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Variation and change in English resultative constructions

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ABSTRACT

The system of English resultative constructions is in a state of flux characterized by variation between two of its most prominent competitors, *way*-constructions as in *She worked her **way** to the top* and reflexive structures as in *She worked her**self** to the top*. Although this competition has occasionally been addressed in the literature (cf. Jackendoff, 1990:213; Kirchner, 1951:158; Salkoff, 1988:54ff.), the present findings reveal that the long-standing rivalry between these structures has resulted in an increased use of the *way*-construction at the expense of reflexive structures. In addition, the coexistence of *way*-constructions with semantically overlapping reflexive structures eventually culminated in a reorganization of the system of English resultatives involving 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, whereas reflexive structures can still to some extent stand their ground with abstract uses. The present paper relates the proliferation of the *way*-construction to grammaticalization theory.

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. Boas, 2002; Jackendoff, 1990, 1992, 1997; Levin & Rappaport, 1995; Marantz, 1992), measuring arguments (cf. Tenny, 1994), word-formation and principles of language variation (cf. Rohdenburg, 1996; Mondorf, 2006, forthcoming).[1] 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), who shows that it was already in use at least as far back as the 15th century and that it was well-established by the 17th century (Israel, 1996:221). 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

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its use from "verbs which were somehow directly related to motion or path creation" to ones "which are only marginally or incidentally related to the actual expressed motion" (Israel, 1996:225–226). This suggests that the *way*-construction grammaticalized, thereby extending its scope to an increasing number of verbs and verb senses.

Within the system of English resultatives, the more recent *way*-construction is sometimes used in the same contexts as the historically earlier reflexive *self*, as illustrated in the pair of examples in (1) and (2).

(1) a. …; there were rumors that he had **worked himself to the top** of the tall flag-staff —which was as smooth as a greased pole—but I will not vouch for their truth. (COHA: M.T.W. *Connor Magan's Luck and Other Stories*, 1881)
b. It was lovely Rose Gowdy who persuaded Steve Brill to take the job of telegraph operator, forgetting his prematurely white hair, and she who encouraged him to **work his way to the top** of the railroad business. (COHA: Emerson, Alice B. *Betty Gordon in Washington*, 1920)

(2) a. Rodham was by nature a planner and an achiever, someone who **worked herself to the top** of any organisation with which she was associated, … (*Guardian*, 2003)
b. Mr Irvin grew up in a poor family of 16 and **worked his way to the top** of the football business. (*Guardian*, 1997)

Wendt (1911:197) observed that the *way*-construction can sometimes take the place of *self*.[2] 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)

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 paper will uncover that the distribution of both constructions has been in a state of flux, which is best analyzed in terms of principles governing variation and change.

The present paper relies on historical and present-day English corpus data to answer the following questions: Is the variation between these two constructions an instance of language change with one construction acquiring new domains formerly covered by the other? 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 labor? 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?

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This paper is structured as follows. The first section provides support for the actual existence of the assumed alternation between the *way*-construction and reflexive *self* and relates the observable alternation to the approach to linguistic variation and change pursued in the present paper. The following section introduces the methodological prerequisites and the database. The next two sections derive the hypotheses and present findings that emanate from the empirical investigation of these hypotheses with respect to the quantitative distribution of each resultative in comparison to its closest competitor. Moreover, these sections tackle the question of whether the data reveal qualitative changes in the form of a semantically conditioned division of labor. The conclusion relates the findings to language change, variation, and grammaticalization.

THE COMPETITION BETWEEN *SELF* AND *WAY*

Although the present paper 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. The "*way*-construction paradigm" (Salkoff, 1988:54) consists of at least three additional variants, listed in (3) and (4) (from Salkoff, 1988:54–55).

(3)

Subject V { POSS *way* / *self* / DET *path*/*entrance*/ . . . / *it* / ∅ } DIRECTIONAL

(4) a. Max forced **his way** into the house.
b. Max married **himself** into big money.
c. Max forced **an entrance** into the house.
d. Max bicycled **it** through the country.
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 were extremely scarce in the data examined 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 affect the percentages scored by *way* and *self* in the paradigm. The primary purpose of the present study, however, is to investigate the relation between *way* and *self*.

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In order to justifiably analyze *way*-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*).

Acknowledging that such variation cannot be relegated to performance, linguists have become increasingly aware that "… at least some categorical constraints are simply the limiting cases of more general statistical tendencies" (Wasow & 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 paper makes a contribution toward this end.

METHODOLOGY

The analysis 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.

Table 1 shows that roughly 77 million words form the basis for the present study. 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 to 1700, the texts are not evenly distributed across the centuries. 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 1597 and 1575, respectively. The vast majority of attestations of both variants are found in the late 17th century.

Given that syntactic variants do not easily lend themselves to analysis in small-sized samples, the smaller corpora, which are also the earliest, set the mark for selecting which verbs were to be investigated. Ten verbs (*cut, drink, eat, fight, grope, hit, wind, work, worm*, and *wriggle*) have been chosen randomly from the historical data.[3] Only if they appeared with both constructions—the reflexive and the *way*-construction—and occurred at least twice in the historical data did they qualify for further study in the present-day English corpus.[4]

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TABLE 1. *British English historical corpora*

Corpus	Period	Time Spans	Million Words
Early English Prose Fiction	1460–1700[a]	1460–1700[a]	10
Eighteenth Century Fiction (ECF 1)	1660–1699[a]		5
Eighteenth Century Fiction (ECF 2)	1700–1752[a]	1700–1800[a]	5
Nineteenth Century Fiction (NCF 1)	1728–1799[a]		11
Nineteenth Century Fiction (NCF 2)	1800–1869[a]	1800–1900[a]	26
British National Corpus (wridom1)	1960–1993[b]	1960–1993[b]	20
Total			77

[a]Birth dates.
[b]Publication dates: The *Eighteenth Century Fiction* corpus and the *Nineteenth Century Fiction* corpus have been split into subcorpora in order to provide periods that start or finish at the turn of a century. Because 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, as all historical texts are dated by birth dates whereas only the present-day English data is based on publication date.

The 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*) that 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.

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]

The *way*-construction has schematically been represented as follows (cf. Salkoff 1988:49):

$$\text{SUBJ}_i[\text{V}\ [\text{POSS}_i\ \textit{way}]\ \text{PP}]$$

This formula does not, however, present the whole picture. Consider the following examples:

(6) a. His trademark hat, a straw, beige Kango, seemed to rest at an odd angle on his head; from beneath it a single, long braid had *worked its way* ***free*** and dangled rebelliously behind his right ear. (COCA: *Iowa Review*, 2006)
b. The image is almost fantastic now, as harried travelers flee Kennedy International Airport's sagging terminals to *fight their way* ***home*** through the endless traffic on the Van Wyck Expressway. (COCA: *New York Times*, 1996)

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c. We begin with some simple number theory which will help us *feel our way* **Ø** and also lead us to some new and fascinating algebraic structures. (*BNC* wridom2)
d. Small builders cannot *see their way* **to take** on many trainees. (*BNC* wridom5)[7]

The scheme therefore has to be revised so as to incorporate at least three additional items:

$$\text{SUBJ}_i\ [\text{V}\ [\text{POSS}_i\ \textit{way}] \left\{ \begin{array}{l} \text{PP} \\ \text{A} \\ \emptyset \\ \textit{to}-\text{infinitive} \end{array} \right\}]$$

All variants somehow denote a direction or movement, which is why I follow Goldberg (1995:199) in calling them directionals. The formula can thus be reduced to:[8]

$$\text{SUBJ}_i [\text{V}\ [\text{POSS}_i\ \textit{way}]\ \text{DIRECTIONAL}\ ]$$

In order to be classified as a *way*-construction in the present study, a syntactic string had to meet the following requirements: the possessive pronoun must be coindexed with the subject (cf. Israel, 1996:226); the construction must imply movement of a subject along a PATH (explicitly or implicitly) indicated by a directional (cf. Goldberg, 1995:199; Israel, 1996:226); and the directional must modify the path designated in POSS *way* (cf. Goldberg, 1995:199).[9]

In order to investigate only the relevant choice contexts, each case of a *way*-construction or reflexive resultative was checked for whether they can also occur with the other variant. As stated, only those verbs that occurred with both resultative variants have been investigated. This procedure yielded a total of 1,146 occurrences of the 10 verbs with the *way*-construction or the reflexive.

QUANTITATIVE CHANGES IN THE SYSTEM OF ENGLISH RESULTATIVES

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

(7) …; 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*

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Surfeit, with the blood of those Hell-dyed Infidels. (Richard Head & Francis Kirkman, *The English Rogue*, Part 2, 1668)

Firstly, we could—somewhat arbitrarily—assume that the verb *eat* licenses *way*-constructions, and *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:

(8) *drink* + *way*

a. …, Maxwell was still **drinking his way** through the haul. (*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. (*F-LOB*)
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:

(9) 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 (9b) 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 (2006).

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*. Indeed, we will see that a semantic factor (concrete vs. abstract meanings) plays a considerable part in the choice between the two variant constructions. Although there is still some degree of overlap between *way* and *self*, we can additionally observe an emergent division of labor throughout the past centuries. But let us first investigate the third explanation in more detail.

It has often been observed that certain uses of the reflexive appear to become obsolete in a wide range of environments (cf., e.g., Kirchner, 1951:158;

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Siemund, 2003:488; Strang, 1970:153). Kirchner (1951:158) mentioned the following examples in which the reflexive has become "somewhat unwieldy":

(10) a. … they *scramble* themselves into a little education…
b. … they *urge* themselves forward … (Kirchner, 1951:158)

Similarly, Strang (1970:153) reported an "increasing disuse of reflexives with such verbs as *rest, dress, wash, move. …*"

Empirical evidence on the decline of the reflexive in both British and American English comes from Rohdenburg (2009:180), who observed a "centuries-old trend towards the zero variant."[10] Kirchner (1951:158) believed that there had been a gradual development of the verbs *shoulder, 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 (2005, forthcoming). We can thus hypothesize that the *way*-construction is replacing reflexive *self* in resultative constructions.[11]

*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, all occurrences of the 10 verbs selected have been searched for in four historically stratified corpora. The results for the aggregate of all 10 verbs investigated are presented in Figure 1. The vertical axis depicts the percentage of each variant's occurrence with the 10 verbs listed on the right. The horizontal axis provides the four time spans investigated. Each curve is additionally labeled with the absolute figures in order 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 (48 of 75 cases). 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 10 verbs could be brought about by an overrepresentation of one extremely frequent verb, and 9 other verbs show exactly contrary developments. 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—wind one's way* vs. *wind oneself*. Here the quantitative effect is even

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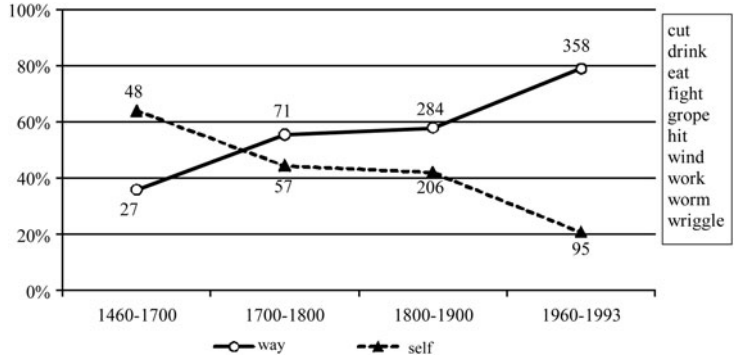


FIGURE 1. Diachronic development of the competition between *way* vs. *self* ($n = 1{,}146$).

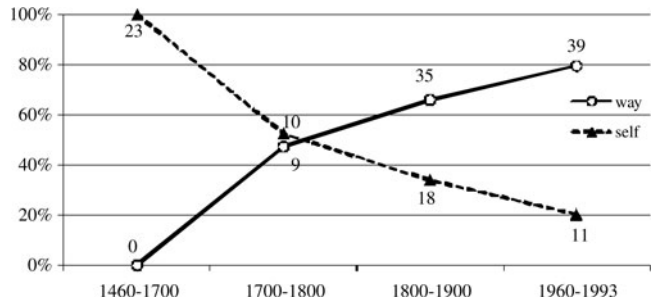


FIGURE 2. Diachronic development of the competition between ***wind one's way*** vs. ***wind oneself*** ($n = 144$).

more pronounced than for the aggregate of all 10 verbs shown in Figure 1. At the starting point of both curves, the *way*-construction is not used at all in the data; though with only 23 contexts for both variants for the first 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. 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 competition between both constructions. What is more, the crossover occurs somewhat later than for *wind*, for example, or the aggregate of all 10 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* (cf. (1) and (2)). In present-day English, the *way*-construction has again almost reached the 80% level and is clearly the majority form today.

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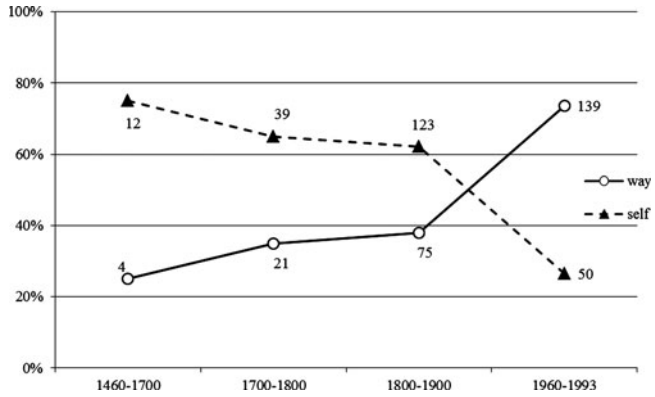


FIGURE 3. Diachronic development of the competition between ***work one's way*** vs. ***work oneself*** ($n = 463$).

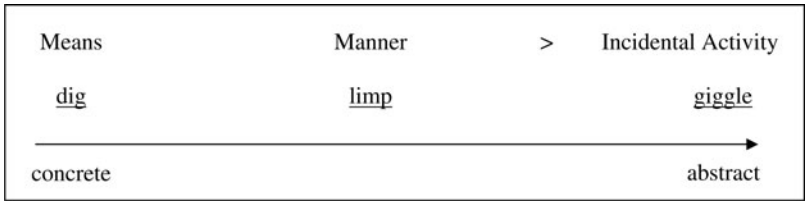


FIGURE 4. Semantic continuum of verbs entering the *way*-construction (based on Israel, 1996).

An interesting case that requires explanation is the pattern for the verb *grope*. This verb exclusively takes *way*-constructions in my data (cf. Appendix). Note, however, that a sketch retrieval in a 1-billion-word megacorpus[12] yields 4 occurrences of *grope* with the reflexive (though not necessarily resultative), all of which have a sexual meaning (illustrated, for instance, by (11a) and (11b)), whereas (11c) illustrates an instance of *grope* plus reflexive with a nonsexual meaning from admittedly messy Internet data.

(11) a. Keith Moon shoots up and Mick Jagger gropes himself in banned sleazy video! (*Guardian*, 1998)
b. If the various characters aren't groping themselves or one another, they are vomiting and urinating…. (*Los Angeles Times*, 1996)
c. Most fighters—even some of the great ones—would have stayed down but Mayorga **groped himself to his feet** one last time. (SecondsOut)

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

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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 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 periods analyzed to merit a more detailed discussion.

It has become obvious that the historically earlier reflexive forms are increasingly being ousted by *way*-constructions, the newcomer to the paradigm.[13]

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 labor between both resultative constructions. Concrete uses are a domain of the *way*-construction, whereas abstract uses are more closely associated with the reflexive. This functional specialization and the successive replacement of *self* by *way* are argued to be brought about by a grammaticalization process affecting the *way*-construction.

*The **way**-construction as an instance of grammaticalization*

The present section discusses three aspects that point toward 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.

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. (*F-LOB*)
b. *nowadays, we **eat our ways** into the fridge.

However, when we apply this criterion of number opposition to earlier **way**-constructions, we find that there is no straightforward way of showing that *way*-

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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 favoring an analysis of the *way*-construction in terms of grammaticalization.

Semantic bleaching of ***way***. In the earliest uses of *way*-constructions, the noun *way* still encoded a highly concrete notion of *way*: a path that is a tangible and visible stretch of matter (e.g., grass, mud, gravel) 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*.

(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. (*F-LOB*)
b. …: he can't, on current performance, **organise his way** out of a bag of popcorn. (*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. (*Guardian*, 1994)

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

	Early English Prose Fiction Corpus		*British National Corpus*: Written Domain 1	
GO+ way	1460–1700	Ratio per 10 Million Words	1960–1993	Ratio per 10 Million Words
my	7	7.00	0	0.00
your	34	34.00	1	0.51
his	107	107.00	2	1.03
her	17	17.00	1	0.51
its	0	0.00	0	0.00
our	1	1.00	1	0.51
your	34	34.00	0	0.00
their	19	19.00	4	2.05
one's	0	0.00	0	0.00
Total	219	219.00	9	4.62

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 organize 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 in present-day English hardly ever occurs with so-called "vanilla motion" verbs, that is, high-frequency monomorphemic verbs expressing motion, such as *go, walk, run*.

> 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,[14] a comparison of the prose fiction texts investigated here suggests that 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). 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 cases per 10 million words 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, and such. 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 the verb does not, as with vanilla motion verbs, it runs the risk of being regarded as redundant.

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

A transition from concrete to abstract meanings. A transition of *way*-constructions from denoting literal to figurative meanings has been described in Kirchner (1951). He provided 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" (Kirchner, 1951:155). Similarly, Israel (1996:217) pointed out that the *way*-construction emerged from three distinct early usages that developed by way of analogical extension: the "means thread," the "manner thread," and the "incidental activity" thread, illustrated in (18).[15]

(18) a. Rasselas **dug his way** out of the Happy Valley.
Means of motion
b. The wounded soldiers **limped their way** across the field.
Manner of motion
c. Convulsed with laughter, she **giggled her way** up the stairs.
Incidental activity occurring while motion takes place (based on Israel, 1996:218; emphasis mine)[16]

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: verbs of path creation (e.g., *pave, smooth, cut, furrow out*) denoting the means by which motion is achieved, or manner readings (e.g., *limp, rush*) that emphasized the manner of motion. Importantly, 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 suggests that the *way*-construction became grammaticalized, 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. 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

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motion calls for an analysis in terms of grammaticalization in the spirit of Hopper and Traugott (2003). This raises the question of whether there are also other aspects relating to its historical development that are generally regarded as features characterizing 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.

*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."[17] Gilhooly and Logie (1980:396) discerned a considerable degree of unanimity in informants' rating of nouns as concrete or abstract. Whereas, for example, *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.[18]

(19) a. He made his way back to the **Jeep**. (*Brown*)
concrete
b. … you can research your way into Shakespeare's **truth**. (*F-LOB*)
abstract

It is reasonable to assume that the concrete meaning of *Jeep*, for example, 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**.
way + concrete
b. She could see how he had **worked his way** into her aunt's **affections**.
way + abstract
c. It was large and green, and **wound itself** along the **branch** with reptilian patience. self + concrete
d. Alex **worked himself** into a crimson-faced **rage** and bit the…
self + abstract
(all examples from *BNC* wridom1)

Figure 5 and Table 3 (see Appendix for individual verbs) depict the competition between the *way*-construction and reflexive *self* in concrete vs. abstract contexts.

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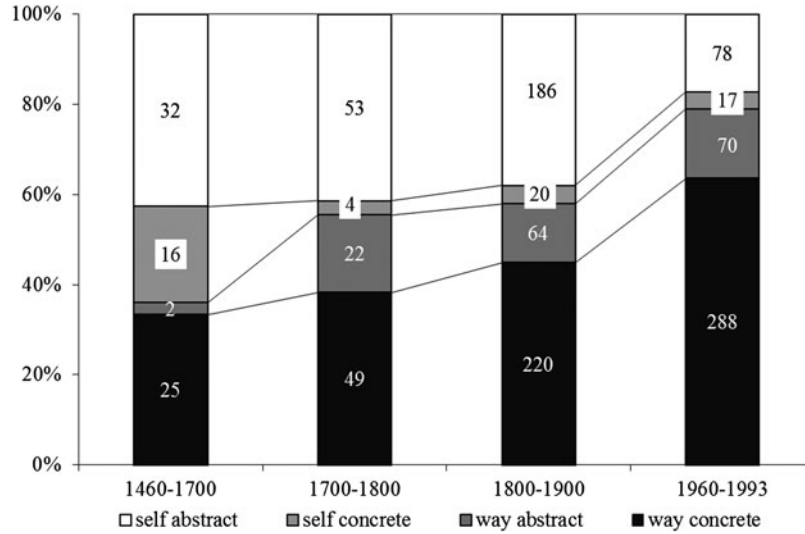


FIGURE 5. Concrete vs. abstract uses of *one's way* vs. *oneself* ($n = 1{,}146$).

To be able to assess the reliability of the findings, each segment is additionally labeled with the actual number of occurrences. In 1460–1700, the *way*-construction has 25 occurrences with a concrete noun in the prepositional phrase and merely 2 with an abstract noun.

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 labor. Concrete uses are a domain of *way*, but abstract ones are more closely associated with *self*. The emergent substitution of *self* by *way* is more advanced in the concrete domain. In particular with abstract meanings, *self* can 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 10 verbs investigated could be brought about by a single verb in the data that was extremely frequent and hence can skew the results for the aggregate figures. We therefore also need to consider the patterns for individual verbs. The following section is restricted to those verbs that have at least eight occurrences of either the *way*-construction or reflexive *self* in the data, *wind, work*, and *drink*.[19] The pattern for *grope* has additionally been included here.[20]

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TABLE 3. *Diachronic development of the competition between* ***way*** *vs.* ***self*** (n = *1,146)*

	1460–1700				1700–1800				1800–1900				1960–1993			
	way		self		way		self		way		self		way		self	
Concrete	25	61%	16	21%	49	38%	4	3%	220	45%	20	4%	288	64%	17	4%
Abstract	2	6%	32	43%	22	17%	53	41%	64	13%	186	38%	70	15%	78	17%
Total	27	36%	48	64%	71	55%	57	45%	284	58%	206	42%	358	79%	95	21%

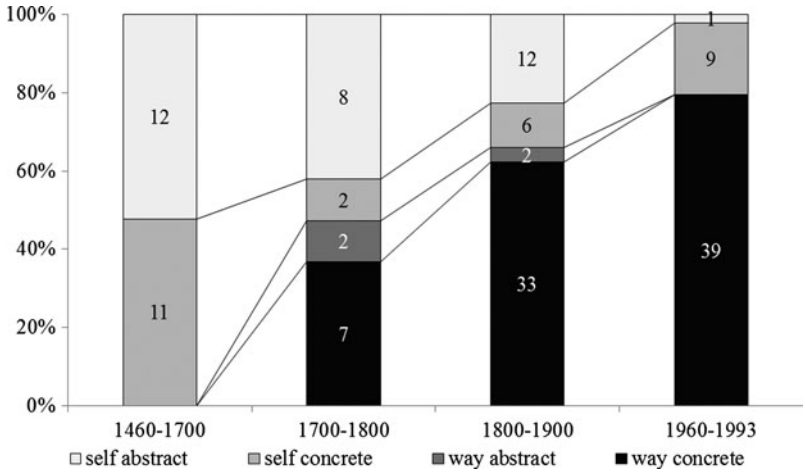


FIGURE 6. Concrete vs. Abstract uses of ***wind one's way*** vs. ***wind oneself*** ($n = 144$).

The pattern observed for the aggregate of all 10 verbs is matched by the distribution of the verb *wind* shown in Figure 6. The observed division of labor between *way* and *self* is well-discernible. As has been shown in Figure 2, in the earliest 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 period, it displays a certain affinity toward 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 of *wind* 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*, whereas abstract uses can—at least temporarily—serve as a refuge for *self*.

The verb *work* displays the by now familiar trend (cf. Figure 7). The main difference between *work* and the remaining verbs investigated here is that the emergent division of labor develops at a slower pace, possibly owing to its high frequency. The competition between both variants already existed 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, whereas *self* can to some extent stand its ground with abstract uses.

The verb *drink* also deserves our attention. At a total of 81 occurrences it does not provide a very stable pattern (cf. Figure 8). *Drink 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

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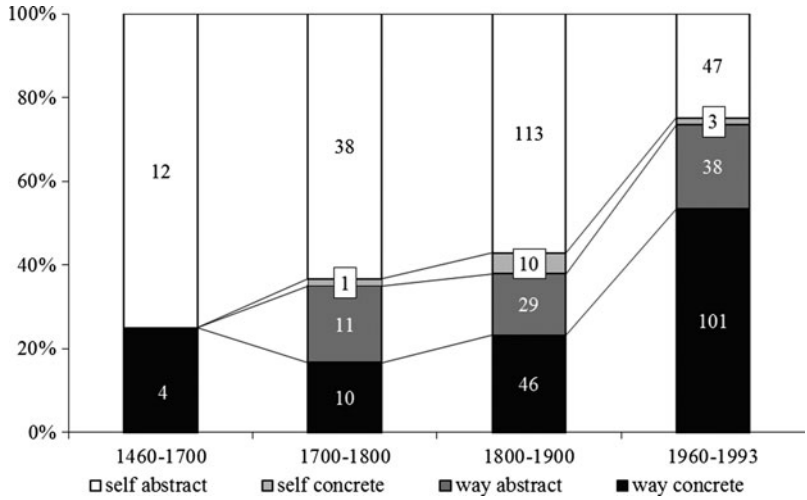


FIGURE 7. Concrete vs. abstract uses of ***work one's way*** vs. ***work oneself*** (n = 463).

that *drink* plus reflexive widely operates in abstract contexts, such as *I drank myself into oblivion*. Even though the substitution of *self* by *way* has almost been completed for *wind* and *work*, for example, 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 toward abstract uses is again confirmed by the distribution of *drink*.

We have observed earlier 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. A classification of the *way*-constructions with *grope* along the concrete-abstract distinction reveals that the *way*-construction

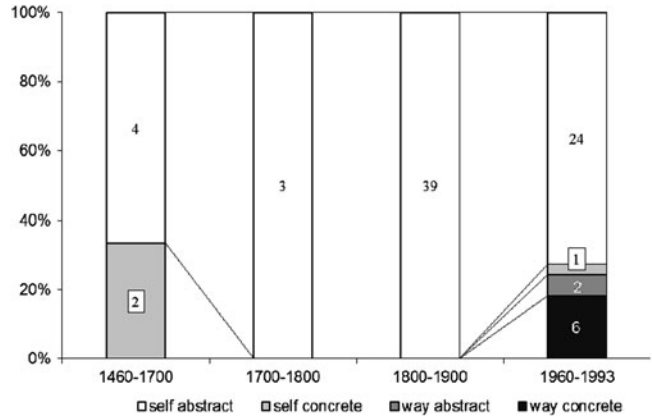


FIGURE 8. Concrete vs. abstract uses of ***drink one's way*** vs. ***drink oneself*** (*n* = 81).

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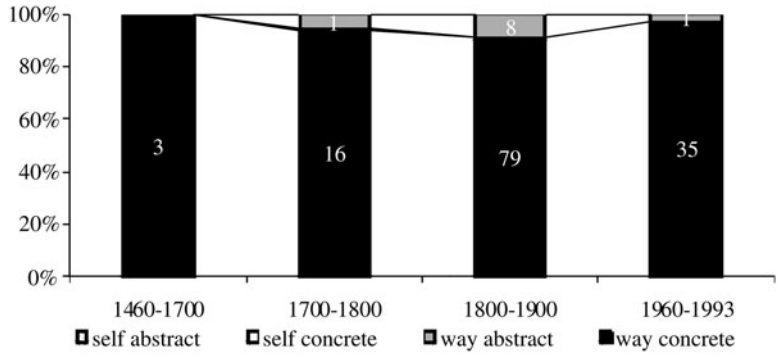


FIGURE 9. Concrete vs. abstract uses of ***grope one's way*** vs. ***grope oneself*** ($n = 143$).

has always been associated in the vast majority of cases with concrete rather than abstract meanings. Concrete meanings, however, are the domain of *way*-constructions rather than of reflexive *self*. Because *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.[21] 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 1664 in a nonreflexive use), but a corpus retrieval in a 1-billion-word megacorpus gleans 4 instances of *grope* immediately followed by the reflexive (cf. Qualitative Changes section). 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 toward 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 toward concrete uses.

Secondly, grammaticalization theory predicts that changes tend to be initiated in local contexts (cf. Hopper & Traugott, 2003:2) and expand from there, for example, 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, that is, metaphorically derived, abstract meanings and that in order to do so it first needs to be established in concrete domains.

CONCLUSIONS

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*)

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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 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 split of the functions performed by each variant. This change culminates in a semantically motivated division of labor. 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, whereas reflexive *self* is more clearly associated with abstract uses. Although 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 toward the observable fluctuations in the system of resultatives, we are able to explain the gradual proliferation of the *way*-construction in terms of grammaticalization theory. Innovations tend to be initiated in local contexts (cf. Hopper & Traugott, 2003:2) and expand to new semantic domains by metaphorical extension (cf. also Israel, 1996:227). 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.

NOTES

1. Other resultative constructions, such as fake object resultatives (e.g., *Chris drank himself silly*), secondary predications (e.g., *Elmar hammered the nail flat*), and such discussed, for instance, in Simpson (1983), Marantz (1992:182), Goldberg (1995:216), and Boas (2002) will not receive attention in the present article.

2. Note that Wendt (1911:197) merely stated that both constructions are in competition without claiming that one is "more basic" than the other.

3. I stopped at 10 verbs in order to stick with manageable numbers, but there were not many that also fulfilled the criterion of occurring with both the reflexive and the *way*-construction and occurring at least twice in the historical data.

4. The only exception is the verb *grope* for reasons to be discussed in the Diachronic Development section.

5. The search string *why** had to be excluded from the tally, because it rendered too many hits (the *WordSmith* concordance limit being roughly 16,000). 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*.

7. The adjective *free* in (6a) can be paraphrased *to freedom* and thus functions like a prepositional phrase. Example (6c) is clearly a borderline case that has received more detailed analysis in Mondorf (2006), where I postulate an explicitness cline ranging from canonical explicit directives to those that must be inferred from world knowledge.

8. The term *directional* is taken from Goldberg (1995:199) and extended so as to refer also to directionals other than PPs.

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9. This definition rules out cases, such as "She went her way in London," "She had her way," "It came my way," "I can't change my way of thinking."

10. The alternation between the reflexive and the zero-variant is illustrated in the following examples: "And then we'd both be in the water and the water in us, and the reservoir would still *empty* ***itself*** *into* the river,…." (Pamela Johnston, *Little Lost River*, 2008) and "The rivers that pour down from the Himalayas and *empty* **Ø** *into* the bay have swelled and shifted in recent decades,…" (COCA: *New York Times*, 2007).

11. Contrastive data also suggests that certain uses of the reflexive are recessive structures in English but not in German. Although in German, reflexive structures of the following type are still fairly common—"He has worked himself to the top"—the English reflexive appears to have a highly productive competitor in the form of the *way*-construction:

(i) 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*)

12. The *Guardian* (1990–2003, including the *Observer*, 1994–2003) and *Los Angeles Times* (1992–1999).

13. Siemund (2004:193) listed reflexive pronouns emerging from univerbation of pronoun + *self* as one of the rare instances in which the English language moves from analytic to synthetic, rather than the reverse (cf. also van Gelderen, 1999). However, if we look at the rise of the *way*-construction, this synthesization appears to be a short-lived phenomenon. At least one particular set of resultative reflexives are being ousted by the more analytic *way*-construction.

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

15. 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.

16. Israel (1996:218) marked the third example as being 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, such as (17a) and (17c) or "… when I came **cursing my way** up the stairs with his tea." (*Guardian*, 1994).

17. Walker and Hulme (1999:1258) gauged concreteness "as an index of how directly the referent of a word can be experienced by the senses." Thus, a word denoting an object that can be seen, touched, tasted, heard, smelled, and so on will be highly accessible to the senses. Abstract referents (in this case abstract ways or paths) are less accessible to the senses than concrete ones, because they cannot be seen, tasted, heard, and such. The operation of concreteness effects for other variation phenomena, such as comparative alternation, has been investigated in Mondorf (2007:216–220).

18. The idea of distinguishing concrete vs. abstract contexts is taken from Salkoff (1988:53), who observed that some *way*-construction verbs can occur with both concrete and abstract meanings.

19. The twofold categorization of the two variants produces four possible combinations, which in turn are investigated in four different time spans, thus giving $2 \times 2 \times 4 = 16$ 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.

20. 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 periods investigated, its occurrence does not warrant splitting the data into smaller lots.

21. I wish to thank Elizabeth Traugott (personal communication) for raising this aspect.

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APPENDIX

*Diachronic development of the competition between **way** vs. **self** (n = 1,146)*

	1460–1700				1700–1800				1800–1900				1960–1993			
cut	way		self		way		self		way		self		way		self	
Concrete	9	90%	1	10%	7	78%	0	0%	23	82%	1	4%	8	89%	0	0%
Abstract	0	0%	0	0%	2	22%	0	0%	4	14%	0	0%	1	11%	0	0%
Total	9	90%	1	10%	9	100%	0	0%	27	96%	1	4%	9	100%	0	0%
eat	way		self		way		self		way		self		way		self	
Concrete	1	100%	0	0%	1	50%	0	0%	7	78%	1	11%	13	72%	0	0%
Abstract	1	100%	0	0%	0	0%	1	50%	0	0%	1	11%	1	6%	4	22%
Total	2	100%	0	0%	1	50%	1	50%	7	78%	2	22%	14	78%	4	22%
fight	way		self		way		self		way		self		way		self	
Concrete	7	100%	0	0%	8	57%	0	0%	31	57%	0	0%	68	84%	0	0%
Abstract	1	100%	0	0%	6	43%	0	0%	21	39%	2	4%	12	15%	1	1%
Total	8	100%	0	0%	14	100%	0	0%	52	96%	2	4%	80	99%	1	1%
grope	way		self		way		self		way		self		way		self	
Concrete	3	100%	0	0%	16	94%	0	0%	79	91%	0	0%	35	97%	0	0%
Abstract	0	0%	0	0%	1	6%	0	0%	8	9%	0	0%	1	3%	0	0%
Total	3	100%	0	0%	17	100%	0	0%	87	100%	0	0%	36	100%	0	0%

Continued

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APPENDIX. (Cont.)

	1460–1700				1700–1800				1800–1900				1960–1993			
hit	way		self		way		self		way		self		way		self	
Concrete	1	50%	1	50%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Abstract	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Total	1	50%	1	50%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
drink	way		self		way		self		way		self		way		self	
Concrete	0	0%	2	100%	0	0%	0	0%	0	0%	0	0%	6	18%	1	3%
Abstract	0	0%	4	100%	0	0%	3	100%	0	0%	39	100%	2	6%	24	73%
Total	0	0%	6	100%	0	0%	3	100%	0	0%	39	100%	8	24%	25	76%
wind	way		self		way		self		way		self		way		self	
Concrete	0	0%	11	100%	7	37%	2	11%	33	62%	6	11%	39	80%	9	18%
Abstract	0	0%	12	100%	2	11%	8	42%	2	4%	12	23%	0	0%	1	2%
Total	0	0%	23	100%	9	47%	10	53%	35	66%	18	34%	39	80%	10	20%
work	way		self		way		self		way		self		way		self	
Concrete	4	100%	0	0%	10	17%	1	2%	46	23%	10	5%	101	53%	3	2%
Abstract	0	0%	12	100%	11	18%	38	63%	29	15%	113	57%	38	20%	47	25%
Total	4	25%	12	75%	21	35%	39	65%	75	38%	123	62%	139	74%	50	26%
worm	way		self		way		self		way		self		way		self	
Concrete	0	0%	0	0%	0	0%	0	0%	0	0%	1	6%	11	46%	0	0%
Abstract	0	0%	0	0%	0	0%	1	100%	0	0%	15	94%	13	54%	0	0%
Total	0	0%	0	0%	0	0%	1	100%	0	0%	16	100%	24	100%	0	0%
wriggle	way		self		way		self		way		self		way		self	
Concrete	0	0%	1	100%	0	0%	1	33%	1	17%	1	17%	7	50%	4	29%
Abstract	0	0%	4	100%	0	0%	2	67%	0	0%	4	67%	2	14%	1	7%
Total	0	0%	5	100%	0	0%	3	100%	1	17%	5	83%	9	64%	5	36%
All 10 verbs	way		self		way		self		way		self		way		self	
Concrete	25	61%	16	21%	49	38%	4	3%	220	45%	20	4%	288	64%	17	4%
Abstract	2	6%	32	43%	22	17%	53	41%	64	13%	186	38%	70	15%	78	17%
Total	27	36%	48	64%	71	55%	57	45%	284	58%	206	42%	358	79%	95	21%

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