construction (viz. the so-called 'time'-*away* construction in *We danced the night away*), Jackendoff (1997, 552) briefly notes that instances such as *Dean laughed/danced himself crazy/silly/to death/to oblivion* "do not really carry resultative semantics" but that "[r]ather, they are instances of [a] family of idiomatic intensifiers that use the same syntax as the resultative", but this suggestion is not further developed in Goldberg and Jackendoff (2004), nor in other constructionist work on resultatives to our knowledge. Margerie (2011) also touches upon the possibility of a non-literal (or non-resultative) reading of the resultative construction in her study on the grammaticalization of *to death* from a resultative phrase to a degree modifier (see Section 4). However, her discussion of the semantic change of *to death* from an actual result sense to a high degree meaning is very broad in that it covers all possible combinations with *to death*, without singling out any construction (such as the fake reflexive) in particular. Aside from the fake reflexive pattern, there is another subpattern of the fake object resultative that *has* attracted some linguistic interest in its own right, viz. the construction that has come to be known as the Body-Part-*Off* construction (BPOC) (see, inter alia, Sawada 2000, Espinal & Mateu 2010, Kudo 2011, Cappelle 2014). (4) below is an authentic example:

(4)   Andy Murray has won when grinning like an idiot and swearing his head off.
(The Guardian 08/08/2015)

Cappelle (2014) argues that the intensifying meaning of the BPOC is not (or no longer) a pragmatic inference in present-day English; rather, it has conventionalized to become part of the semantic component of a separate construction. He then goes on to illustrate, on the basis of corpus data from the Corpus of Contemporary American English, that the BPOC shows varying degrees of productivity and that

a large degree of conventionalization is involved in the use of this construction. Cappelle's article also includes a contrastive section where he briefly discusses a number of Dutch patterns with "excessive semantics" similar to the BPOC pattern in English (2014, 261–266, 271–275). Several of these can be seen as fake reflexive resultatives, see the examples in (5) below, with the glosses provided by Cappelle.

(5) a. Ik lach   me rot!   (Cappelle 2014, 262)
         I   laugh me rotten
         'I'm rolling on the floor laughing!'

     b. Ik schrik me een hoedje.   (Cappelle 2014, 264)
         I   start   me a   little-hat
         'I'm startled out of my wits.'

     c. We verveelden ons de tering.   (Cappelle 2014, 264)
         we bored   us   the phthisis
         'We [were] bored to death.'

Cappelle (2014) presents the results from a preliminary corpus investigation, based on web data, of the subtype illustrated in (5), with an NP as the intensifying element. Apart from Cappelle's (2014) preliminary investigation, the intensifying potential of the Dutch fake reflexive resultative has hardly been addressed in the literature. To the extent that uses relatively similar to the examples in (3) and (5) above have been mentioned in the literature at all, their intensifying semantics have generally not been recognized as such (see e.g. Everaert and Dimitriadis 2013, who explicitly analyse *Hij werkt zich een ongeluk* 'He works intensely/a lot' in terms of secondary predication). Nonetheless, the *Syntax of Dutch* (Broekhuis, Corver & Vos 2015, 254) does briefly signal the "amplifying effect" of the fake reflexive pattern, pointing out that "people are in fact continuously inventing new combinations". Indeed, the intensifying fake reflexive resultative construction appears to be very prevalent and productive in present-day Dutch, to the point where it has become a source of linguistic creativity and astuteness, as exemplified by the following Twitter examples that will strike speakers of Dutch as fairly unconventional:

(6) Hahaha ik **lachte me een knetterbak**. Hoe ziet ie eruit? Hoe oud istie? Echt
     bijdehand mannetje.   (Twitter 15/02/2012)
     'Hahaha, I laughed very hard (lit. laughed myself a 'sputter bin'). What does
     he look like? How old is he? Such a quick-witted little fellow.'

(7) Renske kan geen Engels en ik **schaam mij de tieten uit m'n BH**.
                                                          (Twitter 29/06/2013)
     'Renske doesn't speak any English and I'm so embarrassed (lit. embarrass
     myself the tits out of my bra).'

(8) Ik **werk me de kanker in** om jou iets leuks te geven puur om je ff een goed
     steuntje te geven. En dan alles ugh, stank voor dank.   (Twitter 25/07/2014)
     'I work very hard (lit. work myself into the cancer) to get you something nice,
     just to show you some support. And then – argh – not even a thank you.'

The examples above suggest that there exists an abstract schema [Subj V REFL
XP], associated with the semantics 'to V excessively'. In practise this means that a
speaker of Dutch could fill in just about anything in the XP-slot (henceforth: INT-
slot) in order to convey an intensifying meaning. The richness of possibilities is
illustrated by the blog *pelikanenschurft*, which lists 119 different intensifiers found
on Google with the verb *schrikken* 'to startle' alone (at http://pelikanenschurft.
wordpress.com). At the same time, there are a number of individual intensifiers
and intensifier-verb combinations that occur with a much higher frequency than
others, indicating that there is a great deal of conventionalization involved in the
use of this construction. In an effort to demonstrate this intriguing mix of lexical
idiosyncrasy and productivity, we list all intensifiers that occurred in a random
selection of 100 unique hits of "schrok zich" (lit. 'startled himself') retrieved from
the Dutch component of the COW web corpus (NLCOW14AX), as well as their
frequencies of occurrence.

(9) *rot* 'rotten' (23), *een hoedje* 'a little hat' (21), *dood* 'dead' (12), *kapot* 'broken'
     (8), *wild* 'wild' (5), *een ongeluk* 'an accident' (5), *een bult* 'a hump' (4), *te pletter*
     'to smithereens' (3), *lam* 'paralyzed' (3), *wezenloos* 'vacant' (3), *het lamlazarus*
     'fictitious disease' (1), *het apenzuur* 'fictitious disease' (1), *een schoenmaatje
     groter* 'a shoesize bigger' (1), *een rolberoerte* 'fictitious disease' (1), *de tandjes*
     'the little teeth' (1), *de piep* 'the beep' (1), *blauw* 'blue' (1), *twee hoedjes* 'two little
     hats' (1), *een apenhoedje* 'a monkey hat' (1), *het leplazarus* 'fictitious disease'
     (1), *de tering* 'tuberculosis' (1), *een hernia* 'a hernia' (1), *ziek* 'sick' (1)

The list in (9) contains 23 unique intensifiers, 13 of which are one-offs (including
fictitious diseases like *het apenzuur*, lit. 'the monkey acid'). While this is indicative
of a high degree of productivity, there are also a small number of strong colloca-
tions to be found: the combinations *zich rot schrikken* 'to startle oneself rotten' and
zich een hoedje schrikken 'to startle oneself a little hat' account for roughly 50% of
all tokens. This ties in with the idea of a Lexicality-Schematicity Hierarchy, "spec-
ifying different levels for each construction, ranging from a lexically-filled level at
the bottom, through intermediate levels, to a fully schematic level at the top of the
hierarchy" (Barðdal & Gildea 2015, 27). The Lexicality-Schematicity Hierarchy
allows for capturing both high-level generalizations and low-level idiosyncrasies,
as has been demonstrated by, inter alia, Croft (2003) for the English ditransitive,
Barðdal, Kristoffersen, and Sveen (2011) for the ditransitive in Scandinavian and
Colleman (2015) for the Dutch *krijgen*-passive. With regard to the fake reflexive

construction, this means that the constructional network may consist of numerous subschemas in which the verb or the intensifier are lexically specified, viz. [Subj V REFL *rot*] or [Subj *schrikken* REFL INT], which differ in their relative frequencies and display varying degrees of productivity.

Nevertheless, there are indications that the constructional network of the intensifying fake reflexive resultative construction was not always this extensive. Preliminary corpus research indicates that the use of the construction used to be more restricted, and that the constraints pertaining to both the verb and the intensifier slot have relaxed over time. First of all, there are indications that the range of intensifiers has increased. No intensifying uses were found in the 19th Century volumes of *De Gids* (1836–1899) of e.g. *te pletter* 'to smithereens', *een hoedje* 'a little hat', *een bult* 'a hump' – all intensifiers with a relatively high text frequency in present-day Dutch. This suggests that the abstract schema [Subj V REFL INT] has become more productive over time. Moreover, some intensifiers that did already occur in the 19th Century seem to have extended their collocational range over the last century. The results from a query in the 2002 data in the Twente Nieuws Corpus for all occurrences of the strings *een ongeluk* 'an accident' combined with a reflexive pronoun show that this intensifier is now combined with 29 verb types, 21 of which are one-offs (e.g. *gokken* 'gamble', *gluren* 'peek', *vergelijken* 'compare'). The results of the same query in all volumes of the periodical *De Gids* (1837–1936) indicate that intensifying uses of *een ongeluk* used to be pretty much limited to *schrikken* 'to startle' and *lachen* 'to laugh', suggesting an increase of the productivity of the subschema [Subj V REFL *een ongeluk*]. This expansion of use is in line with Traugott & Trousdale's (2013, 18, 27) observation that a new schema gradually increases its frequency and attracts new items once it has been established. However, in his case study on the suffix – *ment*, Hilpert (2013, 110–154) has demonstrated that not all subschemas necessarily follow the same path, thus highlighting the importance of looking at lower-level schemas when investigating diachronic changes in the degree of productivity of a construction: "If a construction increases in productivity, it is thus worthwhile to investigate which constructional variants are responsible for the overall increase" (Hilpert 2013, 23). Over the course of the development of the intensifying fake reflexive construction in Dutch, new (partially) productive subschemas may have emerged, whereas existing subschemas may have become more productive and increased their collocational range. Others yet may have come to instantiate a limited number of conventionalized combinations or obsolesced completely (see e.g. Colleman & De Clerck 2011, Van de Velde 2011, Hilpert 2013, Torrent 2015, Colleman 2015 for some sporadic case studies on the growth and contraction of constructional networks). In addition, it remains to be investigated whether it is possible to pinpoint when these reorganizations of the network have taken place. As has been observed by several authors, intensification

is a domain in which constant lexical renewal is particularly evident: 'novel' intensifiers tend to rapidly lose some of their expressive force, and this pragmatic wear-and-tear prompts language users to come up with even newer intensifiers (see e.g. Stoffel 1901, Bolinger 1972, Partington 1993, Lorenz 2002, Zeschel 2012, De Clerck & Colleman 2013 for discussion).[3] Given that the life-cycle of expressive forms is typically rather short, we might see a sudden rise and fall of certain subschemas featuring intensifiers that were in vogue for only a small period of time.

As a first step towards a comprehensive account of the diachronic shifts within the intricate constructional network of the (intensifying) fake reflexive resultative construction, the present paper explores the development of what is probably one of the earliest subschemas to have arisen within the network – and which appears to have been particularly robust over time –, viz. [Subj V REFL *dood* 'dead']. We will focus on the expansion of this pattern over the past two centuries, with a particular focus on the extent to which changes in relative frequency have gone hand in hand with changes in the collocational range and, accordingly, the productivity of the subschema. By taking into account both the intensifying and the literal fake reflexive with *dood*, we will also demonstrate how the two subtypes relate to each other, both synchronically and diachronically. Before we introduce the corpus and methodology, the next section elaborates on why we opted for *dood* as an interesting case for a diachronic investigation.

3.   *Dood* but not dead? The use of *dood* as an intensifier

In the previous section, examples (6) to (8) have demonstrated the 'creative' use of the fake reflexive resultative construction in present-day Dutch. We have argued that this creativity is driven by a constant need for new expressive items: the more novel or unusual a linguistic element, the more expressive it is perceived to be. However, it is often left unsaid that the constant arrival of new intensifiers on the scene need not imply that all of them by definition have a brief lifespan. In fact, despite the ongoing processes of linguistic innovation and renewal, *dood* has a long history as an intensifier and it remains one of the most frequent intensifiers in present-day Dutch, both in the fake reflexive resultative construction and in other contexts.

Dood is part of a set of taboo terms, which constitute a fertile source of new intensifiers (see e.g. Napoli & Hoeksema 2009, Hoeksema 2012). Cross-linguistically,

---

3.   Whereas all these publications are primarily concerned with degree adverbs scaling up the quality of an adjective (as in *That joke is dead funny*), which are the most prototypical members of the class of intensifiers, the same effects can be seen in other intensifying constructions, as is illustrated by the unconventional uses in (6) to (8).

the conceptual domain of death is an important source domain that has given rise to different types of intensifying expressions. In English, *to death* can be used to boost both verbs and (predicatively or attributively used) adjectives, as in *hate someone to death*, *be sick to death of X* and *a boring to death lecture*. The adjective *dead* has developed into a degree adverb in combination with certain adjectives, such as *dead quiet* or *dead simple*. German has parallel expressions including *zu Tode* and *tod* (e.g. *zu Tode geängstigt* 'scared to death' or *todmüde* 'dead tired'), as do French (*à mort*) and Spanish (*a muerte*), among others (Margerie 2011, Hoeksema 2012). In Dutch, there is an important group of intensifying or 'elative' compounds with *dood* as their first element. Hoeksema (2012) argues that the oldest compounds of this type are *doodziek* 'mortally sick' and *doodsbleek* 'deathly pale', suggesting that the intensifying interpretation may have developed from a literal, causative meaning.

The intensifying use of *dood* in the fake reflexive resultative may have undergone a similar evolution, as there are indications that it is one of the first adjectives to have developed an intensifying use in addition to the literal one.[4] The WNT lists multiple pre-19th Century examples of (unambiguously) intensifying *dood* with the verbs *lachen* 'to laugh', *schreeuwen* 'to yell', *zich ergeren* 'to be annoyed' and *zich schamen* 'to be ashamed'. The oldest example dates back to Bredero in 1617.

(10)   Och, ach **ick lachmen doodt**, ick kan 't niet langher harden.
                    (Bredero, *Spaanschen Brabander*, 1617)
       'Oh, ah, I'm laughing so hard (lit. myself dead*)*, I can't take it much longer.'

Whereas present-day dictionaries such as the *Van Dale Comprehensive Dictionary of the Dutch Language* contain several examples of the intensifying fake reflexive resultative construction with a selection of other and maybe newer intensifying elements (e.g. *rot* 'rotten', *suf* 'drowsy', *wild* 'wild', *te pletter* 'to smithereens'), there is no mention of any of these under the respective lemmas in the WNT.

What sets *dood* apart from some of the other intensifying phrases found in the fake reflexive is that it is still frequently used as an actual resultative secondary predicate as well. Language users can usually rely on their knowledge of the world to decide whether, in a given instance of the formal pattern, a literal or intensifying interpretation is intended. Consider the examples in (11) below, for instance.

---

4. Semantic ambiguity might have arisen in so-called bridging or critical contexts, where it is unclear whether the traditional (i.e. literal) or innovative (i.e. intensifying) meaning is intended (Heine 2002, Diewald 2002). The circumstances under which the intensifying interpretation of the Dutch fake reflexive resultative has emerged, lies beyond the scope of the present study. We refer to Margerie (2011) for a similar account on the evolution of *to death* from a resultative phrase to a peripheral degree modifier.

(11) a. Overtreders **schrikken zich vaak een hoedje** over de hoogte van de boete.
      'Offenders are often very startled (lit. startle themselves a little hat*)* by the
      amount of the penalty.'

      b. 37 procent van de Nederlandse tuinbezitters **ergert zich groen en geel**
      aan slakken.
      '37 percent of the Dutch garden owners are very annoyed (lit. annoy
      themselves green and yellow*)* by snails.'

      c. We **schamen ons dood** voor onze jonge landgenoten. Ze moeten voelen
      wie de baas is .
      'We are very embarrassed (lit. embarrass ourselves dead*)* by our young
      compatriots. They have to feel who's boss.'

                                        (Sonar Dutch Reference Corpus)

It goes against our expectations that one would actually end up with a little hat as a result of startling, turn green and yellow as a result of annoyance, or literally die of embarrassment. Nevertheless, the difference between both uses is not always that clear-cut.[5] Consider the use of *dood* 'dead' in the following example:

(12) Grootvader **werkt zich dood** in dat stoffig atelier.
     'Grandfather works himself dead/to death in that dusty studio'.

Since *werken* 'to work' is one of the many activities which can potentially lead to someone actually getting themselves killed, sentence (12) is ambiguous: it can mean that grandfather is jeopardizing his life by working in such a dusty studio, but there is an alternative reading in which it just means that grandfather is a hard-working person. In English, *to death* displays similar ambiguity, as demonstrated by the meaning discrepancy between *bored to death* or *shot to death* (see Margerie 2011).

    In sum, *dood* is well-suited for a first exploratory study on the diachronic development of the intensifying fake reflexive resultative construction: it belongs to a conceptual domain that is known to serve expressive purposes, it has been functioning as an intensifier in the fake reflexive pattern since at least the 17th Century, and it displays an interesting ambiguity in some cases. In light of this ambiguity, it is impossible to consider the development of the intensifying [Subj V REFL *dood*] without taking into account what happened to the literal counterpart.

---

5. There are many intensifiers for which a literal reading is de facto impossible. For example, we cannot imagine a situation in which *een hoedje* 'a little hat', as in (11), would somehow denote an actual result of the verbal event. Given our current focus on the literal-intensifying variation, such cases lie beyond the scope of the present paper.

Before we move on to the actual case study, an important terminological sidenote is in order. Our use of the term fake reflexive may be somewhat inapt in some cases in that Dutch also allows for inherently reflexive verbs to occur in this intensifying pattern, such as *zich schamen* 'to be ashamed', *zich ergeren* 'to be annoyed', etc. (see the examples in (11) above). In the remainder of this paper, we will abstract away from this difference, in view of the evident structural and semantic parallelism between cases where the reflexive is selected by the construction only and cases where it is co-selected by the verb and the construction.

4.   Methodology

Since the fake reflexive resultative construction is fairly infrequent, with approximately 10 occurrences per million words in present-day Netherlandic Dutch (Gyselinck & Colleman, in press), we needed a large (and preferably continuous) diachronic corpus of 19th and 20th Century Dutch for the present investigation. There are currently no diachronic corpora of sufficient size available which were collected specifically for linguistic research. There is, however, the online Delpher database of the National Library of the Netherlands, which includes a growing collection of over one million historical Netherlandic newspapers published between 1618 and 1995, consisting of both nationally and regionally/locally distributed newspapers, as well as Dutch-language newspapers from the Dutch East Indies and other former colonies (for a complete overview of all newspapers, we refer to the Delpher website). As a linguistic corpus, the Delpher database has a number of drawbacks. For one, the newspaper data are not evenly distributed across the entire time period (e.g. 2,224 newspaper issues in 1800 versus 23,790 in 1945) and the database does not provide information about the total number of words included. Moreover, the texts are not POS-tagged or otherwise linguistically annotated, and the search possibilities are fairly limited: the online search module does not offer the possibility of searching for complicated regular expressions, for instance. However, the sheer *size* of the corpus makes up for these drawbacks: no other text collections of comparable size are available, making the Delpher database the ideal corpus for longitudinal research into diachronic changes of relatively infrequent linguistic phenomena of Modern (i.e. post-16th Century) Dutch.

We queried the Delpher newspaper database for the exact word string "zich dood", i.e. for instances in which the (both singular and plural) third person reflexive pronoun *zich* 'himself/themselves/herself' is immediately followed by the adjective *dood* 'dead'. In light of the exploratory aim of this case study, we limited ourselves to the most frequent reflexive pronoun and did not include the first and second person pronouns in the query. In addition, we limited the query to

newspapers from the period 1800–1995. The choice for 1800 as the cut-off date is fairly random: most important, for present purposes, was that we could track developments in the fake reflexive resultative with *dood* 'dead' over an extended period of time, with sufficient data being available for the entire period covered to allow for a decade by decade comparison. Naturally, the further we go back in time, the harder this becomes. We do not want to suggest that *dood* was not at all used as an intensifier before 1800, however. On the contrary, as was observed in the previous section, there are indications that intensifying *dood* was already around in the 17th Century. We are not primarily interested in documenting the first emergence of such uses, but rather in tracking shifts in the relative weights of the literal vs. intensifying use over an extended period of time.

The query returned 8,628 hits, but this sample included quite a lot of false hits and doubles. The false hits included clauses with non-resultative reflexive constructions such as *zich dood houden* 'to pretend to be dead' or *zich dood verklaren* 'to declare oneself dead', as well as other irrelevant sentences in which *zich* and *dood* were adjacent, as in (13):

(13)   Voor zich Rome, achter zich dood en schande, rondom zich opgestapelde
       hoopen van verslagenen.   (Nieuwe Tilburgsche Courant 1910)
       'In front of him Rome awaited, behind him lies death and disgrace, piles of
       defeated men surrounded him.'

After manual weeding, a set of 4,669 relevant instances remained, which were semantically annotated as representing either the literal or the intensifying subtype. In her study on *to death* as a degree modifier, Margerie (2011) makes a more fine-grained semantic distinction between five semantic categories, viz. degree, hyperbolic potential result, potential result, hyperbolic actual result and actual result, though the distinction between some of these categories is not always clear from the examples she provides:

(14)   a.   <u>actual result</u>: All Israel stoned him to death.   (Margerie 2011, 121)

       b.   <u>hyperbolic actual result</u>: I'm sure she's working everybody to death.
                                                        (Margerie 2011, 133)

       c.   <u>potential result</u>: My master Kasim is sick well nigh unto death. For many
            days he hath nor spoken nor tasted aught of food.   (Margerie 2011, 125)

       d.   <u>hyperbolic potential result</u>: For I was faint and weary, and sick almost
            unto death.   (Margerie 2011, 137)

       e.   <u>degree modifier</u>: It brings a consumed long string of past transactions,
            that bore me to death.   (Margerie 2011, 127)

It must be stressed that Margerie's research aim is very different from the present study. Her corpus study is aimed at elucidating how *to death* developed its booster function in various constructions (viz. NP1 V NP2 *to death*/NP BE ADJ *to death*) from the 16th Century onwards. In order to provide a comprehensive account of this evolution and the possible bridging contexts in which a degree sense may have started to arise, a more fine-grained classification is required. The semantic categories demonstrated in (14) are mainly of importance in the so-called transitional stages because they appear to have paved the way for a degree reading to arise (Margerie 2011, 139). It is not until the late 18th Century that some examples of an unambiguous degree reading are found and, by the mid-20th Century, the 'intermediary' potential and hyperbolic result senses had virtually disappeared. In the present paper, however, we are not concerned with tracking the entire history of *dood* as an intensifier; the purpose of this case study is to account for changes in the relative frequency of literal and intensifying variants of the fake reflexive resultative construction with the intensifier *dood*.[6] Whereas Margerie (2011) would have annotated the examples in (15) below as instances of a (hyperbolic) potential result, what is important for the present study is that *dood* is not used as an intensifier, but still has a resultative reading – regardless of whether this result is (hyperbolic) 'actual' or 'potential'.

(15) a. Doortje werd hoe langer hoe magerder en bleeker. Was zij bezig **zich dood te werken?**   (Bataviaasch handelsblad 1882)
'Doortje grew fainter and fainter as time went on. Was she working herself dead/to death?'

       b. Volgens goede vrienden is zij op weg om **zich dood te eten**. De laatste maanden is ze maar liefst 15 kilo aangekomen.   (De Telegraaf 1979)
'According to her good friends, she is eating herself dead/to death. She has gained no fewer than 15 kilograms over the past couple of months'.

We therefore opted to subsume all instances in which *dood* is clearly not used as an intensifier under the category of 'literal use' (we will briefly return to Margerie's (2011) data in Section 5.1).[7] A relative small set of examples (164 in total) were

---

6. The observation in Section 3 that examples of (unambiguously) intensifying *dood*, dating back to at least the 17th Century, are listed in the WNT, suggests that the intensifier function has already moved past the 'transitional stages' and was already established in the timeframe under investigation. Nevertheless, this is not to say that intensifying *dood* has reached the end of its development. On the contrary, the case study below shows that it has undergone important changes since the early 19th Century.

7. In her quantitative analysis, Margerie (2011, 140) also merges her semantic categories together in two major categories 'result' and 'degree' in order to visualize the development of *to death*.

hard to interpret for various reasons and were discarded from the actual dataset, leaving us with 4,505 instances that *unambiguously* represented either intensifying or literal use.

5.   Case study: the rise of *dood* as an intensifier in the fake reflexive resultative construction

This section first provides a general overview of the relative frequency development of the literal and intensifying fake reflexive resultative constructions over the 19th and 20th Century (5.1). We then move on to a more detailed study of both variants in terms of verb types attested with them and their productivity (5.2).

5.1   General development

The search string "zich dood" yielded a total of 4,505 unambiguous instances of the fake reflexive resultative construction. Note that, due to lack of information about the corpus size in terms of number of words of running text, it is not possible to determine whether the fake reflexive resultative pattern with *dood* has in general become more or less frequent over the last two centuries. We therefore focus on the relative frequency development of both uses in the present study.[8] If we consider the entire time period of 1800 to 1995, the distribution between literal and intensifying use of *dood* is fairly well-balanced; overall, there are 2,109 instances of the literal and 2,396 instances of the intensifying use. A different picture emerges if we divide the data into 10-year subperiods and track the development of both uses across time.

Figure 1 shows that fake reflexive resultatives with *dood* were primarily used to express an actual result throughout the entire 19th Century. It is only in the 1920s that the balance tips in favour of the intensifying use, which gradually increases its dominance in the following decades. Goodman and Kruskal's (1954) gamma coefficient was computed to assess whether the correlation between time on the one hand and the frequency development on the other is significant. This confirms that there is a significant trend of increasing intensifying use or, conversely, decreasing literal use across time (γ = .355, σ = .017, CI = 0.322–0.388). If we compare this to Margerie's (2011) data on *to death* in English from 1700 until now, divided into 50

---

8.   Hilpert (2013, 8,17) actually points out that a construction may change with regard to any aspect of its frequency, not just its text frequency. He therefore argues in favour of an approach that studies constructional change on the basis of different frequency measures, including the important measure of relative frequency.
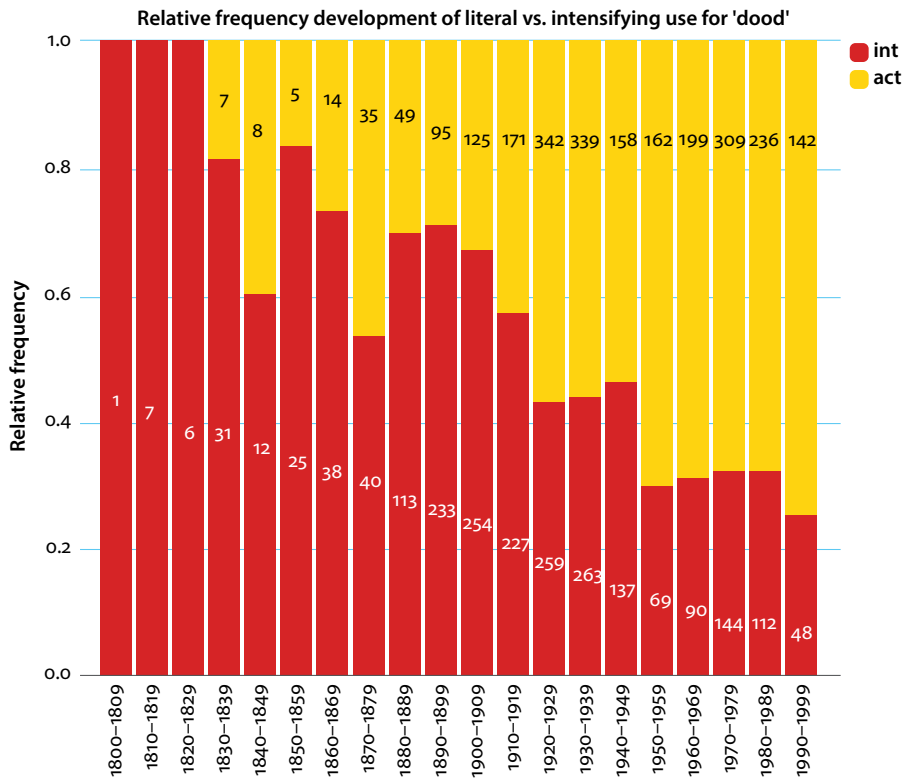
Figure 1. The relative frequency development of the use of *dood* in the fake reflexive resultative construction. Absolute frequencies are indicated on the individual bars. (int = intensifier, act = actual result)

years intervals, we see a similar development. The earliest attestations of *to death* as a degree modifier are found in the second half of the 19th Century, after which its frequency gradually increases. Nevertheless, in the period 1950-now, about 60% of the 101 instances with *to death* still represent the actual result sense, indicating that the intensifying interpretation of *to death* has not advanced as far as *dood* has. In sum, the data provide clear evidence for an increase in the *relative* frequency of the intensifying use as compared to the literal use, but we cannot establish at present whether this has gone hand in hand with an increase in its *total* token frequency per one million words of text.

Before moving on to a more detailed analysis of the literal and intensifying subtypes of the construction, it is interesting to point out that at least some speakers show some awareness of the intensifying potential of the fake reflexive resultative pattern. The dataset contains a number of metalinguistic comments on

the exaggerating nature of this construction. One of these comments was found as early as 1903, suggesting that the intensifying meaning had already reached a certain level of salience at that time, but was still perceived as excessive.

(16)   Zonder twijfel, de overdrijving zit bij ons in de lucht en in 't bloed. […] De een lacht zich ziek, de andere een bochel, ja een derde **lacht zich dood**." (Gooi-en Eemlander 1903)
'Without any doubt, exaggeration is in our nature. This one laughs "himself sick", another one laughs "himself a hunch", a third person laughs "himself dead".'

(17)   Meestal waren het buiten verhouding krachtige definities die ze gebruikten. Lien had zich altijd "naar" gelachen; Mien zich "wild" geschrokken; Rien **zich "dood" gezocht**.   (Leeuwarder courant 1931)
'They usually used disproportionately powerful definitions. Lien had always laughed "herself nasty", Mien had startled "herself wild"; Rien had searched "herself dead".'

In the next section, we will analyse the literal and intensifying uses of *dood* in the fake reflexive resultative construction in somewhat more detail, focusing on issues of productivity.

5.2   A closer look at the literal and intensifying subtypes of the fake reflexive resultative construction

5.2.1   *Lexical variation in terms of verb types*

A first possible way of investigating differences between the literal and intensifying variants of the fake reflexive resultative construction is to focus on the range of verb types that are found in the verb slot of the construction. We will first compare the overall number of verbs occurring in the two constructions, and then proceed to a more detailed diachronic comparison of the respective lexical ranges.

In the entire dataset, the literal fake reflexive resultative construction occurs with 117 different verb types, 59 of which are hapax legomena (HL), i.e. words that occur only once (see appendix A for a full list of attested verbs with their respective observed frequencies). The intensifying fake reflexive resultative construction is also found with 117 different verb types, 65 of which are hapax legomena (see appendix B). The corresponding type-token ratios are almost identical, viz. 0.06 for the literal use and 0.05 for the intensifying use. This may be somewhat surprising, since, intuitively, one might expect the intensifying construction to display more verbal flexibility than the literal construction: after all, virtually any verbal event can be intensified, whereas there are only so many ways of getting oneself killed. However, it is not because a given verbal activity *can* be intensified that language

users will often feel the *need* to intensify it. Although the intensifying construction is clearly productive, there also is a large degree of conventionalization involved.

We found that 45 verbs occur at least once in both the literal and the intensifying fake reflexive – these are marked in grey in appendices A and B. 9 out of the 10 verbs most frequently occurring in the literal fake reflexive resultative construction, are also found with intensifying *dood*. Only *schieten* 'to shoot', overall the most frequent verb in the literal construction, does not seem to allow for this intensifying interpretation. Conversely, 8 out of the 10 top verbs for the intensifying interpretation are also found in the literal subset. In spite of this overlap, χ^2 goodness-of-fit tests show that 20 of the overlapping verbs show a significant preference – at the 95% level of statistical confidence – for either the literal or the intensifying construction.[9] An overview of these verbs is provided in (18); we will highlight a few of them below (see appendix C for all results).

(18) a. <u>literal</u>: *dansen* 'to dance', *drinken* 'to drink', *eten* 'to eat', *hongeren* 'to starve', *lopen* 'to run', *rijden* 'to drive', *roken* 'to smoke', *vechten* 'to fight', *vliegen* 'to fly', *vreten* 'to gorge oneself'

   b. <u>intensifying</u>: *kniezen* 'to mope', *lachen* 'to laugh', *schrikken* 'to startle', *sjouwen* 'to trudge', *staren* 'to stare', *treuren* 'to sorrow', *werken* 'to work', *zich ergeren* 'to be annoyed', *zich vervelen* 'to be bored', *zwoegen* 'to labour'

It should come as no surprise that most of the verbs that favour the literal construction denote activities that, if done excessively, potentially lead to someone getting themselves killed. The verbs of consumption *drinken* 'to drink' and *eten* 'to eat', for example, are significantly more frequent in the literal construction (*drinken*: $\chi^2 = 122.14$, df = 1, $p < .001$; *eten*: $\chi^2 = 25.68$, df = 1, $p < .001$). The examples below illustrate both uses of *drinken*, but intensifying examples like (20) are rare (6 out of 168 tokens):

(19) Frankrijks gevaarlijkste en machtigste vijand heet alcohol. Ieder jaar **drinken** zestienduizend mannen en vrouwen **zich dood**.   (Nieuwsblad van Sumatra 1955)
'France's most dangerous and powerful enemy is alcohol. Every year, sixteen thousand men and women drink themselves dead/to death.'

(20) Een IJslander **drinkt zich dood** als hij de onverwachte kans krijgt, zoals tijdens een heus popconcert [Dan] is 80% reeds tijdens het voorprogramma volslagen dronken.   (De Telegraaf 1978)

---

9. The remaining 25 overlapping verbs are too infrequent to exhibit a significant preference for either the literal or the intensifying construction.

'An Icelander drinks a lot (lit. drinks himself dead*)* when given the opportunity, for instance during a huge pop concert [Then] 80% is already completely drunk during the support act'.[10]

Although *werken* 'to work' is also one of those activities, the verb shows a clear preference for the intensifying use (χ^2 = 106.34, df = 1, p < .001). Less surprising is the primarily intensifying use of a verb like *lachen* 'to laugh' (χ^2 = 172.2, df = 1, p < .001). Nevertheless, a total of 34 examples show that a literal interpretation of *zich dood lachen* 'to laugh oneself dead/to death' is not as rare as one might expect:

(21)   …Zó grappig, dat hij vijfentwintig minuten achtereen gierde van het lachen; toen overleed hij ter plekke. De man had **zich doodgelachen**.

(De Telegraaf 1975)

'So funny, that he screamed with laughter for twenty-five minutes straight; then he dropped dead on the spot. The man had laughed himself to death/dead.'

For some verbs, the intensifying reading seems to be so deep-rooted that the context must explicitly state that a literal interpretation is warranted. This is often done through the use of *letterlijk* 'literal' as in (22) with the verb *zich ergeren* 'to be annoyed' (χ^2 = 347.14, df = 1, p<.001).

(22)   May **ergerde zich dood**, in den letterlijken zin des woords. Op zeventigjarigen leeftijd, in 1912, is hij gestorven.   (De Sumatra Post 1932)

'May annoyed himself dead/to death, in the literal sense of the word. At the age of 17, in 1912, he died.'

Furthermore, in combination with verbs for which the intensifying reading is by far the most likely one, we sometimes find examples of deliberate wordplay, which, again, shows that language users possess metalinguistic awareness of the availability of both interpretations.

(23)   Een goede raad, is, voor dat men deze film gaat zien, eerst een levensverzekering te nemen, deze film is om **zich dood** te **lachen**.

(Het nieuws van den dag voor Nederlandsch-Indië 1912)

'One good piece of advice, before going to see this movie, is to take a life insurance. This film is so funny you'll laugh yourself to death (lit. this film is to laugh oneself dead).'

---

10. An anonymous reviewer suggested that (20) could also be interpreted in the literal sense of an Icelander actually dying as a result of excessive drinking. However, the sentence appears to be some kind of universal statement on the behaviour of Icelanders at concerts: in general, Icelanders like to get very drunk. Moreover, the context explicitly mentions Icelanders being drunk (instead of dead).

(24)   Antwoord geven is een kwestie van eerlijk ja of nee zeggen. Als u dat werkelijk
eerlijk doet, **schrikt** u **zich dood**. Zo bekeken eigenlijk een gevaarlijke enquête.
(De Telegraaf 1969)

'Answering is a matter of saying yes or no. If you do so in good faith, you
will be startled to death (lit. startle yourself dead*)*. In that regard a rather
dangerous survey.'

Now that we have outlined the most important overall differences between the lit-
eral and intensifying uses of the fake reflexive resultative construction, we will con-
sider the degree of variance in the number of attested verb types from a diachronic
point of view in the remainder of this section. It was previously pointed out that the
early 20th Century was a critical turning point in the rise of the intensifying mean-
ing: from the early 20th Century onwards, the intensifying use starts to increase
rather dramatically, mounting to 75% in the 1990s. Traugott & Trousdale (2013,
18,27) argue that the spread of an established subschema is often concomitant with
the loss of collocational and other restrictions, resulting in expanded use. As the
intensifying subschema [Subj REFL V *dood*] rises in relative frequency, the range of
verbs with which it combines might be expected to increase accordingly. This has
also been referred to as host-class expansion by Himmelmann (2004). However,
this is not the only possible scenario: another possibility is that the increase in fre-
quency is mainly led by a limited number of highly frequent V-*dood* combinations,
an alternative scenario that might eventually even lead to the obsolescence of the
subschema, leaving behind only a few conventionalized collocations. Even in the
latter case, however, these entrenched individual collocations can serve as models
for analogical extension, occasionally giving rise to previously unattested V-*dood*
combinations (Barðdal 2008, 78). We will have a closer look at the situation at the
end of the 19th Century (1890–1899) and compare this to the situation at the end
of the 20th Century (1980–1989, the last full decade included in the dataset). The
subsets for these two decades are comparable in size, with respectively 328 and
348 instances of the fake reflexive resultative.

The late 19th Century data contain 233 literal examples with 20 different verbs,
which corresponds to a type-token ratio of 0.08. Almost a century later, the total
token frequency has dropped to 112 literal instances, instantiating 22 different verb
types. The type-token ratio increases to 0.20, indicating a higher degree of lexical
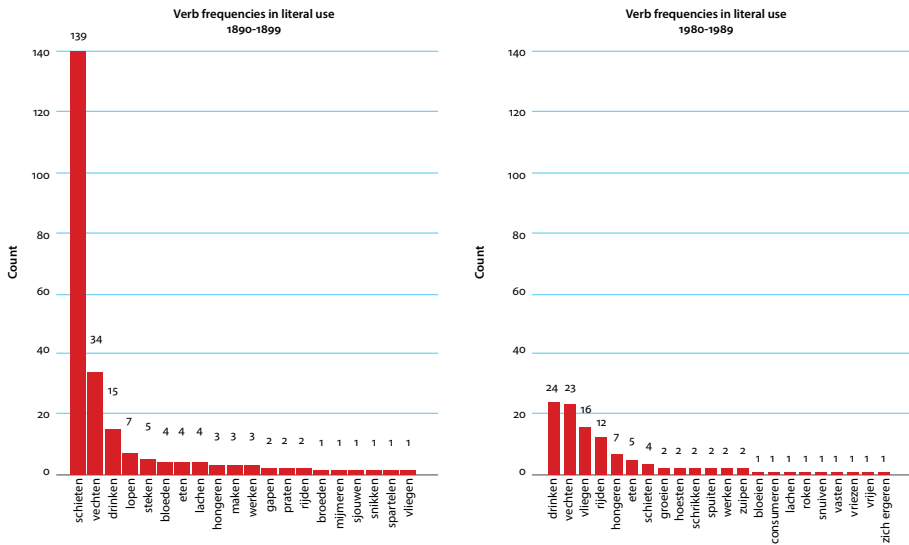variation in the late 20th Century.

Figure 2. The verb types used in the literal fake reflexive resultative construction in the late 19th Century versus the late 20th Century.

The distributions in Figure 2 suggest that the increase in lexical variation is to a large extent due to the rather dramatic drop in frequency of the verb *schieten* 'to shoot', going from 139 attestations in the data for 1890–1899 (59% of all tokens) to only 4 in the data for 1980–1989 (3.6% of all tokens). Since *zich doodschieten* 'to shoot oneself (dead)' is still a conventionalized expression in present-day Dutch, its drop in frequency may be part of a change in style: present-day newspapers tend to use less vivid or more euphemistic language in reporting cases of suicide.[11] Aside from the case of *schieten*, no striking changes are attested in the verb range of the literal fake reflexive resultative construction

A comparison with the degree of lexical variation in the intensifying use reveals a fascinating contrast. For 1890–1899, we retrieved 95 tokens of intensifying *dood* with 18 different verbs. By the late 20th Century, the token frequency has increased to 236 instances, but the type frequency has not followed suit: the 236 tokens instantiate 17 different verb types. This means that the type-token ratio decreases from 0.19 in the late 19th Century to 0.07 in the late 20th Century, suggesting a decrease in lexical variation. The diachronic development in both variants of the construction thus seems to be moving in opposite directions.

---

11. Several studies have shown that explicit reporting on suicide may lead to imitation behaviour (see e.g. Phillips 1974, Stack 1996, Gould 2001).
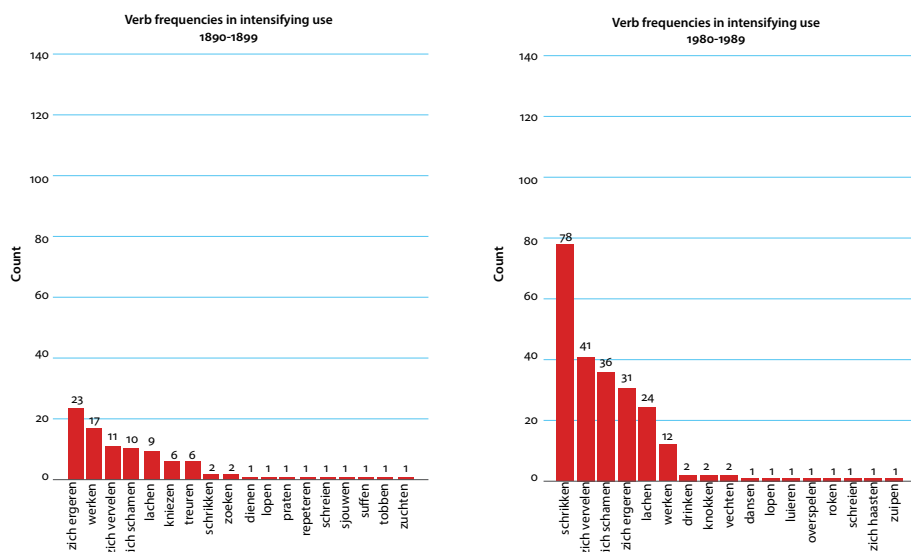
Figure 3. The verb types used in the intensifying fake reflexive resultative construction in the late 19th Century versus the late 20th Century.

The distributions in Figure 3 show that, in both subperiods, the majority of observed instances feature one out of a small set of six or seven verbs, the remaining verbs occurring only sporadically. In the late 20th Century data, however, the difference between these top verbs and the others has become even more pronounced. One verb that particularly comes to the fore is *schrikken* 'to startle', accounting for 33% of all tokens in the 1980–1989 data. *Zich dood schrikken* (lit. 'to startle oneself dead') has clearly become a strongly conventionalized micro-construction or collocation. We refer to Gyselinck and Colleman (in press) for a detailed analysis of conventionalized verb-intensifier collocations in present-day Dutch. This decrease of the collocational range of an intensifier is expected to go hand in hand with a decrease in its degree of productivity: if *dood* starts to become strongly associated with a small number of conventionalized collocations, there is a possibility that it will no longer be recruited very often when *another* verb needs to be intensified. This topic will be further investigated in the next section.

5.2.2   *From verb types to productivity*
The majority of studies on linguistic productivity have been carried out within the domain of morphology. Morphological productivity has generally been defined as follows:

> By productivity as a morphological phenomenon we understand the possibility of language users to coin, unintentionally, a number of formations which are in principle uncountable.
>
> (original definition by Schultink 1961, translation by Van Marle 1985, 45)

Although there is reasonable consensus on this definition of morphological productivity, intuitions on the productivity of certain word-formation patterns diverge (Baayen 1990, Baayen & Lieber 1991). For instance, whereas Schultink (1962) considers the Dutch suffix *te* (which is used to form deadjectival nouns, comparable to English *ness*) to be non productive, Booij (1977) argues that it is still sporadically used to form new nouns, such as *gekte* 'craziness'. The unreliability of such introspective judgements has prompted several linguists to search for empirical measures that can lend statistical support to these linguistic intuitions (see e.g. Aronoff 1976, Baayen & Lieber 1991, Baayen 1992). The most influential measures in morphological productivity are the frequency based measures developed by Baayen (Baayen 1990, 1992, 1993; Baayen & Lieber 1991). By adopting a complex, multifaceted view on productivity, Baayen argues against previous accounts that have tried to capture productivity exclusively in terms of high type frequency (see Bybee 1985, 1988). Baayen's measures were originally designed to measure the productivity of word formation processes and affixes, but they can be fruitfully applied to syntactic argument selection as well (Zeldes 2012). The first measure, called potential productivity, assesses the probability that new types will appear when the total item sample is increased (Baayen & Lieber 1991; Baayen 1992, 1993). In the formula below, P stands for potential productivity, n_1 is the number of HL found in the construction and N is the total number of tokens of the construction under investigation. A high number of hapaxes and the absence of high-frequency words positively influence the potential productivity of a construction (Baayen & Lieber 1991).

(25)   Hapax-token ratio (P) = n_1/N

However, it is important to observe that P is intended as a measure of the relative degree of productivity of different constructions – or of the same construction at different points in time; there are no fixed cut-off points which allow for the identification of, say, patterns of high, medium or low productivity.

According to Baayen and Lieber (1991) and Baayen (2009), type frequency (V) in itself does not really measure the *degree* of productivity but is an indicator of the extent of use, which can be influenced by other factors such as pragmatic usefulness and flexibility of the construction. Type frequency is said to give an indication of the *realized* productivity or 'past achievement' only, in that it fails to make any predictions about potential expansion to new types (Baayen 2009, 902; Hilpert 2013, 136). In other words, a construction that used to be productive can have a

high type frequency in present day language even if it might be the case that it can no longer be extended to new types (this is the case for the V-*ment* construction, as demonstrated by Hilpert 2013) . Conversely, a fairly recent construction can have a low type frequency at present, but it might attract more types in the future. Nevertheless, since type frequency is still an important aspect in the multidimensional complex of productivity, we include it as a second productivity measure.

We have applied these productivity measures to the ranges of verbs that are found with *dood* in our dataset in order to determine whether either the literal or the intensifying construction have undergone important shifts in productivity over the last two centuries. To compare the development of these measures across time, the sample for each point of comparison must be of equal size (Zeldes 2012, 64; Hilpert 2013, 129).[12] Due to the low numbers of examples of the intensifying use of *dood* before 1900, we were unable to measure the productivity of this use during the 19th Century. As the corpus only contains data up to 1995, the 1990s were also excluded from the analysis. Table 1 presents the type frequency, hapax count and hapax-token ratio (or potential productivity P) based on a random sample of 100 tokens for all remaining decades of the 20th Century.

Table 1. Frequency measures of verbs occurring with *dood* in the fake reflexive resultative construction for the 20th Century. The 1950s only returned 79 literal tokens but are included for the sake of continuity

Literal use (*dood* = actual result)

	1900s	1910s	1920s	1930s	1940s	1950s	1960s	1970s	1980s
Types (V)	15	21	25	25	18	22	23	26	28
Hapaxes (N_1)	7	13	17	13	10	11	12	12	15
Hapax/token (P)	0.07	0.13	0.17	0.13	0.1	0.13	0.12	0.12	0.15
Tokens (N)	100	100	100	100	100	79	100	100	100

Intensifying use (*dood* = intensifier)

	1900s	1910s	1920s	1930s	1940s	1950s	1960s	1970s	1980s
Types (V)	23	23	21	23	23	12	13	14	10
Hapaxes (N_1)	14	13	9	12	13	5	4	6	4
Hapax/token (P)	0.14	0.13	0.09	0.12	0.13	0.05	0.04	0.06	0.04
Tokens (N)	100	100	100	100	100	100	100	100	100

---

12. The productivity measures are strongly dependent upon sample size. 'Comparisons between processes for either measure can only take place at an equal sample size: if one process is more common than another, and we simply compare the proportion of HL after 100 items from process A and 1000 items from process B, then the comparison is unfair.' (Zeldes 2012, 64)

Upon first glance, the results in Table 1 indicate important shifts in the productivity of both variants of the fake reflexive resultative construction. If we compare the results for the first decade (1900–1909) to the last decade (1980–1989), we see that both the type frequency (V) of the literal fake reflexive resultative and the hapax-token ratio (P) have more or less doubled over the 80 year period. In the bottom half of the table, the opposite evolution is observed: the type frequency of the intensifying fake reflexive resultative construction goes from 23 to 10 types and the hapax-token ratio drops from 0.14 to a mere 0.04. However, on a closer look, the results tell a different story. With the exception of the first decade, the overall picture that emerges for the literal use is one of relative stability: from the 1910s onwards, both the realized productivity (V) and the potential productivity (P) show only slight fluctuations over the course of the 20th Century. Given the semantics of the literal fake reflexive resultative construction, this is not really surprising: there is no reason to expect an expansion or contraction of the range of verbs that can be used to denote verbal activities literally leading to the subject referent's death. A detailed analysis of the bottom half of Table 1, however, confirms our first impression of a decline in productivity of the intensifying use. Whereas the results in the first half of the 20th Century are comparable to those of the literal use, the degree of productivity of intensifying *dood* appears to be much lower from the 1950s onwards. There is a lasting decrease of the number of types that are intensified with *dood* and, due to a lower number of hapax legomena, the hapax-token ratio also decreases over time. We will return to this point shortly.

This brings us to the third measure, called global productivity. An effective way to visualize differences in productivity of the same construction at different time intervals is by way of the global productivity graph, in which the potential productivity (P) and the realized productivity or extent of use (V) work together to give a multifaceted view on productivity. Baayen and Lieber (1991, 818) define global productivity as follows:

> The global productivity P* of a word-formation rule (or of a construction [EG&TC]) can be summarized in terms of its coordinates in the P-V plane, with the degree of productivity on the horizontal axis and the extent of use V on the vertical axis.

In general, the globally more productive construction will be situated at the top right of the graph and the globally less productive construction will be situated at the bottom left. Figures 4 and 5 below display the shifts in global productivity (P,V) of the literal and the intensifying fake reflexive resultative constructions in the 20th Century. The P-coordinates correspond to the 'Hapax/token' rows in Table 1 , the V coordinates are found in the 'Types' rows.
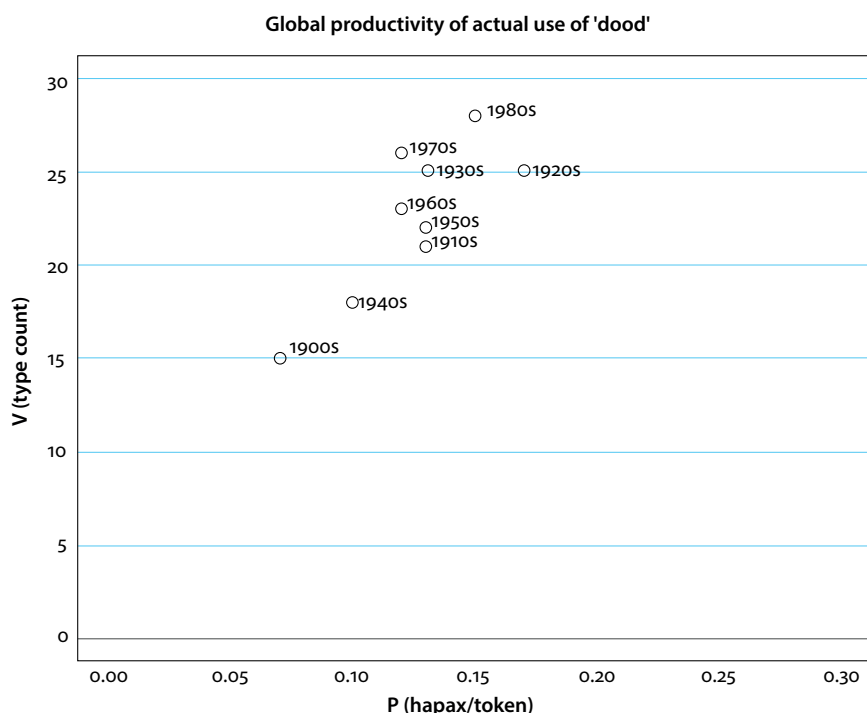
Global productivity of actual use of 'dood'

Figure 4. The global productivity P*(P, V) of the literal use of *dood* in the fake reflexive resultative construction in the 20th Century

Figure 4 visually corroborates the impression that there are no striking shifts in (global) productivity of the literal fake reflexive resultative construction: most decades are situated at the centre top of the graph. The 1900s – and to some extent, the 1940s – appear to deviate from the other decades, but based on the current dataset it is unclear whether these outliers are really meaningful or not. It needs to be kept in mind that these results are based on relatively small samples of 100 tokens and will need to be checked against larger sets of data in future research. In any event, for now, the positioning of the nine decades in the graph is not indicative of a progressive diachronic trend.

The visual representation proves especially useful for capturing trends in the global productivity of the intensifying fake reflexive resultative construction. In Figure 5, a clear contrast emerges between the first and the latter half of the 20th Century. Whereas the decades before 1950 are situated more to the top right, the decades after 1950 are clustered together in the bottom left of the construction, suggesting a rather sudden decline in (global) productivity around the middle of the 20th Century.
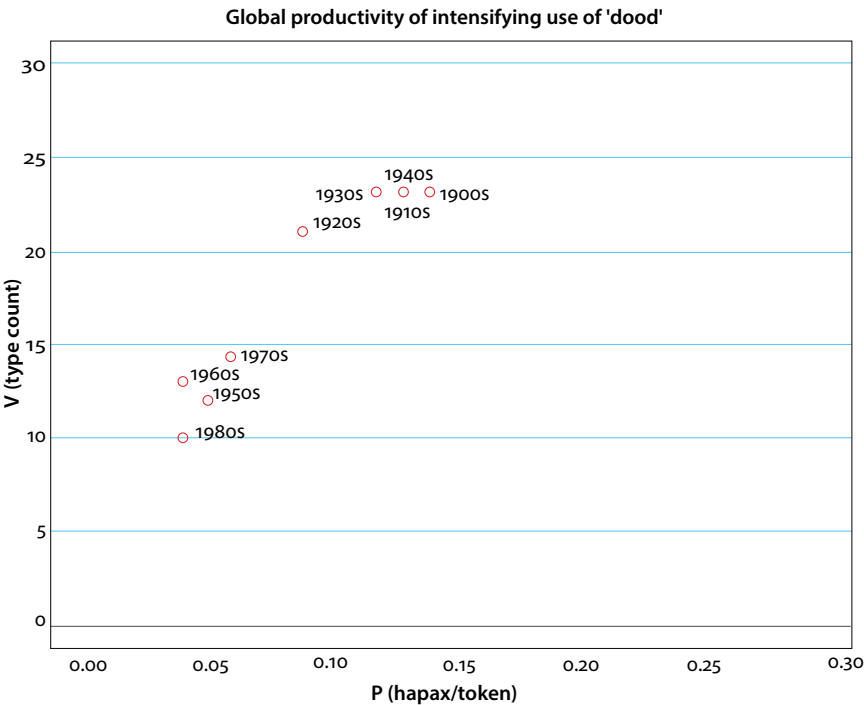
Figure 5. The global productivity P*(P, V) of the intensifying use of *dood* in the fake reflexive resultative construction in the 20th Century

In short, while the relative frequency of the intensifying use as compared to the literal use shows a progressive increase over the investigated period, as we have seen in Section 5.1, it turns out that the (global) productivity of the pattern has not followed suit – contrary to what could be expected on the intuitively appealing assumption that seems to underlie a lot of work in Diachronic Construction Grammar, that, generally, once they have become established, partially schematic constructions are extended to new types (see e.g. Traugott & Trousdale 2013, 27,113).

It is not unlikely that the attested decrease in productivity of intensifying *dood* is related to the constant lexical renewal in the domain of intensification that was referred to in Section 2. Whereas, judging from its relatively low frequency at the time, as well as from metalinguistic comments of the kind illustrated in (16) and (17), intensifying *dood* may well have still had a ring of unconventionality to it in the first decades of the 20th Century, it now faces fierce competition of a myriad of other elements that can act as an intensifier. That is, although *dood* is still used in present day Dutch, language users may increasingly feel the need to replace it with a newer, more expressive intensifier. Related to this is the attested

decrease of the collocational range of intensifying *dood* (see Section 5.2.1). In her study on the grammaticalization of the Middle English intensifier *swithe* 'quickly, very', Méndez-Naya (2003) observes that waning intensifiers tend to occur with a smaller set of lexemes, retreating to particular collocations. In other words, while *dood* may still be the 'default' intensifier for high-frequency verbs like *schrikken* 'to startle', *zich vervelen* 'to be bored', *zich ergeren* 'to be annoyed' or *zich schamen* 'to be embarrassed', it might be losing the race to more novel intensifiers in many other combinations. Future research will have to address the productivity development of other intensifiers in a larger dataset, in order to elucidate the dynamics potentially caused by such "fevered competition", to put it in Bolinger's (1972, 18) terms.

Before moving on to a summary of the most important results of our case study, we want to conclude this section by pointing out that Baayen's frequency-based measures are not the only viable approach to productivity. Future research will explore how different corpus-based measures of productivity can shed more light on semantic and/or pragmatic change in the fake reflexive resultative construction.

6.   Conclusion and discussion

An issue that has so far remained largely unaddressed in the large body of literature on the resultative construction and its subtypes, is that some instances of the fake reflexive resultative pattern encode an intensifying meaning rather than denote a situation actually leading to the result encoded by the resultative phrase. The present paper was concerned with the expansion of this intensifying construction, both in terms of internal development and in relation to the literal-resultative variant of the construction. We focused on a very specific lexical subpattern, viz. third-person resultatives with *dood* 'dead', and explored the question to what extent the observed diachronic shifts in the use of this pattern align with previous accounts of constructional expansion.

A general comparison of the relative frequencies of literal and intensifying "zich dood" instances in a corpus of 19th and 20th Century newspaper language shows a gradual rise of the intensifying use. Throughout the 19th Century, *dood* was predominantly used to express an actual result of the activity denoted by the verb. In the early 20th Century, the use of *dood* as an intensifier really comes to the fore and rapidly becomes the most frequent. This evolution runs roughly parallel to the expansion of the degree modifier use of English *to death*, as attested by Margerie (2011), although the latter is less advanced. Needless to say, the cross-linguistically attested use of the conceptual domain of death in intensifying expressions is a topic that deserves further investigation.

This interesting shift in relative frequency was further explored in an in-depth analysis of the range of verb collocations attested in both constructions and of their productivity. In order to determine whether the shifts in relative frequency have influenced the collocational range of both uses of *dood*, we compared the situation at the end of the 19th Century to the late 20th Century. In accordance with the increase in relative frequency of the intensifying subschema [Subj V REFL *dood*], we expected to observe a host-class expansion of the intensifier *dood*. Counter to these expectations, the range of verbs that is found with intensifying *dood* appears to have decreased. In addition, certain verbs have entered into conventionalized collocations, such as *zich dood schrikken* (lit. 'to startle oneself dead'). The adoption of the frequency-based measures developed by Baayen (1990, 1992, 1993, inter alia) provides a way of further elucidating shifts in the productivity of the literal and intensifying uses over the last century. The literal use of *dood* did not undergo any noteworthy changes in terms of productivity, but a very different picture emerges when we look at the development of the intensifying fake reflexive resultative construction. There seems to be a turning point around 1950, from which point onwards the degree of productivity is noticeably lower than it was in the first half of the 20th Century. This shows that a continuing increase in (relative) token frequency need not co-occur with an increase in productivity: the relatively large frequency of intensifying *dood* in the data from the latter half of the 20th Century seems to be to a large extent due to a small number of strong collocations, such as *zich dood schrikken* (lit. 'to startle oneself dead'), *zich dood vervelen* (lit. 'to bore oneself dead'), and *zich dood schamen* (lit. 'to embarrass oneself dead'). Possibly, *dood* has had to compete with other, newer – and hence more expressive – intensifiers that can combine with all kinds of other verbs, though this hypothesis will need to be tested against a diachronic dataset including a large set of intensifying constructions.

The results from the present study will serve as a point of comparison when the diachronic development of other intensifiers is investigated in future research. It will be interesting to see whether other intensifying elements presently attested in the fake reflexive resultative construction have undergone similar changes or whether they are moving along different pathways. Given that the constructional network is a dynamic system in which inheritance links are being reconfigured as new subschemas emerge or fall out of use, it is not unlikely that the observed changes with regard to [Subj V REFL *dood*] are part of a wider reorganization of the network's architecture. In other words, if the general construction expands and attracts new intensifiers, this might well affect the position of existing subschemas and micro-constructions within the network. Future work will provide insight into such network reconfigurations and, importantly, how we can track such internal shifts in actual data. In that regard, we align ourselves with a rather

recent research area in Diachronic Construction Grammar that is not primarily concerned with the emergence of new constructions (i.e. constructionalization, in terms of Traugott & Trousdale 2013), but with the way in which constructions continue to undergo changes after they have become established.

Sources

Delpher = The online database of digitized Dutch newspapers from 1618–1995. Available at www.delpher.nl/kranten

SoNaR = 500 million word Dutch reference corpus; see <http://opensonar.inl.nl> and Oostdijk et al. (2013)

Van Dale = Boon, Ton den, and Dirk Geeraerts. 2005. *Van Dale: Groot Woordenboek der Nederlandse Taal: 3 Dl.* (14e dr.). Utrecht: Van Dale Lexicografie.

WNT = Online version of *Woordenboek der Nederlandsche Taal*, made available at http://wnt. inl.nl by the Institute for Dutch Lexicology. Most recent version: 10th December 2015

References

Aronoff, Mark. 1976. *Word Formation in Generative Grammar*. Cambridge, MA: MIT Press.

Baayen, Harald R. 1990. "Corpusgebaseerd onderzoek naar morfologische produktiviteit [Corpus-based research into morphological productivity]." *Spektator* 19: 213–233.

Baayen, Harald R. 1992. "Quantitative Aspects of Morphological Productivity." In *Yearbook of Morphology 1991*, ed. by Geert Booij, and Jaap van Marle, 109–149. Dordrecht: Kluwer Academic Publishers. doi:10.1007/978-94-011-2516-1_8

Baayen, Harald R. 1993. "On Frequency, Transparency and Productivity." In *Yearbook of Morphology 1992*, ed. by Geert Booij, and Jaap van Marle, 181–208. Dordrecht: Kluwer Academic Publishers. doi:10.1007/978-94-017-3710-4_7

Baayen, Harald R. 2009. "Corpus Linguistics in Morphology: Morphological Productivity." In *Corpus Linguistics. An International Handbook.*, ed. by Anke Lüdeling, and Merja Kytö, 900–919. Berlin: Mouton De Gruyter. doi:10.1515/9783110213881.2.899

Baayen, Harald R., and Rochelle Lieber. 1991. "Productivity and English Derivation: A Corpus-based Study." *Linguistics* 29 (5): 801–844. doi:10.1515/ling.1991.29.5.801

Barðdal, Jóhanna, and Spike Gildea. 2015. "Diachronic Construction Grammar: Epistemological Context, Basic Assumptions and Historical Implications." In *Diachronic Construction Grammar*, ed. by Jóhanna Barðdal, Elena Smirnova, Lotte Sommerer, and Spike Gildea, 1–49. Amsterdam & Philadelphia: John Benjamins. doi:10.1075/cal.18.01bar

Barðdal, Jóhanna, Kristian Emil Kristoffersen, and Andreas Sveen. 2011. "West Scandinavian Ditransitives as a Family of Constructions: With a Special Attention to the Norwegian V-REFL-NP Construction." *Linguistics* 49 (1): 53–104. doi:10.1515/ling.2011.002

Barðdal, Jóhanna. 2008. *Productivity Evidence from Case and Argument Structure in Icelandic*. Amsterdam & Philadelphia: John Benjamins. doi:10.1075/cal.8

Boas, Hans C. 2003. *A Constructional Approach to Resultatives*. Stanford, CA: CSLI Publications.

Bolinger, Dwight L. 1972. *Degree words*. Den Haag: Mouton. doi:10.1515/9783110877786

Booij, Geert. 1977. *Dutch Morphology. A Study of Word Formation in Generative Grammar*. Dordrecht: Foris.

Broekhuis, Hans, Norbert Corver, and Riet Vos. 2015. *Syntax of Dutch. Verbs and Verb Phrases Vol 1*. Amsterdam: Amsterdam University Press.

Bybee, Joan. 1985. *Morphology: A Study of the Relation between Meaning and Form*. Amsterdam & Philadelphia: John Benjamins. doi:10.1075/tsl.9

Bybee, Joan. 1988. "Morphology as Lexical Organization." In *Theoretical Morphology: Approaches in Modern Linguistics*, ed. by Michael Hammond, and Michael Noonan, 119–141. London: Academic Press.

Cappelle, Bert. 2014. "Conventional Combinations in Pockets of Productivity: English Resultatives and Dutch Ditransitives Expressing Excess." In *Extending the Scope of Construction Grammar*, ed. by Ronny Boogaart, Timothy Colleman, and Gijsbert Rutten, 251–282. Berlin: Mouton De Gruyter.

Colleman, Timothy, and Bernard De Clerck. 2011. "Constructional Semantics on the Move: On Semantic Specialization in the English Double Object Construction." *Cognitive Linguistics* 22: 183–209. doi:10.1515/cogl.2011.008

Colleman, Timothy. 2015. "Constructionalization and Post-constructionalization: The Constructional Semantics of the Dutch *krijgen*-passive from a Diachronic Perspective." In *Diachronic Construction Grammar*, ed. by Jóhanna Barðdal, Elena Smirnova, Lotte Sommerer, and Spike Gildea, 213–255. Amsterdam & Philadelphia: John Benjamins. doi:10.1075/cal.18.07col

Croft, William. 2003. "Lexical rules vs. constructions: A False Dichotomy." In *Motivation in Language: Studies in honor of Günter Radden*, ed. by Hubert Cuyckens, Thomas Berg, René Dirven, and Klaus-Uwe Panther, 49–68. Amsterdam & Philadelphia: John Benjamins. doi:10.1075/cilt.243.07cro

De Clerck, Bernard, and Timothy Colleman. 2013. "From Noun to Intensifier: *massa* and *massa's* in Flemish Varieties of Dutch." *Language Sciences* 36: 147–160. doi:10.1016/j.langsci.2012.04.005

Diewald, Gabriele. 2002. "A Model for Relevant Types of Contexts in Grammaticalization." In *New Reflections on Grammaticalization*, ed. by Ilse Wischer and Gabriele Diewald, 103–120. Amsterdam & Philadelphia: John Benjamins. doi:10.1075/tsl.49.09die

Espinal, Teresa M., and Jaume Mateu. 2010. "On Classes of Idioms and Their Interpretation." *Journal of Pragmatics* 42 (5): 1397–1411. doi:10.1016/j.pragma.2009.09.016

Everaert, Martin, and Alexis Dimitriadis. 2013. *On Reflexive Resultatives*. Lecture given at the Workshop Secondary Predication in Formal Frameworks at Utrecht University on 27 May 2013.

Goldberg, Adele E. 1995. *Constructions: A Construction Grammar Approach to Argument Structure*. Chicago: University of Chicago Press.

Goldberg, Adele E. 2013. "Constructionist Approaches." In *The Oxford Handbook of Construction Grammar*, ed. by Thomas Hoffmann, and Graeme Trousdale, 15–31. Oxford: Oxford University Press.

Goldberg, Adele E., and Ray Jackendoff. 2004. "The English Resultative as a Family of Constructions." *Language* 80 (3): 532–568. doi:10.1353/lan.2004.0129

Goodman, Leo A., and William H. Kruskal. 1954. "Measure of Association for Cross Classifications." *Journal of the American Statistical Association* 49 (268): 732–764.

Gould, Madelyn S. 2001. "Suicide and the Media." *Annals of the New York Academy of Sciences* 932 (1): 200–224. doi:10.1111/j.1749-6632.2001.tb05807.x

Gyselinck, Emmeline, and Timothy Colleman. In press. "*Je dood vervelen* of *je te pletter amuseren*? Het intensiverende gebruik van de pseudo-reflexieve resultatiefconstructie in hedendaags Belgisch en Nederlands Nederlands [*Je dood vervelen* or *je te pletter amuseren*? The intensifying use of the pseudo-reflexive resultative construction in present-day Belgian and Netherlandic Dutch]." *Handelingen van de Koninklijke Zuid-Nederlandse Maatschappij voor Taal- en Letterkunde en Geschiedenis* LXX.

Heine, Bernd. 2002. "On the Role of Context in Grammaticalization." In *New Reflections on Grammaticalization*, ed. by Ilse Wischer and Gabriele Diewald, 83–101. Amsterdam & Philadelphia: John Benjamins. doi:10.1075/tsl.49.08hei

Hilpert, Martin. 2013. *Constructional Change in English : Developments in Allomorphy, Word Formation, and Syntax*. Cambridge: Cambridge University Press. doi:10.1017/CBO9781139004206

Himmelmann, Nikolaus. 2004. "Lexicalization and Grammaticization: Opposite or Orthogonal?" In *What Makes Grammaticalization – A Look from Its Fringes and Its Components*, ed. by Walter Bisang, Nikolaus Himmelmann, and Björn Wiener, 19–40. Berlin: Mouton De Gruyter.

Hiramatsu, Keijiro. 2003. "Fake Reflexive Objects and Run Verbs." *Osaka University Papers in English Linguistics* 8: 1–21.

Hoeksema, Jack. 2012. "Elative Compounds in Dutch: Properties and Developments." In *Intensivierungskonzepte bei Adjektiven und Adverbien im Sprachvergleich* [*Cross-linguistic comparison of intensified adjectives and adverbs*], ed. by Guido Oebel, 97–142. Hamburg: Verlag dr. Kovač.

Huang, James. 2006. "Resultatives and Unaccusatives: a Parametric View." *Bulletin of the Chinese Linguistic Society of Japan* 2006: 1–43. doi:10.7131/chuugokugogaku.2006.1

Iwata, Seizi. 2006. "Argument Resultatives and Adjunct Resultatives in a Lexical Constructional Account: The Case of Resultatives with Adjectival Result Phrases." *Language Sciences* 28 (5): 449–496. doi:10.1016/j.langsci.2005.04.001

Jackendoff, Ray. 1997. "Twisting the Night Away." *Language* 73: 534–559. doi:10.2307/415883

Kiss, Katalin É. 2006. "The Function and the Syntax of the Verbal Particle." In *Event Structure and the Left Periphery – Studies on Hungarian*, ed. by Katalin É. Kiss, 17–55. Dordrecht: Springer. doi:10.1007/978-1-4020-4755-8_2

Kudo, Shun. 2011. "A Comparative Study between Resultative Constructions and Body Part *Off* Constructions." *Tsubaka English Studies* 29: 169–185.

Lorenz, Gunter. 2002. "*Really Worthwhile* or *Not Really Significant*? A Corpus-based Approach to Delexicalization and Grammaticalization of Intensifiers in Modern English." In *New Reflections on Grammaticalization*, ed. by Ilse Wischer, and Gabriele Diewald, 143–161. Amsterdam & Philadelphia: John Benjamins. doi:10.1075/tsl.49.11lor

Luzondo-Oyon, Alba. 2014. "Constraining Factors on the Family of Resultative Constructions." *Review of Cognitive Linguistics* 12: 30–63. doi:10.1075/rcl.12.1.02luz

Margerie, Hélène. 2011. "Grammaticalising Constructions: *To Death* as a Peripheral Degree Modifier." *Folia Linguistica Historica* 32 (1): 115–147.

Méndez-Naya, Belén. 2003. "On Intensifiers and Grammaticalization: The Case of *swithe*." *English Studies* 84 (4): 372–391. doi:10.1076/enst.84.4.372.17388

Müller, Stefan. 2006. "Phrasal or Lexical Constructions?" *Language* 82 (4): 850–883. doi:10.1353/lan.2006.0213

Napoli, Donna J., and Jack Hoeksema. 2009. "The Grammatical Versatility of Taboo Terms." *Studies in Language* 33 (3): 612–643. doi:10.1075/sl.33.3.04nap

Oostdijk, Nelleke, Martin Reynaert, Veronique Hoste, and Ineke Schuurman. 2013. "The Construction of a 500 Million Word Reference Corpus of Contemporary Written Dutch." In *Essential Speech and Language Technology for Dutch: Results by the STEVIN-project*, ed. by Peter Spijns, and Jan Odijk. 219–247. Berlin: Springer. doi:10.1007/978-3-642-30910-6_13

Partington, Alan. 1993. "Corpus Evidence of Language Change: The Case of the Intensifier." In *Text and Technology: In Honour of John Sinclair*, ed. by Mona Baker, Gill Francis, and Elena Tognini-Bonelli, 177–192. Amsterdam & Philadelphia: John Benjamins. doi:10.1075/z.64.12par

Phillips, David P. 1974. "The Influence of Suggestion on Suicide: Substantive and Theoretical Implications of the Werther Effect." *American Sociological Review* 39: 340–354. doi:10.2307/2094294

Rappaport Hovav, M., and Beth Levin. 2001. "An Event Structure Account of English Resultatives." *Language* 77: 766–797. doi:10.1353/lan.2001.0221

Sawada, Shigeyasu. 2000. "The Semantics of the 'Body Part *Off*' Construction." *English Linguistics* 17 (2): 361–385. doi:10.9793/elsj1984.17.361

Schultink, Henk. 1961. "Produktiviteit als morfologisch fenomeen [Productivity as a morphological phenomenon]." *Forum der Letteren* 2: 100–125.

Schultink, Henk. 1962. *De morfologische valentie van het ongelede adjectief in Modern Nederlands* [*The morphological valency of the simplex adjective in Modern Dutch*]. Den Haag: Van Goor.

Simpson, Jane. 1983. "Resultatives." In *Papers in Lexical-functional Grammar*, ed. by Lori Levin, Malka Rappaport, and Annie Zaenen, 143–157. Bloomington: Indiana University Linguistics Club.

Stack, Steven. 1996. "The Effect of the Media on Suicide: Evidence From Japan, 1955–1985." *Suicide and Life-Threatening Behavior* 26 (2): 132–142.

Stoffel, Cornelis. 1901. *Intensives and Down-toners: a Study in English Adverbs*. Heidelberg: C. Winter's Universitätsbuchhandlung.

Torrent, Tiago T. 2015. "On the Relation between Inheritance and Change: The Constructional Convergence and the Construction Network Reconfiguration Hypotheses." In *Diachronic Construction Grammar*, ed. by Jóhanna Barðdal, Elena Smirnova, Lotte Sommerer, and Spike Gildea, 173–211. Amsterdam & Philadelphia: John Benjamins. doi:10.1075/cal.18.06tor

Traugott, Elizabeth C., and Graeme Trousdale. 2013. *Constructionalization and Constructional Changes*. Oxford: Oxford University Press. doi:10.1093/acprof:oso/9780199679898.001.0001

Van de Velde, Freek. 2011. "Left-peripheral Expansion of the English NP." *English Language and Linguistics* 15 (2): 387–415. doi:10.1017/S1360674311000086

Van Marle, Jaap. 1985. *On the Paradigmatic Dimension of Morphological Creativity*. Dordrecht: Foris.

Washio, Ryuichi. 1997. "Resultatives, Compositionality and Language Variation." *Journal of East Asian Linguistics* 6: 1–49. doi:10.1023/A:1008257704110

Wechsler, Stephen, and Bokyung Noh. 2001. "Predication and Anaphora: Parallels Between Korean and English Resultatives." *Language Sciences* 23: 391–423. doi:10.1016/S0388-0001(00)00031-0

Zeldes, Amir. 2012. *Productivity in Argument Selection: From Morphology to Syntax*. Berlin: Mouton De Gruyter. doi:10.1515/9783110303919

Zeschel, Arne. 2012. *Incipient Productivity: a Construction-Based Approach to Linguistic Creativity*. Berlin: Mouton De Gruyter. doi:10.1515/9783110274844

Appendices

Appendix A. Verb types in the literal fake reflexive resultative construction

Verb	Token Frequency	Verb	Token Frequency
schieten	843	zich ergeren	3
vechten	367	springen	3
drinken	141	spelen	3
vliegen	90	leven	3
rijden	80	jagen	3
hongeren	76	zondigen	2
werken	56	zich vervelen	2
lopen	49	wenen	2
eten	40	strijden	2
lachen	34	slapen	2
steken	30	schreien	2
schrikken	15	rennen	2
vallen	13	regeren	2
vasten	12	niezen	2
roken	12	huilen	2
bloeden	12	gapen	2
groeien	11	dringen	2
dansen	11	concurreren	2
spuiten	10	bloeien	2
vreten	9	bijten	2
dragen	8	zwermen	1
maken	7	zwemmen	1
hoesten	7	wurgen	1
broeden	7	walsen	1
zuipen	6	waaien	1
spartelen	6	vrijen	1
praten	6	verdienen	1
administreren	6	trekken	1
treuren	5	theoretiseren	1
zwoegen	4	swingen	1
zingen	4	staren	1
worstelen	4	staken	1
vriezen	4	snuiven	1
tobben	4	snoeren	1
slaan	4	snikken	1
martelen	4	sniezen	1
leggen	4	smoren	1
kniezen	4	sjouwen	1

Verb	Token Frequency	Verb	Token Frequency
siegen	1	kopen	1
schoppen	1	knippen	1
schmetteren	1	knallen	1
repeteren	1	janken	1
racen	1	jammeren	1
produceren	1	hollen	1
procederen	1	groeperen	1
prikken	1	fladderen	1
preken	1	filteren	1
ploeteren	1	drukken	1
pirouetteren	1	drogeren	1
persen	1	delen	1
oxyderen	1	consumeren	1
organiseren	1	compromitteren	1
neutraliseren	1	bruisen	1
monsteren	1	branden	1
mijmeren	1	blazen	1
loeien	1	blaffen	1
lieven	1	bederven	1
kwijnen	1	babbelen	1
kreunen	1	Total	2109

Appendix B. Verb types in the intensifying fake reflexive resultative construction

Verb	Token Frequency	Verb	Token Frequency
schrikken	485	zoeken	8
zich ergeren	358	dringen	7
zich schamen	327	rijden	7
zich vervelen	296	tobben	7
lachen	260	drinken	6
werken	232	hongeren	6
kniezen	51	eten	5
zich generen	42	huilen	5
vechten	37	schreien	5
treuren	26	administreren	4
lopen	25	concurreren	4
sjouwen	15	kopen	3
staren	15	piekeren	3
zwoegen	15	praten	3
knokken	9	schreeuwen	3
zweten	9	schrijven	3
ploeteren	8	spelen	3

Verb	Token Frequency	Verb	Token Frequency
staken	3	jagen	1
trappen	3	janken	1
zich sloven	3	klauwen	1
arbeiden	2	klimmen	1
betalen	2	knijpen	1
dansen	2	knoeien	1
denken	2	kwelen	1
draven	2	kwijnen	1
drukken	2	leven	1
gapen	2	luieren	1
kijken	2	malen	1
peinzen	2	marcheren	1
rennen	2	martelen	1
repeteren	2	organiseren	1
suffen	2	overspelen	1
zich amuseren	2	pagaaien	1
zich haasten	2	produceren	1
zuipen	2	roken	1
analyseren	1	sacherienen	1
balen	1	sappelen	1
beminnen	1	sikkeneuren	1
beulen	1	smachten	1
bidden	1	smeren	1
blokken	1	socialiseren	1
breien	1	speculeren	1
chagrineren	1	studeren	1
combineren	1	theoriseren	1
congresseren	1	transpireren	1
controleren	1	turen	1
creëren	1	vermoeien	1
dartelen	1	verschieten	1
déjeuneren	1	verschrikken	1
delireren	1	versjagerineren	1
dienen	1	vliegen	1
druilen	1	vreten	1
etteren	1	wenen	1
experimenteren	1	wroeten	1
fietsen	1	zich ontfermen	1
geeuwen	1	zondigen	1
gieren	1	zuchten	1
gillen	1	zwijgen	1
inspecteren	1	Total	2396

Appendix C. The results of the chi-square goodness-of-fit-test for all overlapping verbs

Verb	Literal use (actual result)	Intensifying use	Goodness-of-fit
dansen 'to dance'	11/13	2/13	$\chi^2 = 4.92, p = 0.03$
drinken 'to drink'	141/147	6/147	$\chi^2 = 122.14, p < 0.001$
eten 'to eat'	40/45	5/45	$\chi^2 = 25.68, p < 0.001$
hongeren 'to starve'	76/82	6/82	$\chi^2 = 58.06, p < 0.001$
kniezen 'to mope'	8/59	51/59	$\chi^2 = 152.06, p < 0.001$
lachen 'to laugh'	34/294	260/294	$\chi^2 = 172.2, p < 0.001$
lopen 'to run'	48/73	25/73	$\chi^2 = 6.64, p = 0.01$
rijden 'to drive'	80/87	7/87	$\chi^2 = 59.58, p < 0.001$
roken 'to smoke'	12/13	1/13	$\chi^2 = 7.7, p = 0.006$
schrikken 'to startle'	15/500	485/500	$\chi^2 = 439.92, p < 0.001$
sjouwen 'to trudge'	1/16	15/16	$\chi^2 = 10.56, p = 0.001$
staren 'to stare'	1/16	15/16	$\chi^2 = 10.56, p = 0.001$
treuren 'to sorrow'	5/31	26/31	$\chi^2 = 12.9, p < 0.001$
vechten 'to fight'	367/404	37/404	$\chi^2 = 267.92, p < 0.001$
vliegen 'to fly'	90/91	1/91	$\chi^2 = 85.1, p < 0.001$
vreten 'to gorge oneself'	9/10	1/10	$\chi^2 = 4.9, p = 0.03$
werken 'to work'	56/288	232/288	$\chi^2 = 106.34, p < 0.001$
zich ergeren 'to be annoyed'	3/361	358/361	$\chi^2 = 347.14, p < 0.001$
zich vervelen 'to be bored'	2/298	296/298	$\chi^2 = 288.08, p < 0.001$
zwoegen 'to labour'	4/19	15/19	$\chi^2 = 5.26, p = 0.02$

Authors' addresses

Emmeline Gyselinck
Ghent University
Faculty of Arts and Philosophy, Department of Linguistics – Dutch section
Blandijnberg 2 (100.053)
9000 Ghent

Emmeline.Gyselinck@UGent.be

Timothy Colleman
Ghent University
Faculty of Arts and Philosophy, Department of Linguistics – Dutch section
Blandijnberg 2 (100.031)
9000 Ghent

Timothy.Colleman@UGent.be