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Do semantic modal maps have a role in a constructionalization approach to modals?

Elizabeth Closs Traugott

My aim in this paper is to show that, in modified form, semantic connectivity maps of the kind developed in van der Auwera & Plungian (1998) and van der Auwera (2013) can be useful for showing the development over time of relationships among polysemous constructions. Since these maps pertain primarily to meaning and are intended as contributions to cross-linguistic generalizations rather than to language-specific grammars, their purpose might seem orthogonal to construction grammar, in which form–meaning pairs are the basic units of grammar. I propose that the semantic maps can usefully be rethought as being of two kinds: schema-construction maps that represent relationships between abstract, conceptual schemas linked to underspecified form, and micro-construction maps that represent relationships between specific constructions. These two kinds of maps capture both form and meaning since they represent form–meaning pairings, but at different levels of abstraction. They can also capture direction of changes, as tendencies at the schema level and specific trajectories at the micro-level. My case study is the development of the marginal modals BETTER, RATHER, SOONER (see Denison & Cort 2010, van der Auwera & De Wit 2010). I show that BETTER is significantly different in distribution and meaning from RATHER and SOONER, and that, although they form a family of micro-constructions, they do not form a tight-knit group. This can be captured well by modified semantic maps.

Keywords: semantic maps, modality, advice-constructions, preference-constructions, constructionalization, history of English

1. Introduction

In the usage-based models of construction grammar developed in Goldberg (2006; also 1995) and Croft (2001), a construction is a form–meaning pair in a language-specific grammar. Constructionalization, the rise of a new construction,

is the creation of form_{new}-meaning_{new} pairs in particular contexts (Traugott & Trousdale 2013). Semantic maps have traditionally been conceptualized as connectivity maps¹ (e.g. van der Auwera & Plungian 1998), which represent ways in which meanings overlap or are linked, e.g. in English deontic and epistemic modality, as exemplified by *may* and *must*. Recently there has also been growing interest in proximity maps (e.g. Cysouw et al. 2010), which represent the extent to which meanings share the same contexts across languages (see Section 2.1 below). The question I address in this paper is: What role can semantic maps play in a usage-based constructionalist perspective on change in modality since the semantic maps pertain to meaning, with form only assumed, and are intended as contributions to cross-linguistic, typological generalizations rather than language-specific grammars? What relation might semantic maps have to the objective formulated by Boas: “A linguistic model should in principle be able to account for all facets of a speaker’s knowledge about their language” (Boas 2013: 234)?

One suggestion has been that to the extent that semantic maps capture recurrent cross-linguistic generalizations regarding connectivities they can be interpreted as “conceptual spaces”. The term “semantic maps” would then be restricted to language-specific categories mapped onto regions in this space (Croft 2001: 93). How this proposal might relate to a constructionalization framework for studying change has not been worked out. Building on Croft’s suggestion, I propose that to be optimally valuable for studies of change in a constructionalist framework, semantic connectivity maps need to be reconceptualized as models of the relationships between the micro-constructions that are the input to and output of language-specific changes in meaning and form; these micro-constructions are linked to the larger schemas and network contexts in which changes occur, and ideally specify the degrees of connectivity and proximity between nodes in the network. Prior work on conceptual and semantic maps in a construction grammar framework has been focused mainly on the question of how maps can represent extensions from prototypes, e.g. Fried (2007) on extension of the reflexive in Czech to various argument structure patterns and Fried (2009) on the range of uses of the possessive construction in Czech.

The discussion is organized as follows. Some characteristics of semantic maps and conceptual spaces are outlined in Section 2, as is the rationale for building on them. Section 3 is a case study of the history of the marginal modals *BETTER*, *RATHER*, and *SOONER*² (Denison & Cort 2010, van der Auwera & De Wit 2010).

1. These have also been referred to as “contiguity” and “adjacency” maps (van der Auwera 2013: 155).

2. Caps are used to generalize over the various forms *better*, *had/d better*, *would/d/had rather*, and *would/d sooner* (see Section 3) and to distinguish them from the adverbs *better*, *rather*, *sooner*.

Details of the proposal to model both conceptual spaces and semantic maps are given in Section 4. Section 5 concludes.

2. Semantic maps and conceptual spaces

Semantic maps have been used for at least sixty years as geometrical, graphic representations of semantic polysemies and variation. Particularly important for the present study are Croft's (2001) proposal concerning regions in conceptual space, with focus on parts of speech, and van der Auwera & Plungian's (1998:98) map of implicational relationships in modal semantic space. The latter can be partially combined with proximity maps.³

2.1 Connectivity and proximity maps

Croft proposes that speakers' knowledge of their language includes a conceptual space, which is a "structured representation of functional structures and their relationships to each other" (Croft 2001:93). These conceptual spaces are "not merely semantic", but also pragmatic and discourse-functional. They have regions such as parts of speech (his main example), tense, aspect, and modality. The conceptual spaces are considered to be cross-linguistic and "universal" (p.93). The term "semantic map" is reserved for categories of a particular language that are mapped onto a region within conceptual space (p.94) and connected with each other. The "central principle" is the

Semantic Map Connectivity Hypothesis: any relevant language-specific and construction-specific category should map onto a CONNECTED REGION in conceptual space. (Croft 2001:96; small caps original)

Croft goes on to say (p.98) that connections between points "lend themselves to a network representation" like representations found in models of activation such as Elman & McClelland (1984) and subsequent research.

Croft's model is non-implicational and synchronic. By contrast, van der Auwera & Plungian (1998) conceptualize semantic maps as diachronic as well as synchronic hypotheses about possible and impossible meaning overlaps, unidirectional paths of development and implicational universals, the details of which are discussed immediately below in Section 2.2. Connectivity maps are also conceptualized as representations or "portraits" of synchronic variation and the rise of polyfunctionality over time (van der Auwera 2013), or of extensions of prototypes

3. For types of maps see Narrog & van der Auwera (2011) and van der Auwera (2013).

(Fried 2007). Such maps have played an important role in the study of modality (e.g. van der Auwera & Plungian 1998, Simon-Vandenberghe & Aijmer 2007).

Proximity maps as developed in e.g. Cysouw et al. (2010) involve a synchronic statistical grid approach that measures degrees of semantic similarity in terms of context (cf. Haspelmath 2003, Croft & Poole 2008). The focus of research on proximity maps is the extent to which meanings share the same morphosyntactic contexts across languages, for example, to what extent do inchoative-causative pairs like *wake up/wake, burn/burn up/down* have comparable morphological marking in other languages? (Cysouw 2008, reworking Haspelmath 1993). The connectivity and proximity models are not mutually exclusive as they address different aspects of language users' knowledge (van der Auwera 2013). Indeed, connectivity and proximity may be conceptualized as mutually enhancing (e.g. Mauri 2007).

2.2 Maps and change

Conceptually, van der Auwera & Plungian's map is a valuable tool for determining the nature of the modal system in a particular language and how it changes. In the years since 1998, it has become clear that polysemy overlap between situational obligation and epistemic modality is mainly a feature of European languages, Turkish, Hebrew, and Egyptian Arabic. It is not found in Asian languages (cf. Narrog 2012), so the map is not as typologically robust as originally hoped in terms of intersections between semantic clusters, but that does not reduce its value for the study of modality in a particular language or of particular sets of modalities, since the overlaps and relationships between clusters can be adjusted for each language or language group, most especially if the connectivity map is combined with a proximity map, as suggested in Figure 1. Here the length of the arrows represents approximate distance between semantic clusters.

van der Auwera & Plungian's semantic map of modality presents a subset of modal relationships outlined in Bybee et al. (1994). It is an implicational flow-chart of connectivities and polysemies, ranging from non-modal meanings to situational to epistemic meanings. Situational meanings include ability, "deontic" permission (the speaker allows a situation, as in *You may go now*), and obligation (*You must/have to go now*). Epistemic meanings include the speaker's assertion that a proposition is possibly or necessarily true, relative to some information or knowledge (van der Auwera & Ammann 2013); compare *She may be home now*



Figure 1. Abstract diachronic map showing connectivity and proximity (van der Auwera 2013: 165)

with *She must be home now*. A distinction is made between participant-internal and participant-external modality. This has to do with whether necessity or possibility are conceptualized as based within or outside of the individual. Ability, for example, is typically internal (*Jack can dance well*). Obligation is normally external, imposed by someone other than the subject (*I must get to soccer practice early, my coach said; You must go home now, your parents have said so*), but sometimes it appears to be internal (*I must go home now, I feel the need to be alone*). However, in the last example, the speaker in some sense is obliging/advising him- or herself to go home.

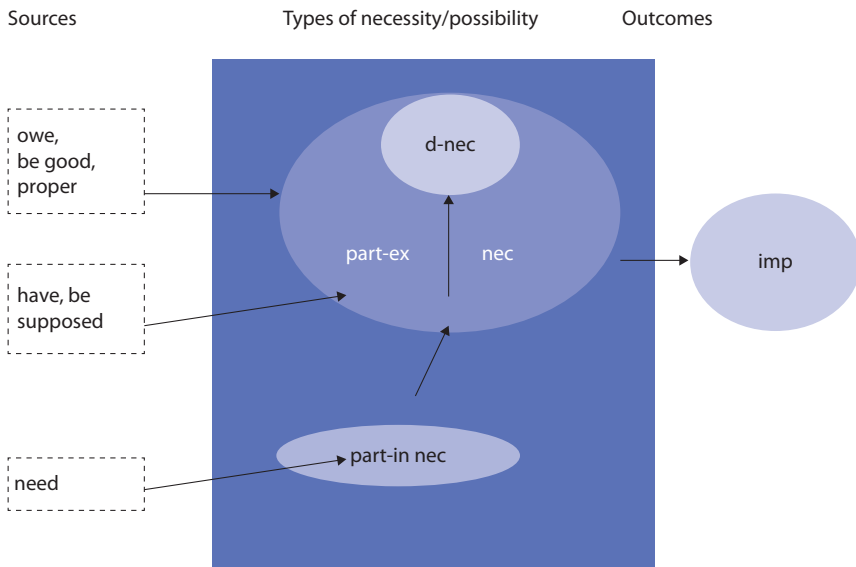


Figure 2. Partial connectivity map, based on van der Auwera & Plungian (1998: 98) and modified by Narrog (2012: 87)⁴

The original modal map was developed for a range of modality and at a level of granularity not relevant to the present paper, therefore details of the map and its various versions (cited in Narrog 2012: 85–87) are not important here — only the schematic concept. Figure 2 presents a modified small sub-part of van der Auwera’s & Plungian’s modal map that is relevant to the case study on comparative modals BETTER, RATHER, and SOONER. The map shows potential connectivities, polysemies, or historical trajectories from non-modal source meanings through modal meanings to mood and related meanings. For example, ‘be good, proper’

4. Abbreviations are listed at the end of the paper.

may give rise to deontic necessity and ultimately to imperative.⁵ The background, here represented as a box, can be considered to be the domain of grammaticalized modality.

The ovals in Figure 2 might suggest discrete areas. However, they represent clusters rather than regions with strict boundaries. For example, there is a continuum from a state of affairs being deemed ‘good’ or ‘proper’ (desirable and preferable), as in *You’d better go now*, through weak obligation *You should go now* to stronger obligation *You ought to go now*.

van der Auwera & Plungian privilege the deontic-epistemic dimension in modality and seek to identify very specific trajectories of change. By contrast Narrog (2012) proposes that the key dimension in modality is volitive–non-volitive, which, in his view, is more appropriate for Asian languages. Narrog makes no claims about specific changes, only general directionalities. Volitive encompasses modality that essentially concerns “an element of will” (Jespersen 1924: 313–321) or “interest in the realization of a state-of-affairs” (Narrog 2012: 284). It may be expressed in terms of desirability, preference, permission, or obligation, and therefore subsumes deontic modality and many of the agent-oriented modalities that Bybee et al. (1994: 177–179) identify, notably obligation, and desire (but not ability). For Narrog non-volitive includes ability, circumstantial and epistemic possibility. Cross-cutting these is the dimension of event- to speech act-orientation, with speaker-orientation in between. This dimension accounts for the continuum from “objective” to “subjective” to “intersubjective” viewpoint. These are all relevant dimensions for the histories of BETTER, RATHER, and SOONER.

Narrog points out that volitive–non-volitive is a closed scale, but event-orientation to speech-act-orientation is an open scale. He models a semantic space which allows for representation of both semantic connectivity and semantic proximity. Abstractly, this semantic space is as in Figure 3, with connectivity on the x -axis and proximity on the y -axis. A caution is that to the extent that expressions are shifted across the space over time, neither axis is strictly unidirectional. A strong tendency has been identified for sequences of semantic change to involve event-oriented to speaker-oriented (subjective) to speech act-oriented (intersubjective) (Traugott & Dasher 2002). But the speaker-oriented space is not always used prior to intersubjectification. For example, question tags, which are originally genuine speech-act oriented/intersubjective questions, were subjectified in English as pragmatic markers (Tottie & Hoffmann 2009). Therefore, the continuum should not be interpreted as either a unidirectional path or an implicational hierarchy.

5. In the 1998 paper, the arrow extends downward from deontic to participant-external necessity. Narrog (2012: 87) reversed the arrow to integrate later discussion in van der Auwera et al. (2009).

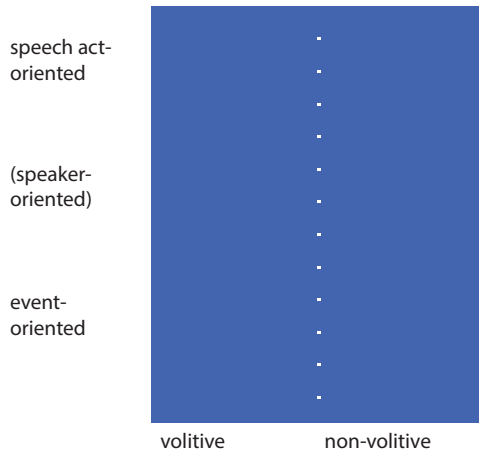


Figure 3. Modal space (based on Narrog 2012: 56)

Changes may occur ‘across’ the *x*-axis, e.g. *must*-, past tense of *mot*- ‘be able’ > obligation *must* is a change from non-volitive circumstantial modality to volitive deontic modality, and deontic > epistemic *must* is a change from the volitive to non-volitive modality. Changes may also occur ‘up’ the *y*-axis as speakers recruit expressions from relatively objective, event-oriented meanings to more (inter)subjective meanings, as in the cases of epistemic *must* and of *recognize* (originally ‘re-gain possession’, later extended to various speech acts of acknowledgement [OED *recognize* 1]). The trajectory of changes from non-volitive to volitive to non-volitive *must* is therefore ‘spiral’-shaped, not a return to the original meaning.

Although it is meant to encompass both connectivity and aspects of proximity, Figure 3 clearly is not a ‘map’ as it has no landmarks. Nevertheless, the hypothesized trajectories of particular expressions are conceptualized, as in connectivity maps, as paths through the conceptual space.

2.3 Reasons for choosing connectivity maps for work on constructionalization

In this paper, I am concerned with the question of how connectivity maps might be used in work on constructionalization. The reason for selecting a connectivity map is that such a map can be used as a model of paths of change. Since a constructionalization is the development of a form_{new}-meaning_{new} pair, semantics needs to be associated with overtly expressed form. In connectivity maps, form is assumed to be relatively constant (though it may undergo processes of form change such as fusion and reduction recognized in work on grammaticalization and lexicalization). If form were not held constant, polysemies (e.g. between deontic and epistemic *may* and *must*) could not be established. Wälchli (2007), focusing on how

the methodology of synchronic proximity maps can enhance understanding of motion events, points out that both connectivity and proximity maps “rely on the single principle that cross-linguistically recurrent identity in form reflects similarity in meaning”. This is a semasiological approach and fits work on construction grammar, where the form is considered key to constructional families.⁶

In construction grammar, sets and schemas form organizational networks, and therefore a map would need to be usable at the micro-level of the individual construction and at the macro-level of a schema. Given the restrictions on two-dimensional maps on paper, it is not feasible to account for both levels in one map. I therefore propose two maps, as Croft (2001) suggests, one an abstract schema-construction map (SCM) which models relationships among schemas, and the other a specific micro-construction map (MCM) which models relationships among micro-constructions. The MCM is linked to the SCM.

In the modal domain, MCMs would ideally have to account not only for meaning changes associated with grammaticalized modals but also for development over time of modals linked with other parts of speech: verbs (e.g. *suppose*, Noël & van der Auwera 2009), adverbs (e.g. *certainly*, *surely*, Simon-Vandenberg & Aijmer 2007), nouns (e.g. *condition*, *fact*, Kanté 2010), and adjectives (e.g. *essential*, Van Linden 2012). In the case study discussed in Section 3, the modal expressions involve a comparative adverb (*better*, *rather*, *sooner*) with an auxiliary and in one case, bare BETTER, without an auxiliary.

A construction has minimally two components: meaning and form, but more properly has at least the six properties Croft (2001) identified: for meaning it is semantics, pragmatics, discourse function, and for form syntax, morphology, and phonology, or a set of features (e.g. Sag 2012).⁷ Therefore different properties can be linked in the network. Meanings can be organized in their own network, as can syntactic forms.

In what follows, I propose thinking of a MCM as a representation of changes in individual specific micro-constructions, and their network relations to larger

6. A complementary, onomasiological, approach is to start with a concept and determine which expressions come to be used for it (see Geeraerts 2005). The constructional analog would be researching the class of quantifiers, regardless of their form. In practice, however, a subset with similar form is usually investigated, e.g. binominal quantifiers like *a lot/heap/bit/shred of* (e.g. Brems 2011). Although the proximity map is designed mainly for synchrony, being a grid it might allow for answers to the onomasiological question, in this case: What expressions come over time to share similar contextual clusters?

7. In any particular construction, one or more of the components/features may be unspecified, e.g. in English few constructions other than derivational word formations specify morphology. Also, inheritance (see Section 2.4) obviates the need for repeating information at all levels of the constructional hierarchy.

SCMs. To test and develop the proposal, in Section 3 I sketch out the development of the non-traditional modals *BETTER*, *RATHER*, and *SOONER*.

2.4 A proposed model

Ideally what is needed for construction grammar are maps that:

- a. account for changes at both the schematic and the micro levels,
 - b. overtly link meaning (semantic, pragmatic, and discourse functional) with form (syntactic, morphological, phonological),
 - c. show the connectivity of changes combined with proximity in terms of both form and meaning,
 - d. account for networks with other constructions in conceptual space.
- (see also Mauri 2007).

In Section 2.3, schema-construction maps (SCMs) and micro-construction maps (MCMs) were distinguished. They can go a long way in addressing the desiderata a)-d), but as the focus is on meaning, they cannot be expected to represent all aspects of networks. Construction grammar as developed by Goldberg has been concerned with networks of hierarchic relationships, e.g. inheritance relationships, which capture the degree to which lower level properties are predictable from higher level ones.⁸ Maps, on the other hand, are concerned with associative relationships, mostly from one construction to another. Inheritance is relevant at the point of a schematic nodes, where it sanctions members of sets.

Changes undergone by micro-constructions are language-specific and can be expected to arise in ways that are harmonic with and constrained by schemas in the language, as well as contributing to their growth. While conceptual in nature, Narrog's parameters seem to be well suited, in English as least, to be features of micro-constructions. What role they might play in schemas requires a different study since they involve stances rather than categories or functions.⁹

As was mentioned in Section 2.1, connectivity semantic maps are semasiological — form is assumed to be relatively constant at the level of the individual expression and of sets of expressions. For example, van der Auwera & Plungian

8. For one of several critiques of inheritance as too rigid a concept, see Fried (2007). Fried proposes that a family-resemblance approach is more realistic (p.756). This proposal could be incorporated within the view outlined here.

9. For example, modal schemas tend not to correlate directly with (inter)subjectivity. Although epistemic modality is often regarded as subjective, there are degrees of subjectivity and not all epistemics are subjective (e.g. general truths like *All men must die*); see Narrog (2012: Chapter 2) for discussion.

(1998) sought to develop a geometric representation of grammaticalized modals in such a way that the historical path of a specific modal can be plotted, as well as that of a set of similar modals. Simon-Vandenberg & Aijmer (2007) sought to develop a geometric representation that accounted for the particular meanings (semantic, pragmatic, and discourse functional) of modal certainty associated with specific adverbs.

SCMs and MCMs are linguists' generalizations. Do they also represent speakers' knowledge of their language? Croft (2001:92) proposes that both conceptual spaces and specific semantic maps do so.¹⁰ If 'conceptual spaces' are reinterpreted as SCMs and specific semantic maps as MCMs (i.e. if constructional form is added to the map), conceptualizing the maps as well as the inheritance hierarchies as part of speaker's knowledge of their language may appear to be over-reaching. Maps are after all multidimensional inter-constructional network relationships. The speaker is hypothesized to have knowledge of these 'horizontal'¹¹ relationships as well as of the multidimensional intra-constructional taxonomic hierarchies, which are nodes in the network. To extend the metaphor, maps model paths; the hierarchic taxonomy is a kind of hub. Modal schema maps are linked to other schema maps, such as parts of speech maps (Croft 2001), and ultimately all the other domains of grammar relevant to a language (but at different degrees of proximity).

However, despite the challenge of hypothesizing that a speaker has knowledge of SCMs and MCMs relevant to their language system, the complexity of neuronal networks should not be underestimated (see e.g. Niyogi 1998, Goldberg 2006). With respect to specific constructions, such as the comparative modals discussed in this section, individual speakers would appear to have access to at least some of the layerings of older and newer functions that the maps represent. By hypothesis, speakers know that *BETTER* is an item-specific construction that overlaps with *RATHER* and *SOONER*, but *RATHER* and *SOONER* are more similar to each other. In other words, they have local maps of pattern and polysemy. Likewise, individual speakers unquestionably have access to generalizations and abstractions and an intuitive sense of differences between obligation and inference, between participant-internal and participant-external modality. I therefore cautiously follow Croft and hypothesize that both SCMs and MCMs are parts of a speaker's knowledge of a language and need to be captured as organizing factors in the construction, the inventory of constructions.

10. For discussion of whether typological schemas can be considered part of a speaker's knowledge rather than products of functional principles and frequency, see Cristofaro (2010). Her example is the animacy hierarchy.

11. Van de Velde (2014) also proposes horizontal networks. This paper came to my attention too late to incorporate into discussion.

3. A case study

Recently there has been some interest in ‘marginal comparative modals’ such as those in (1):

- (1) a. Well then, I **had better** put the remaining fifty-five minutes to good use. (2012 McMullen, *Ninety Thousand Horses* [COCA])
 b. No, I don’t like work. I **had rather** laze about and think of all the fine things that can be done. (2010 Deresiewicz, *Solitude and Leadership* [COCA])
 c. All of us love pups and want them to live. We’d **sooner** give up hunting and live on grass than hurt a pup. (2008 Hearst, *Promise of Wolves* [COCA])

(1a) can be paraphrased as ‘I would be well advised to put/I should put’, (1b) as ‘I would prefer to laze about’, and (1c) as ‘We’d prefer to give up hunting’. As van der Auwera & De Wit (2010: 10) point out, “preference can be understood as comparative volition: one wants one thing rather than another”. Despite differences in meaning and in distribution, comparative modals of the type in (1) have been regarded as a set. Denison & Cort (2010) say *I’d better/sooner/rather X* form “a group of phrasal items”, and van der Auwera & De Wit (2010) passingly suggest they form a “paradigm”. Quirk, et al. (1985: 141) suggest they belong to a larger set of “modal idioms” that includes not only *had/d better/would rather*, but also *have got to* and *be to*.

Although most works on modals mention desire and sometimes advisability, few mention preference. However, Narrog (2012) lists preferential modality among subcategories of modality. He characterizes it as follows: “A proposition is marked as a necessity or possibility with respect to someone’s preferences” (Narrog 2012: 9). However, on p. 116 he says that preferential modality is associated only with necessity, a position that is supported by the three modals under discussion. All the same, deonticity is weak. Narrog (p. 255) notes that in Japanese, there are ‘advice’ or ‘recommendation’ constructions that only indirectly hint at obligation, e.g. *hoo-ga ii* ‘this way is better’; in Japanese preference is mainly volitive. The element of desire or will in both advisability and preferentiality can be seen by comparing *should* (weak obligation, advisability), *better* (advisability), and *want* (desire):¹²

- (2) (In order to stay in shape)
 a. you *should* exercise at least 20 minutes a day
 b. you’d *better* exercise at least 20 minutes a day
 c. you *want* to exercise at least 20 minutes a day

12. Thanks to Alexander Bergs for suggesting (2c).

In Section 3.1 I outline the data sources and methodology for the case study. Section 3.2 highlights the main similarities and differences between the individual comparative modals in Present Day American English. Section 3.3 is devoted to a brief history of BETTER, RATHER, and SOONER, and in Section 3.4 I pose the question whether they form a unified schema. I suggest they do not: there is a distinct asymmetry between BETTER and RATHER/SOONER: BETTER is future-oriented and often used performatively, whereas the other two are not (*You'd better go* can be a directive, whereas *You'd rather/sooner go* cannot). Interpreting the data in terms of SCMs an MCMS is reserved for Section 4.

3.1 Data and method

Prior work on the comparative modals has mostly been based on relatively small corpora. For example, van der Auwera & De Wit (2010) use the LOB and FLOB corpora for twentieth century UK English and BROWN and FROWN for twentieth century US English. Each is a corpus of about a million words. Denison & Cort use not only these data bases but also ARCHER, LLC, and BNC, of which BNC is by far the largest at 100 million words. Here I focus on US English, using two large corpora: COCA (440 million words as of December 2014), and COHA (400 million words). To explore evidence from Early Modern English data,¹³ I investigated CED (1.4 million words), a corpus of dialogues that gives insight into relatively spoken registers, CEECS (450,000 words), a corpus of letters from 1418–1680, and the *Open Source Shakespeare* (OSS), consisting of all Shakespeare's plays (836,000 words) and poems (not used).

Searches were conducted for *better, rather, sooner* followed by verb (V), using the "Pos List" function in COCA and COHA, which allows searches with N, V, Adj, Adv, and other collocates) and preceded by an auxiliary, not only those that have been attested in other works (*had, 'd, might, should, would*), but also *may, shall, and will*. This methodology has the disadvantage of excluding examples with *not* immediately following the search item (3a), with infinitive *to* after it, as in (3b), or with a new subject (3c), but a pilot study suggested that such exclusions did not skew the findings significantly since the study is qualitative and is not meant to be an exhaustive account of the three comparative modals.

- (3) a. I **had sooner not** break the laws of my country (1894 Alma-Tadema, *Wings of Icarus* [COHA])
 b. I confes that I loue my children well, but I **had rather to** haue none att all, then to haue them soe

13. Periods of English are roughly Old English 650–1100, Middle English 1100–1500, Early Modern English 1500–1700, Modern English 1700–present.

'I confess that I love my children well, but I had rather have none at all than have them so' (1635 Meautys, *Letter to Cornwallis* [CEECS: CORNWALL])

- c. I had **rather** yow produced yowr witsnesse.
'I had rather you produced your witness' (1586 D1MBARRO [CED])

The main analytic method was paraphrase. For example, **BETTER** is paraphrasable by 'should/it would be advisable if', **RATHER** and **SOONER** 'would/'d prefer'. So for examples in (1) above, paraphrases were:

- (1') a. I **should/It would be advisable if** I put the remaining fifty-five minutes to good use.
b. No, I don't like work. I'd **prefer to** laze about and think of all the fine things that can be done.
c. We'd **prefer to** give up hunting and live on grass than hurt a pup.

Coding was conducted manually for examples extracted from the Early Modern English data bases, which do not have the search facilities provided by COCA and COHA. The parameters coded for were initially: \pm modal; \pm standard of comparison (a *than*-clause). At the second stage, if +modal, then also \pm participant-external (where -participant-external = 'participant-internal'); \pm volition; \pm event-oriented. Finally, if -event-oriented, then also \pm intersubjective (where -intersubjective = 'subjective').

3.2 BETTER, RATHER, and SOONER in COCA

Structurally, **BETTER**, **RATHER**, and **SOONER** typically have the form 'd/had *better/rather/sooner* V... (*than*). All are preferred in COCA with the reduced form '-d, but to differing degrees. Semantically they all can be used to express deontic "preference or comparative desirability" (OED *have* 21a). As will be discussed in Section 3.3.1, *better* can occur bare, without an auxiliary, as in (4):

- (4) "There are stories, of course, legends... But **better** you go in without knowing them." (1991 Sirota, *Bicycling through Space and Time* [COCA])

With an auxiliary, **BETTER** and **RATHER** both far outrank **SOONER** in frequency. van der Auwera & DeWit (2010) found that in their data 'd is the most frequent auxiliary with the three adverbs and that, while *had better* is well represented, there are no examples of *had* with *rather* or *sooner* in their data. A search of 'd *better*, 'd *rather*, and 'd *sooner* V in COCA gave the following returns (raw data):

Table 1. Numbers of hits in COCA

<i>'d better V</i>	4376
<i>'d rather V</i>	3272
<i>'d sooner V</i>	52

As in van der Auwera & De Wit's data, in COCA there are fewer examples of *had better* than of *'d better* (the raw count for *had better V* is 1151). However, unlike in their data, there are 8 examples of modal *had rather*, e.g.:

- (5) One disturbing result of this study is that 16% of the boys surveyed said that they **had rather commit** suicide than to be a girl. (2004 Tindall & Hamill, *Gender Disparity in Science Education* [COCA])

All examples of *'d better* are idiomatically paraphrasable as *had better*. However, with *rather* and *sooner*, *'d* usually does not paraphrase idiomatically with *had*, but rather with *would*. This means that *'d* has two different functions (*had* and *would*), depending on the adverb with which it appears and the context of the clause as a whole. Among other potential auxiliaries, *would* is a favored collocate of *rather* and *sooner* in their modal sense, as evidenced by searches for *might*, *would*, *should* with each of the adverbs. In Table 2, numbers of *would rather V* are raw; all other collocations were analyzed and coded.

Table 2. Uses with *might*, *should*, *would* in COCA

<i>better V</i>	<i>might</i>	2
	<i>would</i>	2
	<i>should</i>	3
<i>rather V</i>	<i>might</i>	12
	<i>would</i>	2395
	<i>should</i>	8
<i>sooner V</i>	<i>might</i>	0
	<i>would</i>	91
	<i>should</i>	1

BETTER, RATHER, SOONER were all originally comparatives, so a standard of comparison (e.g. *than X*) might be expected. However, in contemporary English, the standard of comparison hardly ever occurs with BETTER. In COCA, it occurs in about one third of examples with RATHER and is preferred only with SOONER.

3.3 The history of the three comparative modals

Denison & Cort (2010) give extensive details of the history of BETTER, especially that of bare BETTER without an auxiliary, so the history of BETTER will be outlined only briefly and only sufficiently to allow for comparison with RATHER and SOONER. It should be noted that all three constructions originated in bi-clausal comparative constructions, the second clause of which established a standard of comparison marked by *than*.

3.3.1 *The history of BETTER*

Denison & Cort point out that the original pattern for BETTER involved a copula. In Middle English, it competed with *lever* ‘more agreeable’. Both were used in early Middle English in impersonal subjunctive copula constructions. Both were originally adjectives. By the 15th century *had* with adverb *better* came to be used, but it occurs only rarely in the data investigated. There are no examples of *had better V* in CED 1, only one in Shakespeare (6a), and only two in CEECS, e.g. (6b):

- (6) a. By all that’s holy, he **had better** starve
 Than but once think this place becomes thee not.
 ‘By all that’s holy, it would be better if he starved than think even once that this place does not befit you’ (1613 Shakespeare, *Henry VIII*, V. iii.132 [OSS; Denison & Cort 2010:355])
- d. A man **had better** take upon him to perswade twenty learned men that are not ‘propositi defensores’, then one suche.
 ‘It would be better to take upon oneself to persuade twenty learned men who are not defenders of the proposition than one who is’ (1600 Whitgift, *Letter to Hutton* [CEECS: HUTTON])

Even though rarely found, examples such as (6) suggest that a new construction arose at the end of Middle English/beginning of Early Modern English with the form [Aux *better V than Y*] and the meaning [preferential, weakly deontic, based in communal mores]. The meaning is consistent with van der Auwera & Plungian’s participant-external necessity (advisability is based in some evaluation external to the subject, not in the speaker at this stage); the ‘necessity’ is, however weak. The choice of auxiliary is fairly open, *may*, *should*, *ought* are attested as well as *had*.

Denison & Cort (2010:366) suggest that the action sought is not only considered beneficial to the subject but is also wished for by the speaker: a speaker would not mention that s/he thinks it is better for the subject that they should do or should have done something unless s/he wished them to do or have done it. Over time the invited inference of the speaker’s wish/desire became semanticized (p. 367). The relatively objective, impersonal uses came to be used subjectively with

first person and intersubjectively as a directive with second person *you*. This new use appears to have become established in the late 18th to early 19th centuries in US English, given that there are only three examples with the subject *I* in the first period of COHA (1810–1819). One of the examples is (7) (note it also includes advisory *you had better*). Both are participant-external (in the case of the second person, the speaker is advising, in the case of the 1st person, Bob Jackanapes is advising himself, based on the advice he has just been given):

- (7) **You had better** make off sir — or expect to receive, what you deserve, a horse-whipping. [Bob Jackanapes aside] I think I **had better** take advice. (1819 Taylor, *False Appearances* [COHA])

Examples increase in the later 19th century but then decline slightly.

There are several pieces of evidence that uses such as (7) are instances of a second constructionalization (of *had/'d better* as a subjective auxiliary). One is the new preferential, advisory meaning. In *You had better make off* in (7), advice is based in the speaker's point of view, not general mores, i.e. it is speaker-oriented. The speaker suggests leaving as an option, i.e. as something the addressee could be expected to prefer given the projected non-beneficial alternative (a horse-whipping). What is new in terms of form is the narrowing of the options of auxiliary and restriction to *had/'d*, and the loss of the standard of comparison. Denison & Cort (2010:355) find three examples with the standard of comparison in their 19th century UK data, but show it is now ungrammatical with the constructed example **We (had/'d) better get a takeaway than start cooking now*. In other words, BETTER no longer has any features of comparison other than the form itself, now a frozen, non-compositional relic.

A similar shift is shown by the development of bare BETTER (*better* with zero auxiliary). First used in proverbs, as in (8),

- (8) **Better** is to haue a bad excuse, then not at all (1586 Bellot, *Familiar Dialogues* [CED 1])

it came to be used in a variety of registers, eventually as a directive with *you* (expressed or understood in imperatives), where it is speech act-oriented:

- (9) if Watkins hunts after you, he will probably strike upward. **Better you** go below. Keep down the Cawcaw, till you strike the Edisto, then cross. (1856 Simms, *Eutaw* [COHA])

It has been suggested that bare *better* is actually now an auxiliary (Denison & Cort 2010, van der Auwera & De Wit 2010), partly on the basis of its occasional appearance in auxiliary inversions (*bettern't we go the other way?*) and tag questions

(*bettn't I?*), especially in the UK. Further research on spoken and dialectal data is needed to establish whether this usage occurs in US English.

In sum, BETTER originated in a (now obsolete) subjunctive impersonal copula construction (see (7) above). A variety of changes occurred by the end of Middle English, especially the systemic loss of impersonals. Construction-specifically there was neoanalysis as an adverb, evidenced by expansion to auxiliary contexts, and participant-external readings. This was a constructionalization (form and meaning both changed). Continued use in subjunctive-like contexts, fixing of the collocation with *had/d*, and gradual decline in use of the standard of comparison appear to have been the “critical contexts” (Diewald 2002) for the further constructionalization of the comparative modal as (inter)subjective advice, often manifested as bare *better*.

Parts of van der Auwera & Plungian’s modified modal map in Figure 2 represent the history of BETTER well (Figure 4), provided that ‘deontic necessity’ is understood as weak (preferential and advisory). The modality of the examples of the first constructionalization is participant-external necessity. The imperative is a sub-case of the bare *better* uses, as in (9) (*Better you go below*).

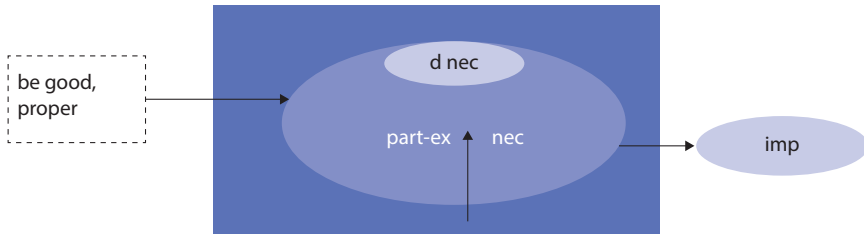


Figure 4. The trajectory of BETTER in terms of van der Auwera & Plungian’s modified modal map¹⁴

In terms of Narrog’s (2012) model of modal semantic space, BETTER illustrates a shift from non-volitive (impersonal) to volitive, and from event-oriented (objective) through speaker-oriented (subjective) to speech act-oriented, illocutionary use, as in Figure 5:

14. I omit a possible connection with epistemic modality as I have found no convincing cases. Denison & Cort (2010: 369–371) question whether there are distinct epistemic uses of BETTER as suggested by Mitchell (2003) and conclude there are not. Rather, the few potential examples “incorporate *simultaneously* an epistemic and a deontic element” (p. 370, italics original).

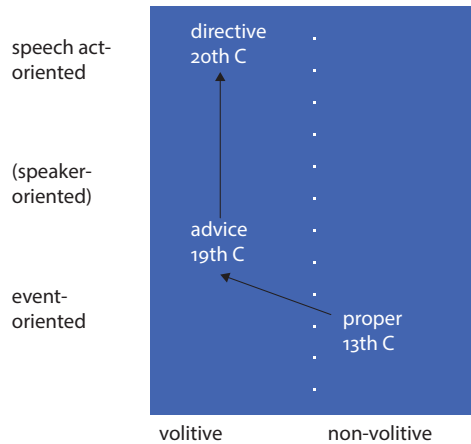


Figure 5. The trajectory over time of BETTER through Narrog's semantic space

3.3.2 The history of RATHER

In Old English the precursor of RATHER was the comparative of *hræpe* 'quick, early'. As an adverb it was used meaning 'sooner, instead'. In the context of a verb like *will-* 'will, intend', preference for the earlier action/event is implied.

- (10) Se casere.. wiste þæt seo dohtor, þe drihten hæfde
 that emperor... knew that the daughter, who lord had
 gecoren, **hraðor** wolde sweltan þonne ceorlian.
 chosen, sooner wanted die than marry
 'The emperor knew that his daughter, who had chosen the Lord, wanted to die sooner/rather than marry' (c1000 Ælfric, *Lives Saints* I.i.188 [OED *rather* adv. III 8a])

RATHER appears in what looks like modal use in Middle English, mainly with *wolde* 'would'. By Early Modern English it also appears with *had*. It was well established as a modal by the end of the 16th century. While there is only 1 example of *had better V* in Shakespeare (ex. (6a) above), there are 60 of *had rather V*, mostly with 1st person pronoun subjects, but some 2nd and 3rd person pronoun and full subjects (e.g. (11c)) appear as well.

- (11) a. I **would rather** be torn with wild Horses, than forsake my Religion.
 (1571 D1TNORFO [CED 1])
 b. When I was with him I have heard him swear
 To Tubal and to Chus, his countrymen,
 That he **would rather** have Antonio's flesh
 Than twenty times the value of the sum
 That he did owe him.
 (c.1596 Shakespeare, *Merchant of Venice* III.ii.287 [OSS])

- c. Richard except, those whom we fight against
Had rather have us win than him they follow. (1597 Shakespeare,
Richard III, V.iii.243 [OSS])

In some respects, RATHER is similar to BETTER. In Middle English both were used as adjectives in impersonal subjunctive constructions, and both came to be adverbs associated with *had*. Both are preference modals, and both are marginal in the modal system. But in many other respects they are different. Modal BETTER does not collocate often with *would* at any point in its history, whereas RATHER and SOONER do. Unlike BETTER, RATHER is not directive and therefore not future-oriented. *You had better X* means ‘you ought to X in the future’ (participant-external necessity), but *You had/would rather X* is a report on what the speaker thinks or knows the addressee to prefer (participant-internal necessity). Consider the first part of (7), repeated here in (12a), and a constructed version with *rather* (12b):

- (12) a. You **had better** make off sir — or expect to receive ... a horse-whipping.
 b. ?? You **had rather** make off sir — or expect to receive ... a horse-whipping.

Substituting *rather* for *better* in (12b) renders the sentence incoherent since the horse-whipping is construed not as a consequence of failing to make off, but rather as an alternative preference of the addressee’s (participant-internal necessity).

Another respect in which RATHER is unlike BETTER is that RATHER has been strongly associated with negative “semantic prosody” (Stubbs 1995). Example (10) illustrates an early, pre-modal example of a trope ‘rather die than X’ that is repeated with variants throughout the history of English. Unlike RATHER, BETTER is rarely found with *die* in COHA, except for bare *better* in the early part of the nineteenth century.

The semantic development of RATHER is accounted for by the simple diagram in the lower left hand corner of van der Auwera & Plungian’s model as in Figure 6 (again, ‘necessity’ must be understood as weak preference):

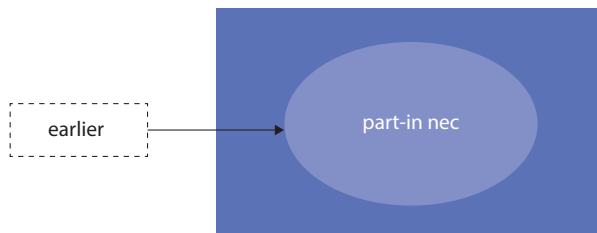


Figure 6. The semantic trajectory of RATHER in terms of van der Auwera & Plungian’s modal map

In terms of Narrog's semantic space, the shift is from non-volitive to volitive only, as represented in Figure 7:

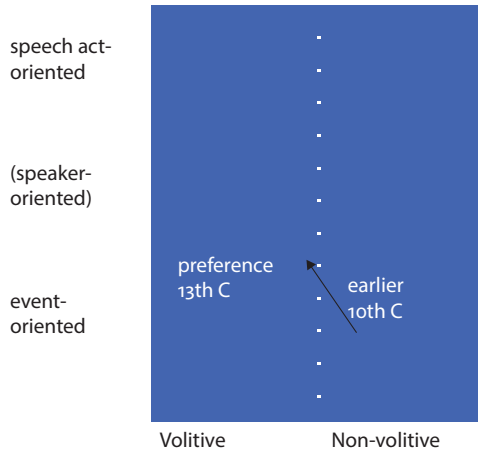


Figure 7. The semantic trajectory through time of *RATHER* in terms of Narrog's semantic space

The shift is a constructionalization as on the meaning side the volitive *RATHER* has a different meaning from the non-volitive temporal, and on the form side it is restricted to modal contexts such as *had*, *would*.

3.3.3 *SOONER*

SOONER, like *RATHER*, has temporal origins but the semantics is still transparent to contemporary speakers. As with *RATHER*, the modality is based in the subject and participant-internal, the preference is oriented to the time of the current state of affairs, and *would* is preferred over *had*. As in the case of *RATHER*, temporal *sooner* came in Middle English to be used in a way that implies (at least to a present day reader) preference in the context of a human subject, and modal *had* and *should*, as in:

- (13) Ladies and gentill women shulde **sonner** take the gise
 ladies and gentle women should sooner take the conduct
 after good women thane after euell.
 after good women than after evil
 'Ladies and gentlewomen should rather model their conduct on that of good
 women than evil women'
 (1425 *Knight of the Tour Landry* 30 [MED *sonne* 5.d.]

Unlike *RATHER*, from Middle English on, *SOONER* occurs with *will* as well as *would*. In COHA, there are 40 examples of *sooner V* with *will*, 317 with *would*, and

22 with (*have*) *had* (the last in the 1920's). Although many earlier examples could in context have a temporal as well as a preference reading, some are clearly modal, among them:

- (14) [Mary Erskine has expressed the desire to have Mary Bell stay with her] “Do you mean all night, too?” asked Mrs. Bell. “Yes,” said Mary Erskine, “all the time.” “Why, you have got two children to take care of now,” replied Mrs. Bell, “and nobody to help you. I should have thought that you **would have sooner asked** me to take Bella home with me.” “No,” said Mary Erskine. “I should like to have Mary Bell here, very much, for a few days.” (1850 Abbott, *Mary Erskine* [COHA])

Given the prior and following context, *would have sooner asked* can only mean ‘would have preferred to ask’, although out of context it might be interpreted as ‘would have earlier asked’.

The same kinds of models as in Figures 6 and 7 account for SOONER, with the same proviso that necessity should be understood weakly as preference. Like RATHER, SOONER involves constructionalization, and for the same reasons but the modal collocates are more numerous for SOONER than for RATHER in the earlier periods.

3.4 One schema or a loose-knit family?

In sum, by the end of the 18th century there were three micro-constructions with similar form: *d/had better/rather/sooner V... (than)*. All were used with the modal meaning of preference. RATHER and SOONER were constructionalized first (by the 16th century), then BETTER (by the 18th century). BETTER began in the 19th century to be used in subjective and intersubjective ways. Interestingly, it is the most recently developed comparative modal that has changed the fastest and the furthest along the modeled trajectories. This is contrary to what is often expected in work on grammaticalization, where it is found that, all things being equal, the most semantically generalized and structurally reduced form is the oldest (see e.g. Bybee et al. 1991 and Bybee et al. 1994).¹⁵

As Hilpert (2013:191) comments, the question whether to label a group of constructions that share similarities but also differences under one schema or not, “might seem like an open-ended exercise in lumping and splitting”. In the case of the concessive clause types he discusses, he uses multidimensional scaling and concludes that they are different enough to form a family rather than a

15. It should, however, be noted that the authors’ findings are based on distinctions between periphrastic and inflectional expression, which are not relevant to the comparative modals discussed here.

single constructional schema. The data for BETTER, RATHER, and SOONER are not large enough to justify multidimensional scaling, but the metaphor of a constructional family is appropriate for the comparative modals. There is no question that the three patterns under discussion share not only form but their basic meaning. To recapitulate, “preference can be understood as comparative volition” (van der Auwera & De Wit 2010: 10) and all three can be interpreted as involving preference and volition. But from the beginning, the preference and volition have different orientations. In the case of BETTER, preference typically originates in an external participant and is primarily future-oriented, especially in (inter)subjective uses. The future-orientation is one of the factors that promotes the ‘advice’ readings of BETTER. In the case of RATHER and SOONER, preference typically originates in an internal participant and is primarily oriented to the present (or generic temporality). Both RATHER and SOONER differ from BETTER in favoring collocation with *would* over *had*. Therefore, the three constructions are not readily subsumed under a single schema in present day American (or British) English. However, they are plausibly networked as a loose-knit ‘family’. It seems best to analyze BETTER as a member of Advice-constructions, including *ought*, *should*, and *advise*, *suggest*, while RATHER and SOONER are members of a small subschema within a Preference-construction that includes *prefer*.

4. Modeling the development of RATHER and SOONER

In this section I show that the history of the three comparative modals can be modeled using MCMs and SCMs, but for reasons of space will detail only the development of RATHER and SOONER.

In the case of the modals of comparison form (*'d/had + better/rather/sooner V... (than)*, and phonological representation) can be combined with meaning in a representation of RATHER such as that in Figure 8, which unifies aspects of van der Auwera’s and Plungian’s modal map (see Figure 6) and Narrog’s semantic space, volition in particular (see Figure 7). An additional feature, pres(ent)-or(ientation) appears as well in Figure 8. The material in the oval is the outcome of the constructionalization. RATHER designates the modal use *'d rather*, as opposed to ‘sooner’ (now obsolete) and ‘instead’.

Figure 8 is a MCM as it is particular to RATHER. Figure 8 situates the micro-construction within the larger modal schema construction and shows links to the biclausal comparative schema construction (BCOMP.SCxn), both of which are only named in the figure. The BCOMP.SCxn lies outside the modal domain. The link to the comparative morpheme *-er* in the form associated with RATHER. MCxn licenses inheritance of the bi-clausal structure. Schemas are represented

with square boxes and micro-constructions with ovals. As in other work on language change that focuses on structural difference over time, the arrow generalizes over the processes involved in constructionalization, including the critical gradual modifications of context that enabled it.

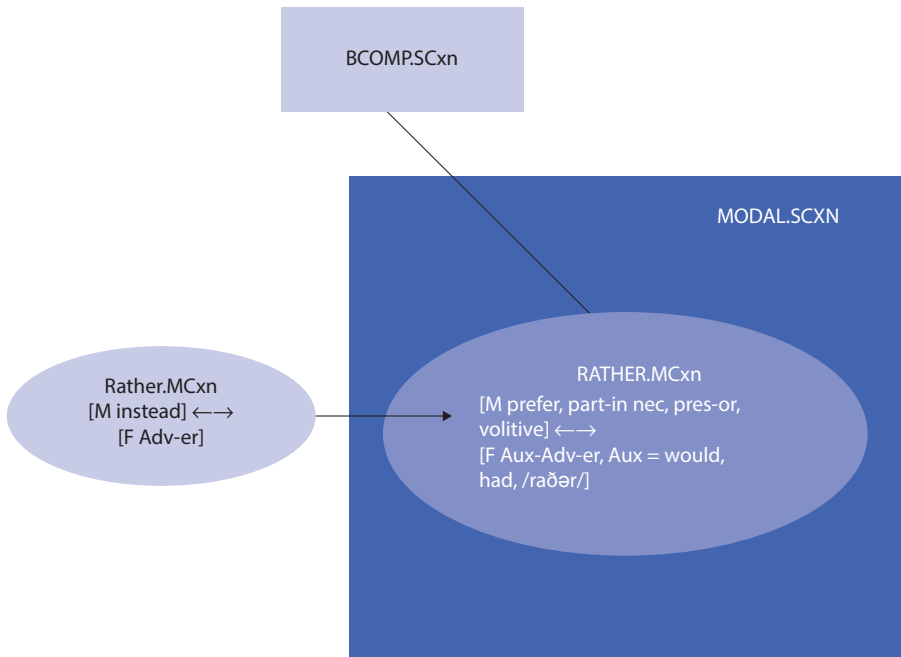


Figure 8. Development of the micro-construction *RATHER* modeled as a MCM.

The development of *SOONER* is similar. Once *RATHER* and *SOONER* micro-constructions had developed, various constructional changes occurred, such as changes in preferences for particular auxiliaries, decrease in use of the standard of comparison, increase in the use of first person pronoun subjects, and so forth, but there was no further constructionalization. Importantly, a new subschema of the *MODAL.SCxn* was formed. The subschema and the micro-construction types that are its members can be represented as in Figure 9, where the double lines indicate that the ovals below are members of the set. Note that volitive, participant-internal necessity and present-orientation schema are specified in the M of the subschema; in the micro-constructions, only *prefer* is specified; auxiliary, adverb and *-er* are specified in the subschema, only auxiliary and the constraints on it in the micro-constructions. This allows for the link to be made between the subschema and its members via inheritance.

In the case of *BETTER*, the initial micro-constructional development is similar to that in Figure 8. However, participant-external necessity is specified, as is

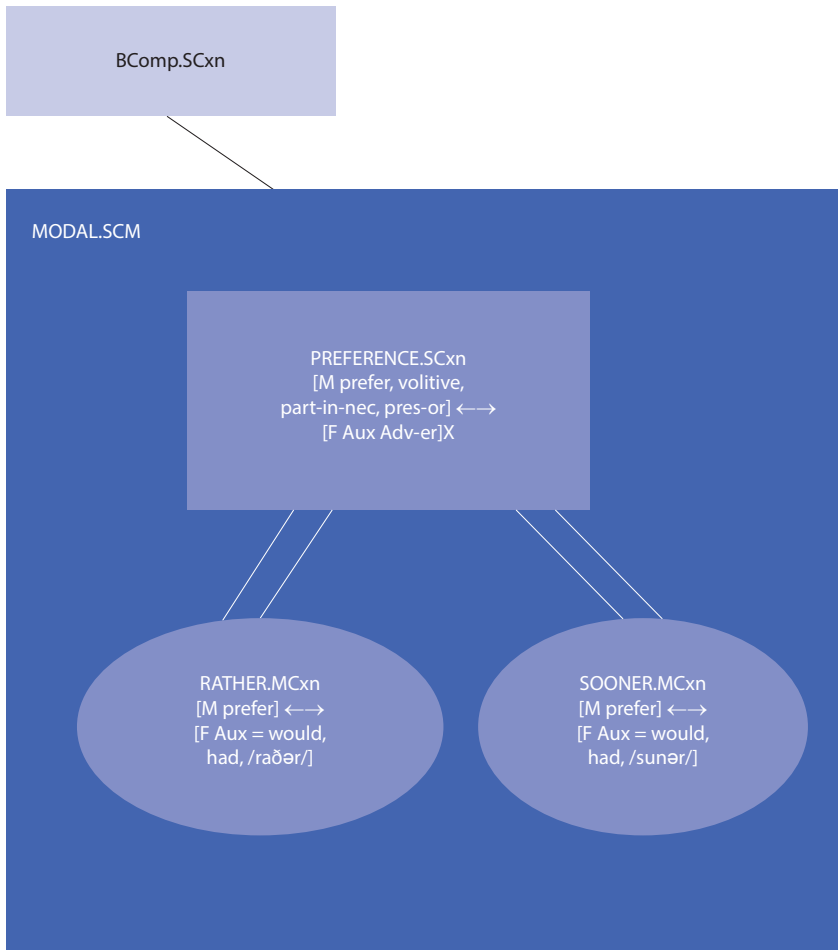


Figure 9. Modal Preference Construction subschema and comparative modal members

future-orientation. *BETTER* does not become a member of the *PREFERENCE.SCxn* subschema. Instead, there is a second constructionalization, which involves subjectification, gradual weakening of the link with bi-clausal comparison inheritance, and the development of the deontic, intersubjective use, largely, but not exclusively, associated with bare *better*. The outputs of both constructionalizations are still used, i.e. there is layering of older and newer uses.

5. Conclusion

I have suggested that connectivity semantic maps can be usefully rethought in construction grammar terms as two kinds of maps: schema-construction maps

(SCMs) that represent relationships between abstract, conceptual schemas linked to form, and micro-construction maps (MCMs) that represent relationships between specific constructions. These two kinds of maps capture both meaning and form since they represent form–meaning pairings, but at different levels of abstraction. They can also capture direction of change, as tendencies at the schema level and specific trajectories at the micro-level. In the modal domain they can capture both the obligation-inference (deontic-epistemic) distinction that is basic to van der Auwera & Plungian’s model and the volitive-non-volitive parameter and the event-oriented to speech act-oriented continuum of Narrog’s model.

What has been presented here is only a preliminary sketch. Future work should explore in depth the rich potential of the SCMs for accounting for networks, the regions within them and the connectivities and distances between them. It should also explore how best to represent the fact that some constructional schemas are more marginal than others.

Goldberg (2006: 18) hypothesizes that “the network of constructions captures our grammatical knowledge of language in toto, i.e. *it’s constructions all the way down*” (bolded italics original). In the Goldbergian approach to construction grammar, the construction in which this network is located is thought of as the locus of hierarchized constructions (from schema to item-specific micro-construction). SCMs and MCMs suggest that the construction might also be thought of more ‘horizontally’ as the locus of that part of a speaker’s knowledge of language that recognizes continuities and proximities at all levels of a construction and across networks.

Acknowledgements

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Abbreviations

BCOMP = bi-clausal comparative; MCM = micro-construction map; MC_{xn} = micro-construction; SCM = schema-construction map; SC_{xn} = schema-construction; Adv = adverb; Aux = auxiliary; nec = deontic necessity; fut-or = future-oriented; imp = imperative; epist-nec = epistemic necessity; event-or = event-oriented; -event-or = subjective, intersubjective; part-ex nec = participant-external necessity; part-in nec = participant-internal necessity; pres-or = present-oriented.

Data sources

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- COCA *Corpus of Contemporary American English*. 1990–2012. Compiled by Mark Davies. <http://corpus.byu.edu/coca/>.
- COHA *Corpus of Historical American English*. 1810–2009. Compiled by Mark Davies. <http://corpus.byu.edu/coha/>.
- MED *The Middle English Dictionary*. 1956–2001. Ann Arbor: University of Michigan Press. <http://www.hti.umich.edu/dict/med/>.
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Author's address

Margaret Jacks Hall, Building 460, Room 127
Stanford CA 94305-2150
USA

traugott@stanford.edu