

The Way Constructions Grow¹

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This paper examines the history of the Modern English *way*-construction, a construction which has recently been the focus of a number of theoretical works on argument structure constraints in synchronic grammar (Levin & Rapoport 1988, Jackendoff 1990, Marantz 1992, Goldberg, in press). The present work seeks to show the relevance of a diachronic perspective to the general issues of synchronic grammatical representation raised by these studies. It will be shown that the modern construction arose out of three distinct, but related early usages, and that each of these usages developed independently through a process of gradual, analogical extensions. Drawing on a diachronic corpus of 1,211 examples from the OED on CD-ROM, along with 1,047 contemporary examples from the Oxford University Press corpus, I will argue that the evolution of this construction provides strong support for a usage-based model of grammar in which linguistic knowledge is organized around the two complementary principles of (global) schema extraction and (local) analogical extension (cf. Bybee 1988, Langacker 1988, Barlow & Kemmer 1992).

Following Langacker, I assume that the grammar of a language is properly understood as “a structured inventory of conventional linguistic units” (1987: 57), and that the organization of this inventory largely reflects the experience speakers have of actual linguistic usage. This usage-based approach to language is distinguished from traditional generative approaches by being maximalist, non-reductive and bottom-up. The approach is maximalist in that it views language as “a massive, highly redundant inventory” in which conventional units “run the gamut from full generality to complete idiosyncrasy” (1988: 131). It is non-reductive in that it allows for both general rules (or schemas) and specific instances of those rules as part of a speaker’s grammatical competence. Finally, it is bottom-up in that the general rules are

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themselves understood as schematizations over experienced instances, so that the overall structure of the grammar is determined not by general cognitive principles alone, but also crucially by the probabilistic vagaries of experienced linguistic usage. In what follows, I provide empirical support for this general theoretical view of language.

1. The Modern *Way-Construction*

The modern *way*-construction is illustrated below in (1-3).

- (1) Rasselas dug his way out of the Happy Valley.
- (2) The wounded soldiers limped their way across the field.
- (3) %Convulsed with laughter, she giggled her way up the stairs.

Each of these examples in its own way entails the movement of the subject referent along the path indicated by the prepositional phrase. In (1) the verb codes a means of achieving this motion, i.e. the creation of a path. In (2) the verb elaborates the manner in which this motion is achieved. And in (3) the verb describes an incidental activity of the subject as she moves along the path. These three usages--means, manner, and incidental activity--give a rough sense of the range of the present day construction, though we should note that examples like that in (3) are at best marginal for many speakers. As will be seen, this usage is a late entry in the history of the construction.

A variety of facts justify us in viewing these sentences as instances of a grammatical *construction*, that is, as a conventional pairing of form and meaning (Fillmore, Kay and O'Connor 1988, Fillmore and Kay 1993; for further arguments that the construction is a *construction*, see Jackendoff 1990 and Goldberg 1995, in press). First, the construction assigns an idiomatic interpretation to sentences having the general form [NP_i [V NP_j's way OBL]]: in all cases the subject's movement is entailed, whether or not that entailment can be derived from the normal lexical semantics of any part of the sentence. Moreover, the argument structure of these sentences is often not regularly projected from the meaning of the verb: in (2) the normally intransitive *limp* takes a direct object; in (3) *giggle* acts like a motion verb with both a direct object and a directional PP. Finally, despite this idiomatic interpretation and unusual argument structure, the construction is used productively with a diverse array of predicates.

counting as an extension from a more basic means sense². This minimal enrichment effectively splits the representation in two, thus capturing the construction's variable interpretation (note the WITH/BY split in Jackendoff's conceptual structure) and according a different status to each of the two interpretations. The split has the further advantage of allowing us to associate different semantic constraints with each interpretation. As Goldberg notes, while the means interpretation is generally limited to coding motion achieved despite some obstacle or difficulty, no such constraint appears to hold for the incidental activity usage.

Still, there is reason to think that the simple polysemy hypothesis does not go far enough. As Goldberg herself points out, a survey of attested examples reveals that usage tends to cluster around certain narrowly defined semantic verb classes. Thus we commonly find examples with verbs of winding motion (*pick, thread, wind, wend, worm, snake, serpent, weave*) and laborious motion (*plod, crawl, grind, slog, stumble*); with fighting verbs (*fight, force, claw, elbow, knee, push*) and cutting verbs (*cut, hack, plow, dig, tunnel, eat, chew*); and with noisy verbs (*crash, crunch, clang, warble, sob, snarl*), among others. As Goldberg has argued for the English ditransitive construction, clusterings of this sort suggest that speakers are aware, not only of general syntactic patterns, but also of the particular ways those patterns tend to be instantiated in use (1995: 133-136).

In what follows, I argue that speakers are indeed aware of both the general patterns and their specific instances, and further that the specific instances play an important role in the grammar. The *way*-construction will thus be viewed as a massive and highly redundant network of related usages represented at multiple levels of schematicity. At the most fine-grained level, the representation includes information about specific verbs and their frequency of occurrence in the construction. Moving up a level of schematicity, verbs are clustered into types along a variety of semantic parameters. Because these types more or less fill up all of semantic space (or that portion covered by unbounded activity verbs) they provide ample motivation for higher order representations schematizing over prominent subsets of usages, and ultimately for Jackendoff's maximally schematic entry specifying only that the verb should mark an unbounded activity. These schematic categories may then

²My terminology differs from that of Goldberg, who uses *manner* for what I term *incidental activity* and handles examples like 1 and 2 both as instances of a means usage.

serve as the basis for novel usages of the construction, and thus can be seen to play an important and complementary role to that of the specific instantiations.

2. Growth and History of the Construction

The modern *way*-construction can be traced back to three early usages in which a possessed *way* appeared in direct object position with verbs of motion, path creation and possession. All three of these proto-usages were independently motivated by the lexical semantics of *way*, and each formed the basis for an independent thread of analogical extensions. In this section I briefly trace the development of two of these analogical threads from the fourteenth century to the present, confining my attention, for the most part, to the verbs which characterize them. The manner thread started with simple verbs of motion and gradually evolved to include a wide range of very colorful predicates coding a manner of motion. The means thread began with verbs of path clearing and creation and evolved to include predicates coding almost any means of achieving motion³. Not until the nineteenth century, when both threads were already quite richly elaborated, did they begin to tangle into a single category and so to obscure their original, independent motivations.

2.1. The Manner Thread. The manner thread has its roots in a much more general ME construction, the *go-your-path*-construction, in which a motion verb took an optional possessed path argument: as (4-5) suggest, any noun meaning something like “way” appears to have worked in this construction.

- (4) To madian lond, wente he his ride. (c. 1250. *Genesis & Exodus*, 3950)
- (5) Tho wente he his strete, tho flewe I doun. (1481. Caxton, *Reynard (Arb)*, 55)

Examples with *way* constitute a special case of this more general construction and are common from at least 1350 on. Early instances

³The third thread, which I omit for lack of space, involved usages with verbs like *keep*, *hold*, *take*, *snatch* and *find* coding the acquisition or maintenance of possession of a path. These usages were very common in early stages of the construction. But unlike the other two threads, this usage shrank rather than expanded over time, so that now only *find* (still one of the most of the common predicates in the modern construction) and a few other verbs remain to represent it.

tend to feature high-frequency motion verbs like *go, ride, run, pursue, wend* and *pass*.

- (6) He lape one horse and passit his way. (1375. Barbour, *The Bruce* xxxiii)
- (7) The kyng took a laghtre, and wente his way. (1412. Hoccleve, *De Reg. Princ.*, 3400)
- (8) Now wyl I go wende my way With sore syeng and wel away. (1450. *Coventry Mysteries*, "Cain & Abel" 193)
- (9) I ran my way and let hym syt Smoke and shitten arse together. (1557. *Welth & Helth*)

Up to 1700 only sixteen distinct verb types are attested in this thread, and most of these are common, basic-level words. The construction gradually expands, as verbs coding path shape, rate, and manner of motion find their way into usage by analogy with the more basic motion verbs already established in the construction. In addition to those shown in (10-12), these novel verbs include *sweep, wale, creep, plod, pick* and *wheel*, among others.

- (10) From Samos have I wing'd my way. (1667. Congreve, *Semele* ii. i. 2)
- (11) He windes his oblique way Amongst innumerable Stars. (1667. Milton, *P.L.*, iii. 563)
- (12) The moving legions speed their headlong way. (1715-20. Pope, *Iliad*, ii.)

By the early nineteenth century, the construction had become fairly productive, and between 1826 and 1875 we find as many as 38 distinct verbs of motion occurring in the construction. By now the role of analogy as a guiding force in the construction's evolution is apparent, as new forms entering the construction tend to cluster around certain well-defined semantic prototypes. In particular, we find a large number of verbs coding difficult or laborious motion--*plod, totter, shamble, scramble, churn, sap, grope and grabble, grind, flounder* and *fumble*--as well as a good number of verbs coding winding, tortuous paths--*wend, wind, thread, corkscrew, worm, serpentine* and *insinuate*. The examples in (13-16) give some small sense of the construction's range at this point.

- (13) She started up, and fumbled her way down the dark stairs. (1801. *Gabrielli's Mysterious Husband*, III. 80)

- (14) The poor Dominie..wearily plodded his way towards
Woodbourne. (1815. Scott, *Guy M.* xxviii)
- (15) Mr. Bantam corkscrewed his way through the crowd. (1837,
Dickens, *Pickwick Papers* xxxv)
- (16) He was merely serpentining his way to the part of the details.
(1837. T. Hook, *Jack Brag* viii)

Finally, by the end of the nineteenth century we begin to find verbs like *crunch*, *crash*, *sing*, *toot* and *pipe*--encoding not motion per se, but rather the noise that inevitably accompanies certain forms of motion. While this extension begins with a few isolated instances (examples with *ring* (1836) and *crunch* (1851) lead the way), a well-defined usage quickly emerges as novel verbs are added by analogy with these innovating leaders.

- (17) There is a full stream that tumbles into the sea..after singing its
way down from the heights of Burrule. (1890. Hall, *Caine
Bondman*, ii. iii)
- (18) Such a paltry collection of commonplace tunes..as jingle-jangles
and drums its way through the piece. (1899. *Westminster
Gazette*, 13 Feb 3/1)
- (19) The cars that buzzed and clanged their way past Wayne were
filled to the running-boards. (1917. Mathewson, *Second Base
Sloan*, 248)

The remarkable thing about this long evolution is the consistency of usage over the centuries. In every period certain predicates--*go*, *make*, *work*, *pursue*, *wing*--tend to recur and predominate in usage. And as new usages modestly build on the range of established of predicates, the construction gradually increases in productivity. Long strings of analogical extensions lead to discrete clusters of usage, which then license the extraction of more abstract schemas for the construction. These basic observations turn out to hold equally for the means thread.

2.2. The Means Thread. The created path usage which forms the basis for the means thread comes in fairly late at the end of the sixteenth century. By 1650, examples include verbs like *pave* and *smooth* from the domain of road building, verbs of path clearing like *cut*, *furrow out*, *poke out* and *eat out*, as well as the more general *force out* coding the general physical exertion required to make one's way.

- (20) Like as a fearefull Dove, which through the raine Of the wide
ayre her way does cut amaine. (1590. Spenser, *F. Q. i. v.* 28)
- (21) Arminius paved his way first by aspersion and sugillating the
fame and authority of Calvin. (1647. Trapp, *Com. Acts xxi.* 28)
- (22) Bacon was one of those that smoothed his way to a full ripeness
by liquorish and pleasing passages. (1653. A. Wilson, *Jas. I.* 37)

Over the next hundred years many of these predicates recur and many similar ones enter into usage. By 1750 we find several more examples from the domain of road building--*bridge*, *chalk out*--and many more coding some notion of clearing or cutting--*hew out*, *sheer*, *shave out*, *corrode*, *plough*, *dig*, *clear*, *free*. Note that usages like these necessarily imply that the motion is not easy (otherwise, why build a path?), and so lay the basis for Goldberg's constraint that motion be achieved despite some obstacle.

The "cutting" category remains the main attractor of new predicates for some time, but extensions do gradually emerge. The "fighting" usage, illustrated in (23) and (24), is a particularly prominent example, entering into usage around 1770 and rapidly becoming entrenched as a new source of analogical extensions.

- (23) Every step that he takes he must battle his way. (1794. Southey,
Bot. Bay. Eclog. iii)
- (24) Fighting his way to a chair of rhetoric. (1816. Scott, *Antiquities*,
xxx)

The usage here is presumably motivated by the common use of *force* in the construction and, perhaps, by a frequent occurrence of the cutting usage for battle scenes. By 1875 examples include uses with *push*, *struggle*, *jostle*, *elbow*, *shoulder*, *knee*, *beat* and *shoot*.

In the nineteenth century, as the manner thread experiences a rapid expansion, the means thread begins to allow verbs encoding increasingly indirect ways of reaching a goal. In (25-28) the verbs do not depict any physical exertion but rather mark various social and psychological sorts of activity which enable (literal or metaphorical) motion. In (29-30), where the overtly coded action only incidentally enables motion, the causal link is even more indirect. Cattermole may get to oblivion by means of his bad painting, but there is no sense in which this activity necessarily leads to this end, nor even that Cattermole was ever trying to get there.

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- (25) Sad deeds bewailing of the prowling fox; How in the roost the thief had knav'd his way. (1821. John Clare, *The Village Minstrel* I. 18)
- (26) He...smirked his way to a pedagogal desk. (1823. *New Monthly Magazine* VII. 386)
- (27) Not one man in five hundred could have spelled his way through a psalm. (1849. Macaulay, *History of England* iii. I. 405)
- (28) The passionate absorbedness with which..intellect has plumbed its way forward in search of God. (1881. Robertson, in *Sunday Mag.*, April, 245)
- (29) Cattermole...now prostitutes his talent...and blots his way to emolument and oblivion. (1844. John Ruskin, *Modern Painters* Pref. 67)
- (30) Addison wrote his way with his Whig pamphlets to a secretaryship of state. (1890. T. F. Tout, *History of England*, 111)

By the time examples of this sort appear in the construction, the cutting and fighting usages were well entrenched, and these, along with the well established manner uses, allowed for the extraction of increasingly abstract schemas which could generalize over the range of established usages. Such schemas naturally supply a solid basis for increasingly far-flung extensions. The farthest-flung are cases in which the verb codes neither a means nor a manner of motion, but rather some incidental activity that happens to accompany motion. As noted in section 1, usages of this sort are still unacceptable for many speakers; however, they have been around since at least 1866.

- (31) He..whistled his way to the main front-door. (1866. Blackmore, *Cradock Nowell* xvi)
- (32) He ahs and ers, and hums and hawes his way through an incredibly fatuous pronouncement. (1931. *Time & Tide* 12 Sept. 1057)

Note that this extension appears to be equally well-motivated as stemming from either the means or the manner thread. Until well into the twentieth century instances of this sort consistently involve sounds produced in the process of moving, and as such they appear to be extensions from examples like (17-19) in which the verb encodes a noisy manner of motion. On the other hand, it is equally plausible to think of these as extensions from the means thread, since the notion of an incidental activity that accompanies motion is really but one small step away from cases like (29-30) coding activities that incidentally enable motion.

Really, there is no reason we should have to choose. By the time such usages begin to emerge, the two threads are already so entangled that it is often difficult to decide for a particular novel extension whether it should count as means or manner. The growth of the two threads had inevitably led to areas of overlap between them, and the extreme range of established usages naturally led speakers to reanalyze the categories that underlay them. Doubtless, the reanalysis was not sudden, for there is no discernible break in the long chain of analogical extensions that clearly precipitated it. Still, speakers must have gradually reorganized the links that mediated this increasingly vast network of usages, uniting them into what then became the modern construction⁴.

3. Generalizations and Discussion

The basic developments that characterize the growth of the *way*-construction appear to be remarkably straightforward. Early predicates associated with the construction tended to be less unusual and more schematic, while later predicates include nonce forms (e.g. in 32), onomatopoeic noisy verbs, and generally a variety of unusual and highly specific subordinate-level words. As usage began to include increasingly *recherché* sorts of verbs, the construction's conceptual range gradually expanded: 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.

It is useful, in this light, to consider the construction, in the terminology of Fauconnier and Turner (1994, this volume), as an example of a syntactic blend--that is, as a specialized grammatical pattern serving to combine disparate conceptual contents in a single, compact linguistic form. Essentially, the modern construction provides a way to blend the conceptual content of an activity verb with the basic idea of motion along a path. The trend toward verbs coding activities which are increasingly marginal to the achievement of motion thus reflects the construction's gradually increasing power to blend different types of events into a single conceptual package.

⁴For similar developments in which diachronic pressures led to the reconceptualization of a complex category see Geeraerts (1990), Melis (1990) and Winters (1989).

Crucially, the construction did not acquire this power over night. The transition from the early simple uses to the later more elaborate ones involved a long process of local extensions, with each successive phase of usage building on the established patterns of earlier generations. While this paper has emphasized the conceptual side of these extensions, it is important to note that the construction's emergence has a formal side to it as well, and that this formal development was also very gradual in nature.

Note that several of the diachronic examples (6-10, 12) lack an overtly expressed oblique argument, despite the fact that in modern usage the oblique is essentially obligatory in the construction. In coding the corpus, my strategy was to accept as an instance of the construction any sentence which: (1) includes a non-oblique possessed *way* argument; (2) has the possessive coindexed with the subject; and (3) entails, or at least allows the implicature, that motion was achieved. The result is that many examples without overt obliques are included in the corpus; interestingly, however, their distribution is hardly random.

Table 1

	Total Tokens	# No Obl.	% No Obl.
1374-1587	40	24	60%
1588-1650	64	35	55%
1651-1700	72	28	39%
1701-1800	107	31	29%
1801-1825	77	19	25%
1826-1850	138	21	15%
1851-1875	190	34	18%
1876-1900	210	24	11%
1901-1945	169	18	11%
1946-1960	74	4	05%

Table 1 lists the total number of tokens occurring at each stage in the history of the construction, and shows in the rightmost columns the number and percentage of tokens occurring without an overt oblique. As can be seen, while such instances were common in early stages of the construction, originally including more than half of the attested examples, their frequency gradually declined over several centuries. Indeed, by the twentieth century what few examples remain tend to occur in specialized, idiomatic instances of the construction, as in the expression *I went my own way*. The gradual disappearance of such examples follows a linear function. It thus

appears that, just as the construction's general productivity emerged from a long series of analogical extensions and increasingly abstract constructional schemas, so did the construction's modern form slowly emerge as general statistical tendencies became strengthened into rigid, categorial constraints.

4. Conclusions

The *way*-construction emerged gradually over the course of several centuries. There is no single moment we can point to and say, "This is where the construction entered the grammar." Rather, a long process of local analogical extensions led a variety of idiomatic usages to gradually gain in productive strength even as they settled into a rigid syntax. As the range of predicates spread, increasingly abstract schemas could be extracted from them and this in turn drove the process of increasing productivity.

Trivially, any synchronic model of grammatical organization must be reconcilable with the observed facts of linguistic change. Since the growth of the *way*-construction only makes sense if speakers somehow kept track of which verbs were used in it and how frequently they were used, it follows that such information must be available to speakers as part of their knowledge of a language. The evidence from the *way*-construction suggests that while speakers surely do rely on abstract grammatical knowledge, the role of actual linguistic usage in organizing that knowledge may be much greater than is generally supposed.

I should emphasize that these conclusions are not just special facts about unusual idioms like the *way*-construction. One clear result from work on grammaticalization is that change tends to occur in local contexts (Hopper and Traugott 1993:2). Recent work by Carey (1994, this volume) demonstrates that the shift from resultativity to the coding of perfect aspect in English started with narrowly defined usages involving verbs of mental state, perception and communication, and only gradually expanded to uses with other verbs. Similarly, Hare and Elman (in press) provide a connectionist model showing how the growth of English strong and weak verb classes was driven by analogical extensions within narrowly defined verb classes (cf. Tabor 1993 for similar work on the degree modifiers *kinda* and *sorta*). More generally, the work reported here reflects a tendency in theoretical work towards viewing the organization of grammar as driven by and arising from the demands of actual linguistic processing and usage (Barlow and Kemmer 1992,

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Bates and MacWhinney 1987, Bybee 1988, Kemmer and Israel 1994,
Langacker 1987, 1988).

By way of conclusion, I would like to suggest two very general
principles that might be invoked to explain the sorts of phenomena
discussed in this paper.

1. The Production Principle (Analogical Usage):

Utterances should sound like things the speaker has heard before.

2. The Comprehension Principle (Schema Abstraction):

Representations should capture similarities across experienced
usages.

These principles are intended to capture the complementary roles of
schema extraction and analogical extension in the organization of
grammatical knowledge. The production principle represents a
tendency toward conservatism and reflects the fact that people tend
to talk like the people they identify with. The comprehension
principle, on the other hand, is a force for innovation and reflects the
fact that, in general, people will seek to accommodate and make
sense of even the most unexpected novel utterances. Of course,
individuals may be expected to show considerable variation both in
their commitment to these principles and in their ability to execute
them (not everyone is a perfect mimic, and not everyone will extract
the same generalizations). Still, I would suggest that the two
principles together do provide a useful basis to begin thinking about
the complementary roles of innovation and imitation in mediating
between abstract linguistic abilities (i.e. competence) and actual
linguistic usage (i.e. performance).

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