Variation and Change in English Resultative Constructions[1]

ABSTRACT

The system of English resultative constructions is involved in a state of flux characterised by a fierce battle between two of its two most prominent competitors: *way*-constructions as in (1) and reflexive structures as in (2).[2]

(1)   *She worked her **way** to the top.*
(2)   *She worked her**self** to the top.*

While this competition has occasionally been addressed in the literature (cf. Kirchner 1951: 158; Salkoff 1988: 54ff.; Jackendoff 1990: 213), it has never been subjected to a thorough empirical analysis, whether in terms of the quantitative or the qualitative distribution of the two competitors.

The present paper introduces novel findings from two corpus-based diachronic and synchronic studies. They reveal that the long-standing rivalry between both structures has resulted in quantitative changes taking the form of an increased use of the *way*-construction at the expense of reflexive structures. In addition to this quantitative reorganization within the system of English resultatives, the trajectories of change for both variants also exhibit marked and hitherto unobserved qualitative changes: the coexistence of *way*-constructions with semantically overlapping reflexive structures eventually culminated in a reorganization of the system of English resultatives. This reorganization involved a diversification of the functions performed by each variant resulting in a semantically motivated division of labour: The *way*-construction turns out to be particularly successful in conveying concrete meanings, while reflexive structures can still to some extent stand their ground with abstract uses. The present paper takes a functional approach towards explaining the rise of the *way*-construction that allows us to relate its proliferation to grammaticalization theory.

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[2]   The present investigation is restricted to the competition between *way*-constructions and reflexive *self*. Other resultative constructions, such as fake object resultatives (e.g. *Chris drank himself silly*), secondary predications (e.g. *Elmar hammered the nail flat,*) etc. discussed for instance in Simpson (1983), Marantz (1992: 182), Goldberg (1995: 216) and Boas (2002) will not receive special attention in the present article.

1. INTRODUCTION

English resultatives and in particular the *way*-construction have received much attention in the past two decades by those interested in syntactic fusion (cf. Salkoff 1988), construction grammar (cf. Goldberg 1995, 1997), cognitive grammar (Israel 1996), argument structure constraints (cf. Jackendoff 1990, 1992, 1997; Levin and Rappaport 1995; Marantz 1992; Boas 2002), measuring arguments (cf. Tenny 1994;), word-formation and principles of language variation (cf. Rohdenburg 1996; Mondorf 2005). Jackendoff (1990: 223) has even dubbed it a "fairly outrageous mismatch between syntax and semantics", because it appears to violate argument structure constraints and poses intriguing problems as regards its representation in the mental lexicon (cf. Jackendoff 1990: 212, 222). One of the most revealing studies on the proliferation of the *way*-construction has been conducted by Israel (1996). While according to Strang (1970) the *way*-construction became established at the beginning of the 19th century, Israel (1996: 221) is able to show that the construction was already in use at least as far back as the 15th century and that it was well-established by the 17th century. By counting the number of verbs entering the *way*-construction in three different semantic domains he observes that over the centuries it has gradually extended its use to additional semantic domains.

> (...) in early stages the construction was limited to verbs which were somehow directly related to motion or path creation; in later stages, the construction allows verbs which are only marginally or incidentally related to the actual expressed motion. (Israel 1996: 225-226)

This suggests that the *way*-construction became grammaticalized, thereby extending its scope to an increasing number of verbs and verb senses.

Within the system of English resultatives, the fiercest competitor of the *way*-construction is reflexive *self*. As regards the competition between the historically earlier reflexive structure (e.g. *She worked herself to the top*) and the more recent *way*-construction (*She worked her way to the top*), Wendt (1891: 197) observes that the *way*-construction can sometimes take the place of *self*. [3] Apparently diametrically opposed is Salkoff's claim that

> (...) it is not *way* which takes the place of *self*, but rather the opposite: the substitution of *self* for *way* is possible for only a subgroup of verbs in the paradigm. It is therefore *way* that is basic, and not *self*. (Salkoff 1988: 52)

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[3] Note that Wendt (1891: 197) merely states that both constructions are in competition without claiming that one is 'more basic' than the other.

It is not quite clear on what grounds Salkoff (1988) considers the *way*-construction more basic than reflexive *self*. Concerning the diachronic development, the research introduced in the present article reveals that *self* was clearly the earlier form that is presently being ousted by *way*. Moreover, as regards the implication that *self* is more restricted in applying to fewer verbs, the present article will uncover that the distribution of both constructions has been in a state of flux, which is best analysed in terms of principles governing variation and change.

The present paper introduces novel research on the relation between reflexive *self* and its closest competitor, the *way*-construction, on the basis of historical and Present-day English corpus data in order to answer the following questions: Is the variation between both constructions an instance of language change with one construction acquiring new domains formerly covered by the other? Secondly, are all uses of the constructions under investigation equally affected by the reorganization of the system of English resultatives or are we witnessing an emergent division of labour? And thirdly, does the metaphorical extension of semantic domains investigated by various authors (most notably Israel 1996: 227) lend itself to an explanation in terms of grammaticalization theory?

This article is structured as follows: Section 2 provides support for the actual existence of the assumed competition between the *way*-construction and reflexive *self*. In addition it shows how the observable alternation relates to the approach to linguistic variation and change pursued in the present paper. Section 3 introduces the methodological prerequisites and the database. Next, sections 4 and 5 derive the hypotheses and present findings which emanate from the empirical investigation of these hypotheses. While section 4 is concerned with the quantitative distribution of each resultative in comparison to its closest competitor, section 5 addresses the question of whether the data reveal qualitative changes in the form of a semantically conditioned division of labour. Section 6 presents the conclusion, relating the findings to language change, variation and grammaticalization.

2. THE COMPETITION BETWEEN *SELF* AND *WAY*

While the present article is based on the competition between reflexive *self* and the *way*-construction, there are several additional resultative constructions that are at least partly functionally equivalent to the ones selected here. It is therefore readily admitted that the restriction to merely two structures in the area of resultative constructions (i.e. *way*-constructions and reflexive *self*) is a simplification, albeit a methodologically and theoretically justifiable one. The "*way*-construction paradigm" (Salkoff 1988: 54) in which

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both competitors operate consists of at least three additional variants, listed in Salkoff (1988: 54-55).

(3)   Subject   V $\left\{ \begin{array}{l} \text{POSS } way \\ self \\ \text{DET } path/entrance/... \\ it \\ \varnothing \end{array} \right\}$ DIRECTIONAL

(4)   a. Max forced **his way** into the house.
     b. Max married **himself** into big money.
     c. Max bicycled **it** through the country.
     d. Max forced **an entrance** into the house.
     e. Max hiked **Ø** across the U.S. (based on Salkoff 1988: 55)

The occurrences of the DET *path*/*entrance*/... variant and the *it*-variant are extremely scarce and retrieval of the zero-variant proved too time-consuming because of vast amounts of waste entries. This is not to belittle the role of the zero-variant for verbs such as *cut* in the paradigm of resultatives, which might significantly affect the percentages scored by *way* and *self* in the paradigm. Since the primary purpose of the present study, however, is to investigate the relation between *way* and *self*, we will exclusively restrict our attention to these two variants

In order to justifiably analyse *wa*y-constructions and *self*-reflexives as functionally equivalent variants, we first need to establish whether the assumed competition between the two structures actually exists. The alternation between the two functionally overlapping constructions is illustrated in the following 17th century example.

(5)   (...); yet I am not unknown to the African part of the Macrocosme, where my single Sword hath *eaten **its way** through thousands*, and hath afterwards *drank **it self** into a Surfeit*, with the blood of those Hell-dyed Infidels. [Richard Head & Francis Kirkman. *The English Rogue*, Part 2, 1668]

Such an example poses an almost irresistible challenge to the variation linguist. We are faced with variation by one and the same author, within one and the same text, within one and the same sentence – and we are even dealing with semantically related verbs (*eat*, *drink*).

The approach to variation assumed here argues that many grammatical phenomena originally believed to be instances of free variation or of theoretically unrevealing performance constraints turn out to be subject to systematically-constrained variation once researchers undertake in-depth analyses based on sufficiently-sized data and a set of potentially influential determinants of variation. Rather than relegating such variation to performance, linguists have become increasingly aware that

> (...) at least some categorical constraints are simply the limiting cases of more general statistical tendencies" (Wasow and Arnold 2003: 148).

Thus, we can think of categorical choices of *self* or *way* as the endpoints on a scale that is characterized by variation, governed by factors that are yet to be explored. The present article makes a contribution towards this end.

3. METHODOLOGY

The analysis tracing the trajectories of change for *way*-constructions and the corresponding reflexive structures is based on a selection of British English historical prose fiction corpora plus one section from the British National Corpus (written domain 1) which contains imaginative prose and is therefore well-suited for comparison with the historical databases. The earliest corpus data stem from the 15th century, the period from which we have the first attestations of *way*-constructions according to Israel (1996: 221). Note, however, that though the *Early English Prose Fiction* corpus covers the time-span from 1460-1700, the texts are not evenly distributed across the centuries. Only very few texts are from the 15th and 16th centuries. In fact, in this corpus the earliest instances attested for the *way*-construction or reflexive *self* with the verbs investigated here date from 1575 and 1597 respectively. The vast majority of attestations of both variants are found in the late 17th century.

Table 1. British English historical corpora

Corpus	Period	Time-Spans	Mio Words
Early English Prose Fiction	*1460 – 1700	*1460 – 1700	10
Eighteenth Century Fiction (ECF 1)	*1660 – 1699		5
Eighteenth Century Fiction (ECF 2)	*1700 – 1752	*1700 – 1800	5
Nineteenth Century Fiction (NCF 1)	*1728 – 1799		11
Nineteenth Century Fiction (NCF 2)	*1800 – 1869	*1800 – 1900	26
British National Corpus (wridom1)	P1960 – 1993	P1960 – 1993	19
Total			78

*   birth dates, P publication dates[4]

Table 1 shows that a grand total of roughly 78 million tokens form the basis for the present study. In order to trace the diachronic development of the competition between the reflexive structure and its closest competitor, ten verbs have been chosen (*cut, drink, eat, fight, grope,*

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[4]   The *Eighteenth Century Fiction* corpus and the *Nineteenth Century Fiction* corpus have been split into subcorpora in order to provide time periods that start or finish at the turn of a century. Since the emergent subcorpora (ECF 1, ECF 2, NCF 1, NCF 2) were ordered by authors' birth dates rather than publication dates, birth dates have been chosen for locating the historical texts in time. This inconsistency in dating the texts is considered negligible here, since all historical texts are dated by birth dates while only the Present-day English data is based on publication date.

hit, wind, work, worm, wriggle). Given that syntactic variants do not easily lend themselves to analysis in relatively small corpora, the smallest corpora, which are also the earliest, set the mark for selecting which verbs were to be investigated. Only if a verb showed some consistency of occurrence in the earlier data, did it qualify for further study in the later corpora.

The historical data has only been checked for *way-* and *self*-constructions without intervening material in order to retrieve matching contexts. Some *way*-constructions allow inserted material (e.g. *own* in *worked my own way to the top*) which is less readily admitted with the reflexive (e.g. **worked my own self to the top*).

In order to collect all instances of *way*-constructions for the 10 verbs investigated, the *Oxford English Dictionary* was checked for post-16th century spelling variants of Present-day English *way*.[5] Next, all spelling variants were retrieved automatically and all instances that did not match the *way*-construction were manually eliminated from the tally.

In order to ascertain the corresponding forms for the reflexive, the spelling variants for reflexive pronouns were gleaned from the *Oxford English Dictionary*. The resulting search strings designed to allow for the most common variant spellings consisted of: m*sel*, m* sel*, y*sel*/y* sel*, h*sel*/h* sel*, i*sel*/i* sel*, o*sel*/o* sel*, th*sel*/th* sel*[6].

This procedure yielded a total of 1146 occurrences of the ten verbs with the *way*-construction or the reflexive.

4. QUANTITATIVE CHANGES IN THE SYSTEM OF ENGLISH RESULTATIVES

Returning to example (5), which is repeated here for convenience, we have at least four opportunities to interpret the occurrence of the functionally partly overlapping *way*-construction and reflexive *self* used by one author within one and the same sentence.

(5)   (...); yet I am not unknown to the African part of the Macrocosme, where my single Sword hath *eaten **its way** through thousands*, and hath afterwards *drank **it self** into a Surfeit*, with the blood of those Hell-dyed Infidels. [Richard Head & Francis Kirkman. *The English Rogue*, Part 2, 1668]

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5   The search string *why** had to be excluded from the tally, because it rendered too many hits (the *WordSmith* concordance limit being roughly 16000). This omission is justifiable in view of the fact that the vast majority of hits referred to interrogative pronouns or complementizers.

6   This search string also produced older forms of the second person pronoun, such as *thy*, that were later replaced by *you*.

Firstly, we could – somewhat arbitrarily - assume that the verb *eat* licenses *way*-constructions, while *drink* licenses the reflexive. However, the following examples culled from a sketch retrieval in selected corpora attest that at least for Present-day English both verbs can occur with both variants, so that differing profiles for individual lexemes cannot be the whole story:

(6) *drink + way*
     a. (...), Maxwell was still **drinking his way** through the haul. [The Guardian 1994]
     drink + self
     b. So you can **drink yourself** into a stupor? [BNC]
     eat + way
     c. (...) nowadays, we **eat our way** into the fridge. [FLOB]
     eat + self
     d. So he sat there thinking about life and things; what the dog does when it catches its
        tail and about the snake that **ate itself** to death. [BNC]

Secondly, it is theoretically possible that the PP (i.e. *through thousands* vs. *into a Surfeit*) is responsible for the observed variation. But again, very similar PPs also exhibit variation:

(7) a. It will be more to the purpose to tell you how he **worked himself into my good
        graces**. [Wilkie Collins. *The Woman in White*, 1860]
     b. (...) till he had patiently, with long-continuing and deep affection, **worked his way
        into her regard**, (...) [Elizabeth Cleghorn Gaskell. *Sylvia's Lovers*, 1863]

Note that example (b) appears to have a stronger volitional, intentional element. The tendency for intentional actions to be more strongly associated with *way*-constructions than with the reflexive has been discussed in Mondorf (2005).

A third interpretation regards the occurrence of both constructions within a single sentence as an instance of language change.

Finally, there is a fourth possible explanation for the co-occurrence of *way* and *self* in examples such as (5). Rather than locating the motivation for the variation in the individual lexeme (*eat* vs. *drink*), we can look for shared properties of constructions that prefer *way* and contrast them with those that prefer *self*. And indeed, we will see in section 5.2 that a semantic factor (concrete vs. abstract meanings) plays a considerable part in the choice between the two variant constructions. While there is still some degree of overlap between *way* and *self*, we can additionally observe an emergent division of labour throughout the past centuries. But let us first investigate the third explanation in more detail.

4.1 Contrastive Aspects

It has often been observed that certain uses of the reflexive appear to become obsolete in a wide range of environments (cf. e.g. Krüger 1951: 158; Strang 1970: 153 and Siemund 2003:

488). Krüger (1951: 158) mentions the following examples in which the reflexive has become "somewhat unwieldy"

(8) a. (...) they *scramble* themselves into a little education (...)
     b. (...) they *urge* themselves forward (...) (Krüger 1951: 158)

Similarly, Strang (1970: 153) reports an "increasing disuse of reflexives with verbs as *rest, dress, wash, move* (...)". This is indicative of a more general decline of the reflexive in English.

Secondly, contrastive data also suggests that certain uses of the reflexive are recessive structures in English but not in German. While in German reflexive structures of the following type are still fairly common,

(9) a. Er hat **sich** hochgearbeitet.
         'He has worked himself to the top.'

they appear to have a highly productive competitor in the form of the *way*-construction in English:

(10) a. **Worked himself** into a frenzy and gave himself indigestion. [BNC wridom1]
      b. (...) he **worked his way** down the steep bank toward the stream [FROWN]

Kirchner (1951: 158) believes that there has been a gradual development of the verbs s*houlder, work, worm* and *wriggle* from being used with reflexives to occurring in *way*-constructions. It would hardly be surprising if this tendency went hand in hand with the high productivity of the *way*-construction reported in Mondorf (2006). We can thus hypothesize that the *way*-construction is replacing reflexive *self*.

4.2 The Diachronic Development of the Competition between the *Way*-Construction and Reflexive *Self*

In order to empirically test the hypothesis that the *way*-construction is supplanting reflexive *self* in the resultative use (described in section 2), all occurrences of the ten verbs selected (cf. section 3) have been ascertained in four historically stratified corpora. The results for the aggregate of all ten verbs investigated are presented in Figure 1.

Figure 1. Diachronic Development of the Competition between *Way* vs. *Self* (N = 1146)
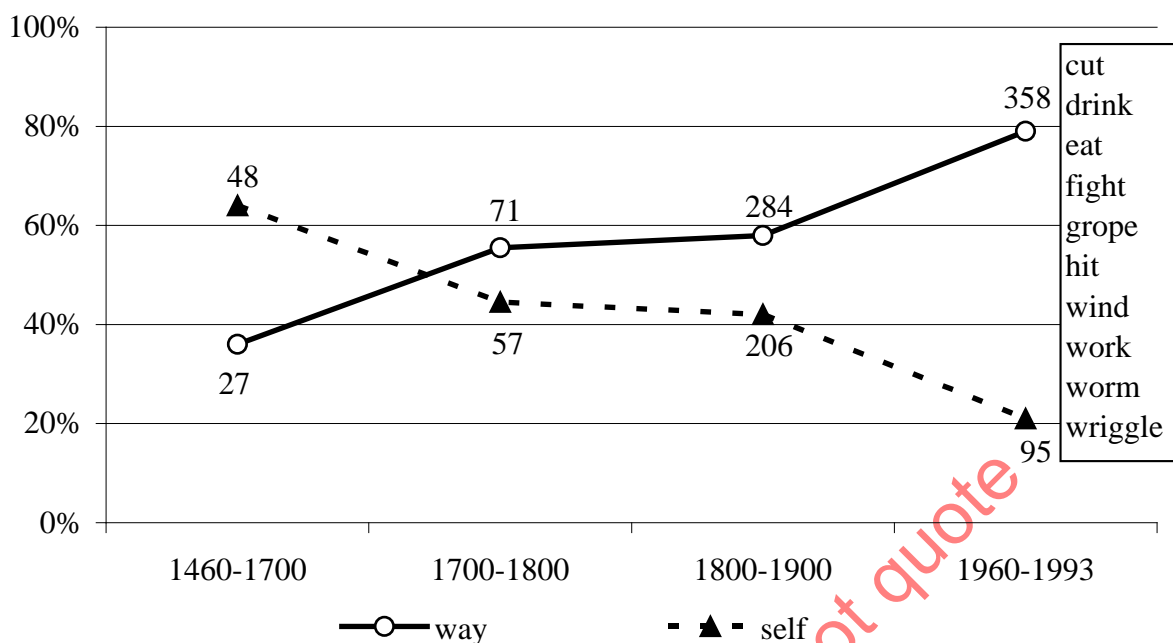

The vertical axis depicts the percentage of each variant's occurrence with the ten verbs listed on the right. The horizontal axis provides the four time-spans investigated. Each curve is additionally labelled with the absolute figures in order to be able to assess if the sample is large enough to permit the deduction of meaningful claims. Thus, the figure can be interpreted as follows:

In the earliest time period investigated the reflexive (e.g. *She worked her**self** to the top*) is used in 64% of all instances. This corresponds to 48 occurrences of *self* with all ten verbs. Since both constructions always add up to 100%, this leaves 36% (27 occurrences) for the *way*-construction. Up to the 17th century, the *self*-variant is the majority form. This pattern is reversed in the 18th century, with the *way*-construction (e.g. *She worked her **way** to the top*) overtaking the reflexive. From then on, the *way*-construction is continually on the increase, a development culminating in an 80% usage of *way* in the Present-day English data. Conversely, the reflexive has largely been ousted by its more recent competitor. With 95 as opposed to 358 instances for *way* it accounts for a mere 20%.

These figures strongly suggest that the *way*-construction has largely supplanted its closest competitor throughout the past five centuries. Theoretically, however, there is the possibility that the aggregate figures for all ten verbs could be brought about by an overrepresentation of one extremely frequent verb while nine other verbs show exactly contrary developments. In order to avoid such skewing effects, we also need to look at the individual verbs.

Figure 2 presents the trajectories of change of both variant constructions for the verb *wind*, i.e. *wind one's way* vs. *wind oneself*. Here the quantitative effect is even more pronounced than for the aggregate of all ten verbs shown in Figure 1.

Figure 2. Diachronic Development of the Competition between *Wind One's Way* vs. *Wind Oneself* (N = 144)
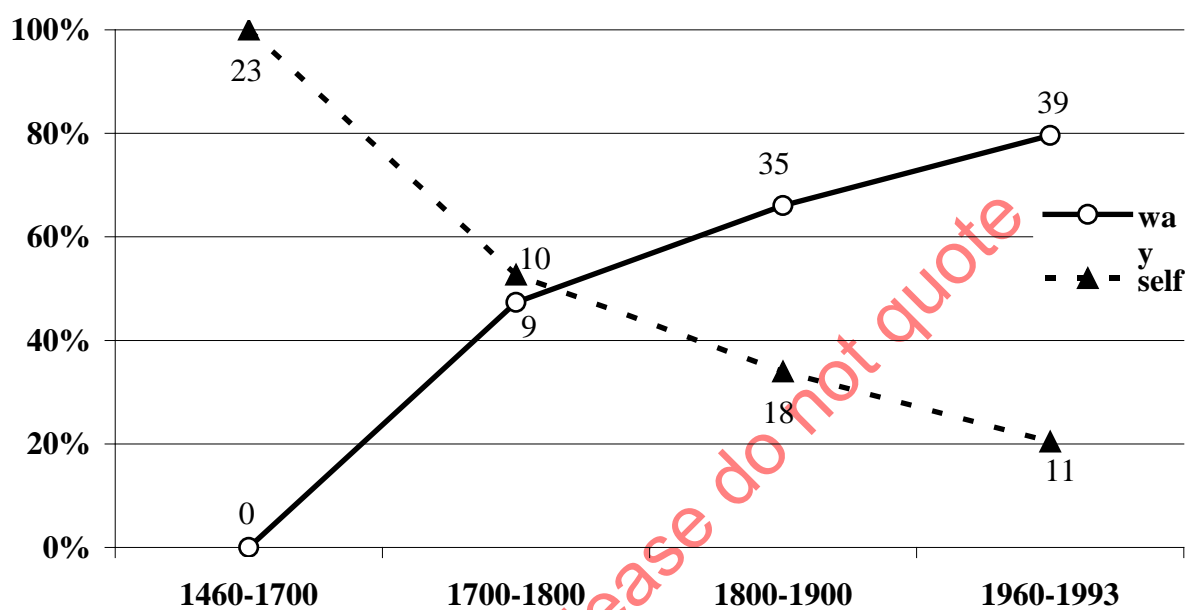
At the starting-point of both curves, the *way*-construction is not used at all in the data, though at only 23 instances for the first time-period we can hardly claim that *way* was not yet an option. A crossover is again observable in the 18th century, when the *way*-construction has almost caught up with the reflexive. A steady rise in the use of *wind one's way* at the expense of *wind oneself* then leads to an 80% usage of the *way*-construction in the Present-day English data.

The second verb to be investigated in more detail is the verb *work*, whose trajectory of change is particularly interesting.

Figure 3. Diachronic Development of the Competition between *Work One's Way* vs. *Work Oneself* (N = 463)
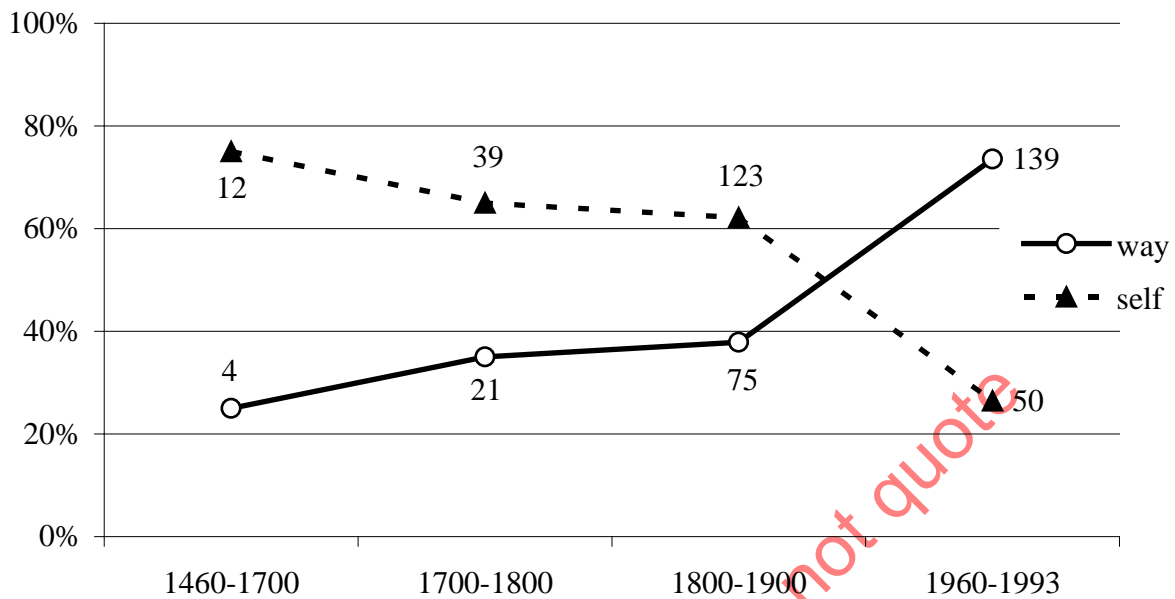
Both the starting point and the endpoint of the replacement of *self* by *way* extend over the time-span observed here. This is indicative of the long stretch of fierce competition between both constructions. What is more, the crossover occurs somewhat later than for e.g. *wind* or the aggregate of all ten verbs, which shows that for *work* the alternation of both structures is still easily perceivable. Thus, it is not accidental that examples that jump to mind if we look for sentence pairs illustrating the variation between *way* and *self* often involve the verb *work* (*She worked her way to the top* vs. *She worked herself to the top*). In Present-day English the *way*-construction has again almost reached the 80% level and is clearly the majority form today.

An interesting case that requires explanation is the pattern for the verb *grope*. This verb exclusively takes *way*-constructions in my data (cf. Figure 4). Note, however, that a sketch retrieval in a 1 billion word megacorpus[7] yields 4 occurrences of *grope* with the reflexive.

(11) a. "She's only complaining," said Mr Haider, "because she is upset she was not groped herself." [*The Guardian* 1993]
   b. Keith Moon shoots up and Mick Jagger gropes himself in banned sleazy video! [*The Guardian* 1998]
   c. (...) as he turned a political message into a sexual exhortation, or groping himself as two topless women danced next to him, (...) [*Los Angeles Times* 1992]
   d. If the various characters aren't groping themselves or one another, they are vomiting and urinating (...). [*Los Angeles Times* 1996]

This shows that *grope* does occur with reflexive *self* but is too rare to be found in the comparatively small databases available for the diachronic analysis.

Figure 4. Diachronic Development of the Competition between *Grope One's Way* vs. *Grope Oneself* (N = 143)
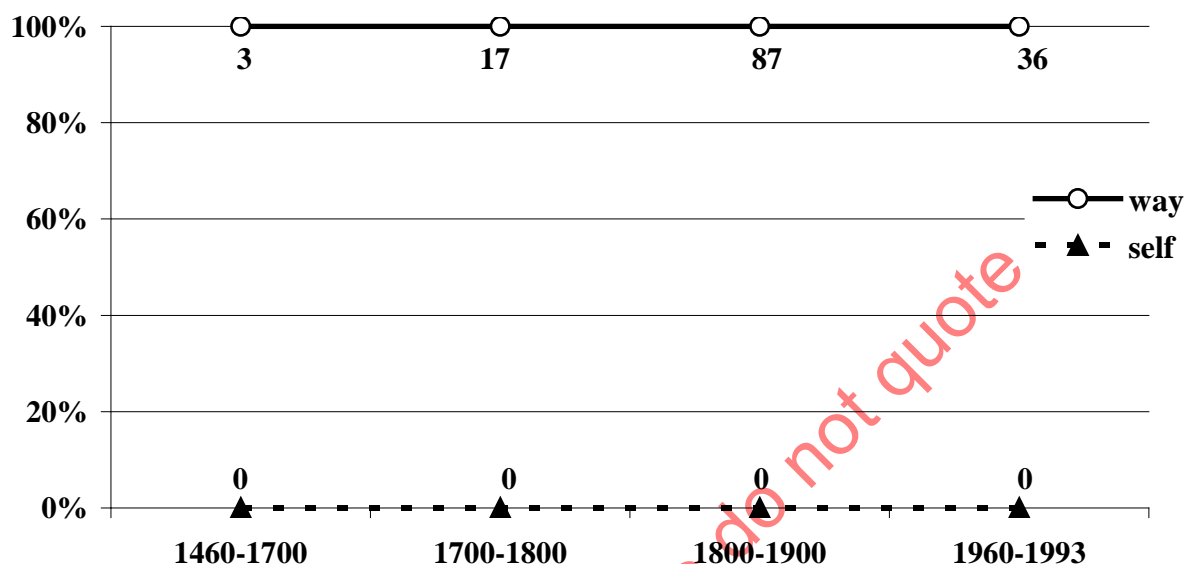
Given the fact that *grope oneself* is so rare that it does not show up in the corpora selected for the diachronic analysis, this verb at first sight appears unrevealing for the development of the competition between the two variant constructions. We will, however, see in section 5.2 that this distribution results from semantic factors that systematically constrain the choice between the two variants. The remaining verbs were too scarce in some of the time periods analysed to merit a more detailed discussion.

It has become obvious that there are marked and systematic quantitative differences in the use of *way*-constructions and reflexives. The historically earlier reflexive forms are increasingly being ousted by the newcomer to the paradigm.

The observed development can also be related to typological issues concerning the synthetic-analytic cycle. While it is generally assumed that English develops from more synthetic to more analytic structures, Siemund (2004: 193) lists reflexive pronouns, such as *herself, himself*, etc. as an exception. He emphasizes that these reflexives are the result of synthesization via coalescence and univerbation of e.g. *him + self* (cf. also van Gelderen 1999). Thus, he classes reflexives as one of the rare instances where the English language moves from analytic to synthetic, rather than the reverse.[8] However, if we look at the rise of

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[8] The often alleged trend from synthetic to analytic cannot be confirmed for English comparatives either (e.g. *prouder* vs. *more proud*). In fact, the historical development is characterized by a division of labour with the

the *way*-construction, this synthesization appears to be a short-lived phenomenon: As we have seen, at least one particular set of resultative reflexives are being ousted by the *way*-construction. Thus, while the univerbation of pronoun + *self* has first produced a more synthetic structure, it is already being replaced by a more analytic structure again, i.e. the *way*-construction.

5. QUALITATIVE CHANGES IN THE SYSTEM OF ENGLISH RESULTATIVES

In addition to the gradual ousting of reflexive *self* by the *way*-construction, we can also observe marked qualitative preferences in the distribution of *way* and *self* over time. This qualitative change is best described in terms of an emergent division of labour between both resultative constructions. Concrete uses are a marked domain of the *way*-construction, while abstract uses are more closely associated with the reflexive. This functional specialization and the successive replacement of *self* by *way* is argued to be brought about by a grammaticalization process affecting the *way*-construction.

5.1 The *Way*-Construction as an Instance of Grammaticalization

A better understanding of the *way*-construction can be achieved by taking a prototype approach. Diachronically, we find that the *way*-construction evolved from instances, in which the noun *way* is used in its primary or concrete sense (cf. Israel 1996: 227). In this prototypical use *way* referred to a tangible and visible stretch of grass, mud, gravel etc. that was easily accessible to the senses. The lexeme *way* then extended its application to denoting less prototypical secondary or abstract meanings. These are less immediately accessible to the senses. Now people could *snore their way through meetings* or *eat their way through the fridge*. The meaning of *way* has been transferred from a concrete to an abstract domain by analogical extension. The relation of the development of the *way*-construction to grammaticalization phenomena is fairly straightforward: Changes tend to be initiated in local contexts (cf. Hopper/Traugott 1993: 2) and expand to new contexts, in this case to other verbs (cf. also Kirchner 1951: 154-156 and Israel 1996: 227).

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analytic variant specializing in cognitively complex environments (e.g. syntactically complex environments characterized by the presence of argument complexity, morphologically complex adjectives or lexically complex adjectives that are less entrenched or infrequent). By contrast the synthetic variant is increasingly being used with highly frequent adjectives and short adjectives. For a detailed discussion of processing explanations for the variation between synthetic and analytic comparative forms see Mondorf (2004).

The present section discusses three aspects that point towards an analysis of the *way*-construction in terms of grammaticalization theory: the lack of number opposition, semantic bleaching of the noun *way* and a transition from concrete to abstract meanings.

5.1.1 Lack of Number Marking

One of the typical features of grammaticalization (or lexicalization) that might apply to the *way*-construction is the loss of number marking. Such a development has, for instance, been reported for the *take someone prisoner* construction.

(12) They took them **prisoner**.
      ?They took them **prisoners**. (Berlage 2006)

For this construction number opposition has been on the decline since the late 19th and early 20th centuries and it is rarely found in Present-day English (cf. Berlage 2006).

We know that Present-day English *way-constructions* do not allow the plural form. Not a single instance was found in the 20th century data investigated in this article:

(13) a. (...) nowadays, we **eat our way** into the fridge. [FLOB]
      b. *nowadays, we **eat our ways** into the fridge.

However, when we apply this criterion to the *way*-construction, we find that there is no straightforward way of showing that *way*-constructions had plural marking in the first place. Though earlier examples – at first glance – suggest that plural marking was originally used with *way*,

(14) (...) and laide them together as they found them, and went their **waies** merrily to the Rope-makers house, (...) [Thomas Dekker. *The Ravevens Almanacke*, 1609]

this argument is considerably weakened by two factors: First, the -*s* morpheme need not be a plural marker but might instead serve as singular genitive inflection. The OED (entry: *ways* 23 b.) mentions that in "(...) the later period a loose use of the plural may have coalesced with the use of the advb. [adverbial] genitive", so that *ways* can be used as genitive singular parallel to German (*Er ging seines Weges*). This would explain why the singular subject in the following example is also accompanied by the -*s* inflection.

(15) Thus Margaret in a melancholy humor went her **waies**, and in short time after she forsooke Westminster, & attended on the Kings army to Bullin, (...). [Thomas Deloney. *The Gentle Craft*, 1639]

Secondly, the plural was not as consistently marked in earlier stages of English as it is today. As it thus remains unclear if *way*-constructions used to have plural marking, we can merely attest a lack – but not a loss – of plural marking with *way*-constructions. We therefore move

on to other, more reliable criteria favouring an analysis of the *way*-construction in terms of grammaticalization.

5.1.2   Semantic Bleaching of *Way*

In the earliest uses of *way*-constructions the noun *way* still encoded a highly concrete notion of *way*, i.e. a path that is a tangible and visible stretch of matter (e.g. grass, mud, gravel, etc.) that you could tread on and that was either created or generally used in order to move from one location to another. According to Israel (1996: 221), the verbs used with early *way*-constructions were often high-frequency motion verbs, such as *go, ride, run*, etc.

(16)   I (...) only replied, I shall, if it please your Worship, and so left him, and **went my ways to the next Alehouse**, (...). [Richard Head & Francis Kirkman. *The English Rogue*, Part 2, 1668]

By contrast, in more recent *way*-constructions *way* has assumed new meanings. This functional extension goes hand in hand with a bleaching of the original meaning of *way*.

(17)   a. (...), while I **snored my way** into a hangover. [LOB]
      b. (...): he can't, on current performance, **organise his way** out of a bag of popcorn. [The Guardian 1994]
      c. (…), Seles became the youngest top-ranked tennis pro in history and **grunted her way** to seven of the first 13 Grand Slam events she entered. [The Guardian 1994]

The noun *way* in example (17a) no longer refers to a tangible or visible stretch of matter but is instead understood as a stretch of time. Similarly, in (17b) the subject referent is not meant to organise any kind of *way* in the literal sense. And Seles in (17c) does not grunt while moving from one tennis court to the next, but the *way* referred to is metaphorical.

Related to this aspect are Tenny's (1994: 194) and Goldberg's (1995: 205) observations that the *way*-construction hardly ever occurs with so-called "vanilla motion" verbs, i.e. high-frequency monomorphemic verbs expressing motion, such as *go, walk, run* etc.

> The *his/her way* construction on the other hand, is entered into by verbs which do not
> include an element of motion in their meaning, as the construction itself adds that element
> to produce a path-object verb. (Tenny 1994: 194)

Though this claim appears somewhat too categorical,[9] vanilla motion verbs, such as *go*, are scarce in Present-day English *way*-constructions but were considerably more frequent in earlier stages of English (cf. table 2).

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9   Tenny's observation does not hold true if the motion verb expresses unexpected information or has a semantic content in addition to signalling mere motion, as in "After the audience has **walked its way** through

Table 2. Diachronic development of the frequency of *way*-constructions with the verb *go*

GO+way	*Early English Prose Fiction* corpus		*British National Corpus*: Written domain 1	
	1460-1700	Ratio per 10 million words	1960-1993	Ratio per 10 million words
my	7	7.000	0	0.000
your	34	34.000	1	0.514
his	107	107.000	2	1.027
her	17	17.000	1	0.514
its	0	0.000	0	0.000
our	1	1.000	1	0.514
your	34	34.000	0	0.000
their	19	19.000	4	2.054
one's	0	0.000	0	0.000
TOTAL	219	219.000	9	4.622

Table 2 shows that the ratio of occurrence of verb forms of *GO* in *way*-constructions (e.g. *went his way to the alehouse*) amounted to 219 instances in an Early Modern English corpus as opposed to merely 4.6 cases per 10 million words in Present-day English data.

When the noun *way* was still understood in its primary sense, *GO* was apt to express motion associated with moving on a stretch of gravel, grass, mud, etc. In Present-day English the meaning of *way* has been bleached so as to denote different kinds of transition. The motion meaning is – to some extent– expressed by the construction, which leaves the verb free to convey additional information. If it does not, as with vanilla motion verbs, it runs the risk of being regarded as redundant.

We can now turn to a third and most compelling argument in favour of analysing the *way*-construction in terms of grammaticalization. This argument centres on the verbs that can enter the *way*-construction and it involves a transition of from concrete to abstract.

5.1.3 A Transition from Concrete to Abstract Meanings

A transition of *way*-constructions from denoting literal to figurative meanings has been described in Krüger (1951). He provides examples for a historically earlier literal use meaning "to make, force one's way by means of the action of the verb" to a later figurative sense "to accompany one's advance by the specific action" (Krüger 1951: 155). Similarly, Israel (1996: 217) points out that the *way*-construction emerged from three distinct early usages that

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the rooms, they are treated to a 25-minute comedy-horror show in the courtyard." [LAT 1994] (Cf. also Goldberg's 1995: 204 discussion of *way*-constructions with vanilla motion verbs).

developed by way of analogical extension: the "means thread", the "manner thread" and the "incidental activity" thread.[10] The three semantic domains or threads are illustrated in (18):

(18) a. Rasselas **dug his way** out of the Happy Valley.   Means
      b. The wounded soldiers **limped their way** across the field.   Manner
      c. Convulsed with laughter, she **giggled her way** up the stairs.   Incidental Activity
      (based on Israel 1996: 218; emphasis mine)[11]

In the first example the verb denotes the means of motion (i.e. creating a path by digging), in the second example the verb codes the manner in which the motion is achieved (i.e. in a limping manner) and in the third the verb *giggling* merely refers to an activity that is incidentally occurring while motion takes place.

Crucially, Israel (1996: 225-226) is able to show that the *way*-construction has gradually extended its conceptual range over time. The earliest attestations of *way*-constructions represent means or manner readings, i.e. verbs of path creation (e.g. *pave, smooth, cut, furrow out*, etc.) denoting the means by which motion is achieved, or manner readings (e.g. *limp, rush* etc.) that emphasized the manner of motion. Significantly, very much later the incidental activity thread comes into play (cf. Israel 1996: 224-225; and also Goldberg 1995: 203).

Israel's (1996) analysis thus provides some indication that the *way*-construction first took a foothold with fairly concrete or primary senses of *way*. In its early stages it is most frequently used with verbs implying that concrete movement from one location to another is involved. By contrast, secondary or metaphorically derived senses appear to have developed at somewhat later stages. This suggest that the *way*-construction became grammaticalised, thereby extending its scope of application to include an increasing number of verbs and verb senses.

> As the range of predicates spread, increasingly abstract schemas could be extracted from them and this in turn drove the process of increasing productivity. (Israel 1996: 227)

I have ordered Israel's (1996) threefold distinction along a grammaticalization cline of primary or concrete vs. secondary or abstract uses.

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[10] Some terminological confusion may arise in the denotation of these threads: Talmy (1985) used both terms to differentiate between actions performed by AGENTS and those performed by THEMES. Goldberg's (1997: 202ff.) terminology subsumes both the means and the manner thread under the heading 'means', reserving 'manner' for Israel's (1996: 218) 'incidental activity' usage. The present paper follows Israel's classification.

[11] Israel (1996: 218) marks the third example as considered marginally acceptable by many speakers, but instances of the incidental activity thread – though rarer than the other two uses – are well attested in my data, e.g. (17a and c) on page 15 or "(...) when I came **cursing my way** up the stairs with his tea." [*The Guardian* 1994].

Figure 5. Semantic Continuum of Verbs Entering the *Way*-Construction (based on Israel 1996)

Means	Manner	>	Incidental Activity
dig	*limp*		*giggle*
concrete			*abstract*
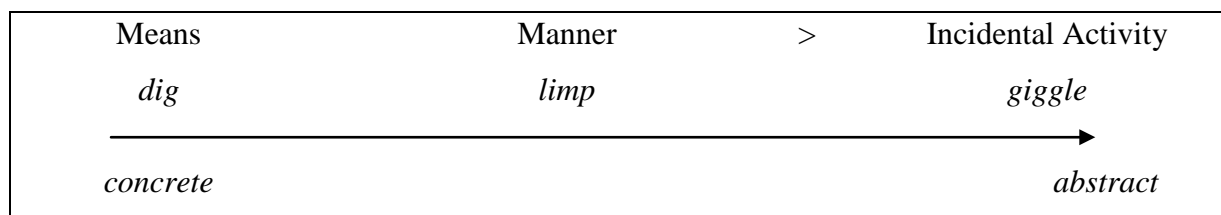
The observation that the *way*-construction has successively extended its conceptual domains from highly concrete motion verbs to verbs that are only indirectly associated with directed motion calls for an analysis in terms of grammaticalization in the spirit of Hopper and Thompson (1993). This raises the question of whether there are also other aspects relating to its historical development that are generally regarded as features characterising grammaticalization processes. We can thus derive the following hypothesis: If expansion of *way* is an instance of grammaticalization, then *way* should start out in concrete domains and gradually acquire more abstract domains.

5.2 The Diachronic Development of the Competition between the *Way*-Construction and Reflexive *Self* according to Semantic Factors

In order to test the hypothesis that the *way*-construction is gradually extending its territory from concrete to abstract domains, we first need to devise a measure for defining concrete vs. abstract contexts.

Following Walker and Hulme (1999: 1258) concreteness is conceived of "as an index of how directly the referent of a word can be experienced by the senses". Gilhooly and Logie (1980: 396) discern a considerable degree of unanimity in informants' rating of nouns as concrete or abstract. While e.g. *ball and ship* are judged highly concrete, *logic and conscience* are rated as highly abstract. For the present investigation the nouns contained in the prepositional phrase have been contrasted with respect to whether they denote concrete or abstract entities.[12]

(19) a. He made his way back to the **Jeep**. [Brown]   concrete
      b. (...) you can research your way into Shakespeare's **truth**. [FLOB]   abstract

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[12] This criterion for distinguishing concrete vs. abstract contexts is taken from Salkoff (1988: 53) who observes that some *way*-construction verbs can occur with both concrete and abstract meanings.

It is reasonable to assume that the concrete meaning of e.g. *Jeep* is more immediately accessible to the senses than the abstract noun *truth*.

The two competitors (*way* vs. *self*) and two varying semantic contexts (concrete vs. abstract) yield four possible combinations, each of which is attested in the data investigated.

(20) a. (...), and the procession **wound its way** into the **cemetery**.
      b. She could see how he had **worked his way** into her aunt's **affections**.
      c. It was large and green, and **wound itself** along the **branch** with reptilian patience.
      d. Alex **worked himself** into a crimson-faced **rage** and bit the (...) [all examples from BNC wridom1]

Figure 6 depicts the competition between the *way*-construction and reflexive *self* in concrete vs. abstract contexts. In order to be able to assess the statistical reliability of the findings, each segment is additionally labelled with the actual number of occurrences. The *way*-construction has 25 occurrences with a concrete noun in the prepositional phrase and merely 2 with an abstract noun.

Figure 6. Concrete vs. Abstract Uses of *One's Way* vs. *Oneself* (N = 1146)
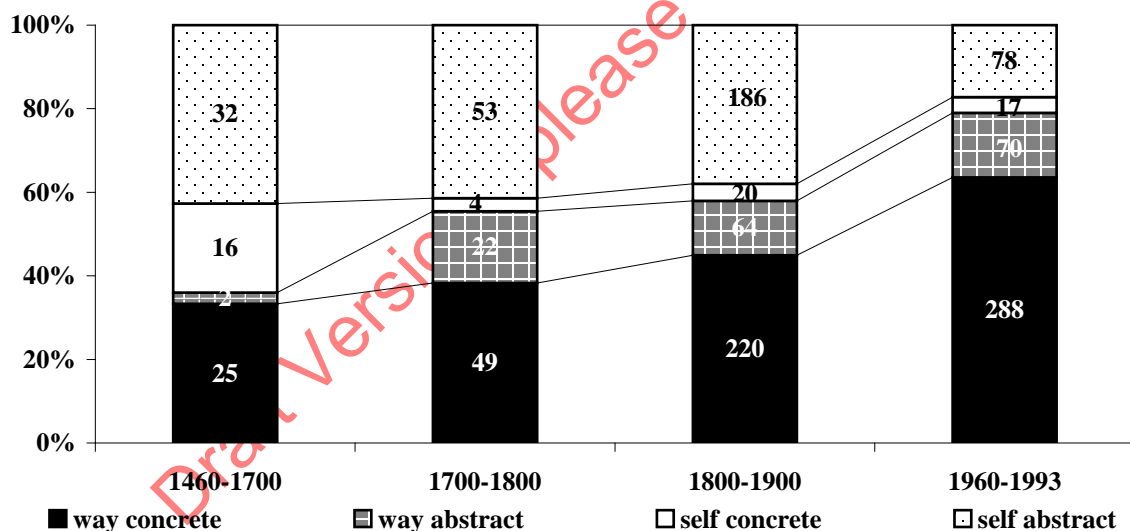
As the investigation of quantitative changes in the use of both resultatives has already indicated, we observe that the use of *self* erodes over time, while *way* is gaining ground. Turning now to the qualitative differences involved, we find a strikingly systematic pattern emerging. The *way*-construction consistently has a higher proportion of concrete rather than abstract uses throughout all four periods. By contrast, reflexive *self* scores consistently lower on concrete than on abstract meanings. This distribution is indicative of a division of labour: concrete uses are a marked domain of *way*, while abstract ones are more closely associated with *self*. The emergent substitution of *self* by *way* is more advanced in the concrete domain.

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In particular with abstract meanings can *self* still to some extent stand its ground. But even here it is continually declining in use.

Thus we are witnessing a gradual replacement of *self* by *way*, with *way* acquiring new domains that were formerly inaccessible to this variant. This is in line with an analysis along the lines of an emergent grammaticalization, in which *way* extends its range of application. The noun *way* is losing its semantic restriction to concrete entities that are easily accessible to the senses by being tangible and visible. The concomitant semantic bleaching allows it to expand its use into ever less concrete domains to become the majority form in Present-day English.

Theoretically, the pattern for all ten verbs investigated could be brought about by one single verb in the data which was extremely frequent and hence can skew the results for the aggregate figures. We therefore also need to consider the patterns for individual verbs. Out of the ten verbs investigated only four will be analysed individually in the present section. The twofold categorization of the two variants produces four possible combinations, which in turn are investigated in four different time-spans, thus giving 2 x 2 x 4 = 16 combinations for each verb. This procedure of splitting the data into smaller lots reduces the size of the samples to such an extent that we are unable to discern a patterned stratification for the less frequent verbs in my data. The following section is therefore restricted to those verbs that have at least eight occurrences of either the *way*-construction or reflexive *self* in the data. This leaves us with the verbs *wind*, *work* and *drink*. The pattern for *grope* has additionally been included here for reasons to be explained below.[13]

The pattern observed for the aggregate of all ten verbs is matched by the distribution of the verb *wind* shown in Figure 7.

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[13] The verb *fight* though being second in terms of frequency of occurrence did not produce an identifiable pattern of change and is consequently not shown here. With only three occurrences of the *way*-construction in all four time periods investigated its occurrence does not warrant splitting the data into smaller lots.

Figure 7. Concrete vs. Abstract Uses of *Wind One's Way* vs. *Wind Oneself* (N = 144)
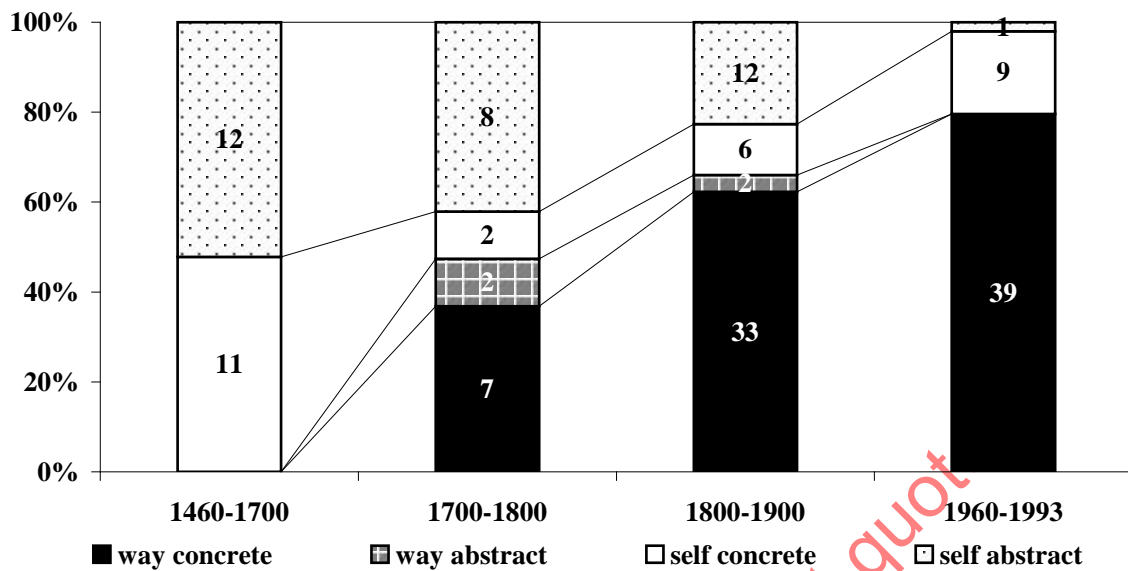
The observed division of labour between *way* and *self* is well-discernible. As has been shown above (cf. figure 2 on page 10), in the earliest time-period investigated, the *way*-construction is not yet an option. Reflexive *self* is used in equal shares in the concrete and abstract domains. When *way* emerges in the second time-period, it displays a certain affinity towards concrete rather than abstract meanings. Conversely, *self* scores lower on concrete than on abstract meanings. Note, however, that the figures for *wind* also exhibit a quantitative difference regarding the overall occurrences in the abstract domain: recessive abstract uses are increasingly replaced by concrete ones, which leaves us with merely one instance of an abstract use in the Present-day English data. This tendency holds for both *way* and *self*. In general, the pattern for *wind* parallels the aggregate figures for all 10 verbs in that concrete uses are more clearly associated with *way*, while abstract uses can – at least temporarily – serve as a refuge for *self*.

The verb *work* displays the by now familiar trend (cf. Figure 8). However, possibly owing to its high frequency, the replacement process of *self* by *way* has proceeded at a slower pace.

Figure 8. Concrete vs. Abstract Uses of *Work One's Way* vs. *Work Oneself* (N = 463)
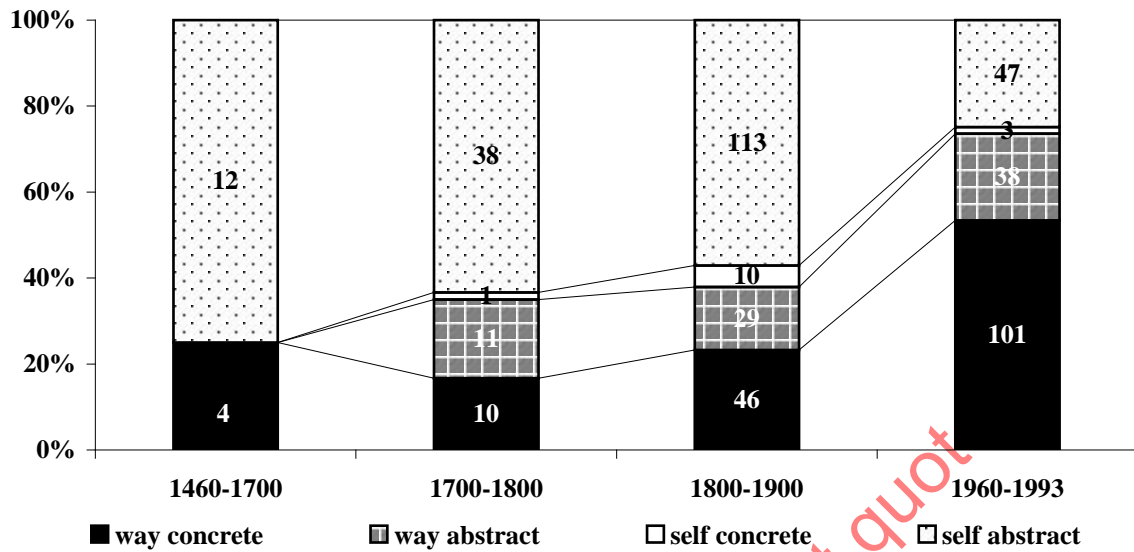
The main difference between *work* and the remaining verbs investigated here is that the emergent division of labour develops at a slower pace. The competition between both variants is already existent in the 17th century and has still not been settled, though the observable trajectories of change warrant venturing the hypothesis that future developments will lead to an increased replacement of *self* by *way*. Again, we witness a gradual process in which *way* acquires new domains, while *self* can to some extent stand its ground with abstract uses.

The verb *drink* also deserves our attention. At a total of 81 occurrences altogether it does not provide a very stable pattern (cf. Figure 9).

Figure 9. Concrete vs. Abstract Uses of *Drink One's Way* vs. *Drink Oneself* (N = 81)
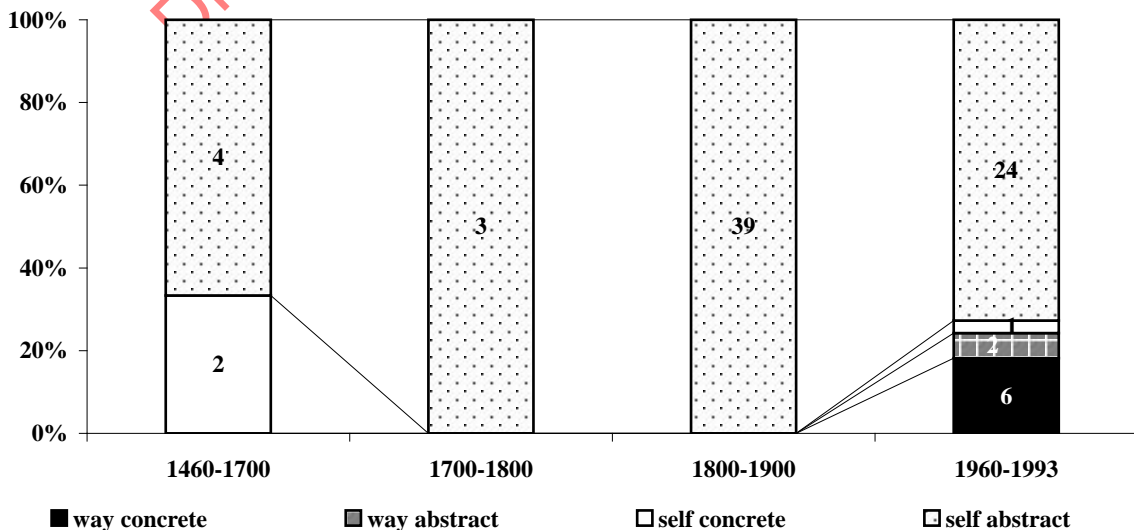
D*rink one's way* only emerges in the 20th century in my data. It appears to be a very recent acquisition of the *way* construction. The newcomer status of *drink* is presumably motivated by the fact that *drink* plus reflexive widely operates in abstract contexts, e.g. *I drank myself into oblivion*. While the substitution of *self* by *way* has almost been completed for e.g. *wind* and *work*, other semantically restricted verbs such as *drink* lag a long way behind. The by now familiar pattern of *way* being more closely associated with concrete uses while *self* displays a proclivity towards abstract uses is again confirmed by the distribution of *drink*.

We have observed earlier (section 4.2) that with the verb *grope*, the reflexive is not used at all in my data, though it does occur – but rarely – in larger corpora. We can now give a reason why this might be the case.

Figure 10. Concrete vs. Abstract Uses of *Grope One's Way* vs. *Grope Oneself* (N = 143)
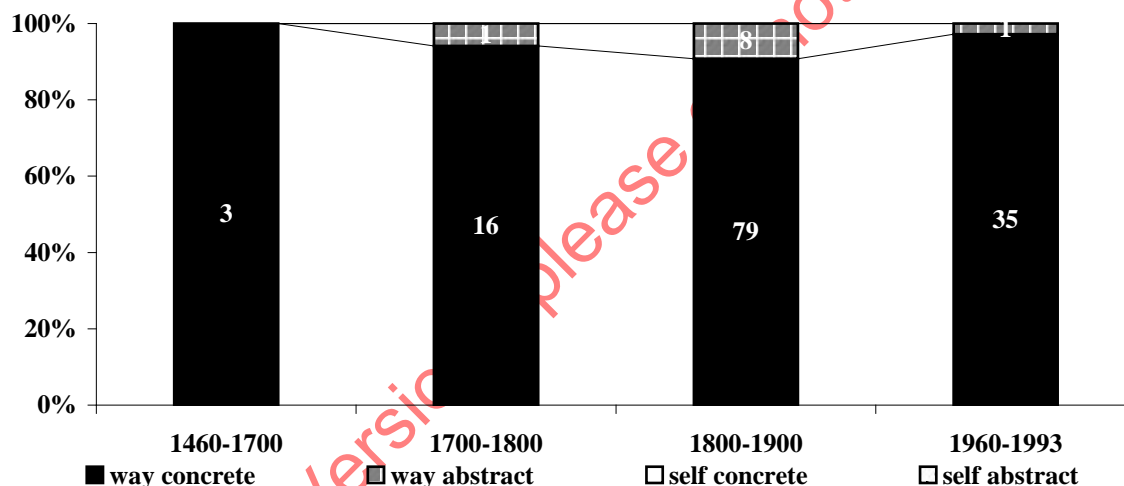
A classification of the *way*-constructions with *grope* along the concrete-abstract distinction reveals that the *way*-construction has always been associated in the vast majority of cases with concrete rather than abstract meanings. Concrete meanings, however, are the marked domain of *way*-constructions rather than of reflexive *self*. Since *self* can only stand its ground in abstract uses, it has not been able to get a foothold in this verb's semantic domain. Hence the *way*-construction prevails throughout all periods. Another explanation can be formulated in terms of blocking: *grope oneself* might be blocked because of its sexual connotations.[14] Further research would be needed to decide which of the two factors is the dominant one. The OED describes the "indecent sense" of *grope* as obsolete (the latest entry being provided for

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[14] I wish to thank Elizabeth Traugott (p.c.) for raising this aspect.

1664 in a non-reflexive use), but a corpus retrieval in a 1 billion word megacorpus gleans four instances of *grope* immediately followed by the reflexive (cf. section 4.2 page 11). This shows that *grope* still occurs with *self* but that it is very rare.

What remains is the question of why the *way*-construction should display a proclivity towards occurring with concrete nouns while reflexive *self* is more closely associated with abstract meanings. There are two aspects that deserve attention. Firstly, the *way*-construction contains the originally concrete noun *way* that only by analogical extension came to be used with abstract meanings (cf. Israel 1996: 225-226). *Way* might hence be more biased towards concrete uses.

Secondly, grammaticalization theory predicts that changes tend to be initiated in local contexts (cf. Hopper/Traugott 1993: 2) and expand from there, e.g. to other verbs (cf. also Israel 1996: 227). We can thus expect that the more recent variant (*way*) will only gradually expand its uses to less prototypical, i.e. metaphorically derived, abstract meanings and that in order to do so it first needs to be established in concrete domains.

6. CONCLUSION

The coexistence of *way*-constructions (e.g. *She worked her way to the top*) with semantically overlapping reflexive structures (e.g. *She worked herself to the top*) has eventually led to a reorganization within the system of English resultatives. Two diachronic and synchronic corpus-based studies tracing the trajectories of change of both variants reveal quantitative and qualitative changes.

The research findings concerning the quantitative changes involved clearly show that the *way*-construction is increasingly supplanting its historically earlier competitor *self*. During this replacement process reflexive *self* is increasingly being ousted by the *way*-construction, which tends to become the majority form around the 18th century. However, the exact time when the use of *way* outscores *self* varies for individual verbs.

As regards the qualitative changes characterizing the long-standing battle between the *way*-construction and its competitor *self*, the spread of the *way*-construction is accompanied by a diversification of the functions performed by each variant. This diversification culminates in a semantically motivated division of labour. The second question posed in the introduction addressing the issue of whether all uses of the two competitors are to the same degree affected by the reorganization can now be answered in the negative. The *way*-construction is particularly successful in expressing concrete meanings, while reflexive *self* is more clearly

associated with abstract uses. While in the long-run *self* is being ousted by *way*, *self* can in the short-run maintain itself in the abstract domain.

By taking a functional perspective towards the observable fluctuations in the system of resultatives, we are able to explain the successive proliferation of the *way*-construction in terms of grammaticalization theory. Innovations tend to be initiated in local contexts (cf. Hopper and Traugott 1993: 2) and by metaphorical extension (cf. also Israel 1996: 227) expand to new semantic domains. This is in line with the finding that the *way*-construction was first implemented with concrete meanings and only gradually acquired less prototypical, metaphorically derived, abstract contexts.

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