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Toward a constructional framework for research on language change

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Over the past two decades usage-based models of language as a system of form-meaning pairs ('signs') have been developed (e.g. Goldberg 1995, 2006; Croft 2001). These models are known as Construction Grammars. Historical approaches using constructionalist frameworks (e.g. Bergs & Diewald 2008; Barðdal 2008) have concentrated on accounting for grammatical change. In this paper I present a framework that includes and extends prior work on both grammaticalization and lexicalization (see also Traugott & Trousdale 2013). Because a construction is a sign, the framework requires the researcher to focus on form and meaning equally. Because a construction may be specific or abstract and schematic, each micro-construction can be shown to have its own history within the constraints of larger schemas. Schemas and networks provide a principled way of thinking about analogy. The development of patterns and of changes in productivity are highlighted in constructionalist frameworks. Therefore the focus in this paper is on expansion (see Himmelmann 2004) rather than on the reduction often associated with many earlier models of grammaticalization and lexicalization (e.g. Lehmann 1995; Brinton & Traugott 2005). Expansion and reduction are shown to be intertwined. Therefore unidirectionality has a less prominent theoretical status than is often assigned to it in non-constructionalist models of language change.

1. Introduction¹

Construction grammar in its various versions has been developed largely from a synchronic point of view. However, there have been several research projects aimed at accounting for specific diachronic changes in a construction grammar framework (e.g. Israel 1996 on the way-construction and most recently several

1. This paper draws extensively on Traugott (Forthcoming) and on Traugott and Trousdale (2013). It is a minimally modified reprint of a paper with the same title appearing in the journal *Cognitive Linguistics Studies*, by permission of the editors of the journal and of John Benjamins. Many thanks to Graeme Trousdale for discussion of the issues.

papers in Giacalone Ramat, Mauri, and Molinelli 2013), or larger change types like grammaticalization (e.g. Bergs & Diewald 2008; Fried 2009; Barðdal, Gildea, Smirnova, and Sommerer Forthcoming). Other research topics have included productivity associated with changes in argument structure (e.g. Barðdal 2008) and comparative reconstruction (Barðdal 2013). With the exception of Trousdale (2008a, b) and Traugott and Trousdale (2013), the focus has been almost exclusively on the development of grammatical constructions and potential links with and implications for grammaticalization. However, since construction grammar embraces constructions on a gradient from contentful (lexical) to procedural (grammatical) functions, this means that a large area of change has for the most part not been investigated from this perspective.

In this paper I provide a brief outline of Traugott and Trousdale's (2013) suggestions about how to rethink many aspects of language change in terms of "constructionalization", developed in the context of a usage-based construction grammar perspective such as that of Goldberg (1995, 2006) and Croft (2001).² Focus is on the following questions:

- A. How can one account for phenomena associated with grammaticalization in a constructional framework?
- B. How can one account for phenomena associated with lexicalization in a constructional framework?
- C. What is the "value-added" of a constructional perspective?

I begin by outlining the main features of construction grammars and of Traugott and Trousdale's constructionalization model in Section 2. Questions A and B are addressed in Sections 3 and 4 respectively. Major similarities and differences between contentful and procedural constructionalization are outlined in Section 5. Question C is addressed in Section 6, which also concludes my paper. Examples are taken from the history of English.³

2. The main features of the constructionalization model

A constructional approach to language change assumes the architecture of construction grammar. Several models of construction grammar have been developed;

2. Bybee (2010) provides a detailed account of a usage-based approach to language that has been widely influential in construction grammar, in particular on the work reported here.

3. The following abbreviations for periods of English are used: EModE Early Modern English (c. 1500–1700), ME Middle English (c. 1150–1500), OE Old English (c. 650–1150), PDE Present Day English (c. 1970–present).

a detailed account of the models and various aspects of construction grammars can be found in Hoffmann and Trousdale (2013). Here I mention those aspects of the architecture that are of special relevance to the discussion below; most are generally agreed on by researchers working in construction grammar (see Goldberg 2013):

- (a) “A linguistic model should in principle be able to account for all facets of a speaker’s knowledge about their language” (Boas 2013:234).
- (b) The basic unit of grammar is a form-meaning pairing (“sign”).
- (c) The model of grammar is non-modular, and therefore no one linguistic domain is core.
- (d) Constructions are made up of many properties (features in some models). Minimally, these properties are: semantics, pragmatics, discourse function on the meaning side and syntax, morphology, phonology on the form side (see Croft 2001).
- (e) A construction may be of any size (Goldberg 2006), and therefore may be “atomic” (not made up of other parts, e.g. plural noun inflection in English and *table*) or complex (a phrase, clause, or complex sentence, e.g. quantifier *a lot of X* and pseudo-clefts like *What (NP) V BE X* as in *What I did was drive to Santa Cruz*).
- (f) A construction may be specific or schematic. In the former case it is called a “substantive” construction; it is fully specified phonologically (e.g. /rEd/ ‘red’). In the latter case, it is abstract, sometimes wholly so (e.g. ditransitive SUBJ V OBJ1 OBJ2), sometimes partially so (e.g. *X is the new Y*), but all schemas involve slots with variables.
- (g) Construction-types (both substantive and schematic) are stored in an inventory called a “constructicon”.
- (h) Constructions form networks in mental space.
- (i) They are combined or “unified” if they are compatible.

The main question to be addressed here is how constructions come into being and change. In thinking about these developments, it is useful to distinguish between constructionalization and constructional changes, a distinction that will be elaborated on below. Briefly:

- (1) a. Constructionalization is the development of form_{new}-meaning_{new} pairs, i.e. constructions.
- b. Constructional changes are changes to features of constructions, such as semantics (e.g. *wif* ‘woman’ > ‘married woman’) or morphophonology (e.g. *had* > ‘d). Such changes precede or follow constructionalization.

As will be shown in subsequent sections, constructionalization involves a complex interaction of reduction and expansion.

In what follows the key type of reduction is loss of compositionality understood as loss of transparency between meaning and form. Two types of expansion are of particular relevance: increase in schematicity and increase in productivity. Schematicity is a property of categorization and crucially involves abstraction. A schema is a taxonomic generalization across categories, whether linguistic or not. Linguistic schemas are abstractions across sets of constructions which are (unconsciously) perceived by language-users to be closely similar to each other morphosyntactically and semantically. Productivity concerns the extent to which a schema sanctions other less schematic constructions (type-productivity) and the frequency with which a construction is used (token-productivity).

Compositionality, schematicity and productivity are all gradient, “more-or-less” concepts. Bybee and McClelland (2005) illustrate the gradience of compositionality with the degree of opacity of the historical prefix *pre-* in word formation, as exemplified by *predecease*, *prediction*, and *president*. It is least opaque in *predecease* and most opaque in *president*, and this difference in opacity is reflected in different stress assignment. Sometimes, however, there may be an increase in formal analyzability; this tends to be highly idiosyncratic, and is associated with “folk etymology”, e.g. reinterpretation of *asparagus*, a borrowing from Latin, as *sparrowgrass* and of *carriole* ‘covered light cart’, a borrowing from French, as ‘carry-all’ (Hock & Joseph 2009: 168–171).

With this background, I now turn to examples of constructionalization and constructional changes, with focus on ways in which grammaticalization and lexicalization can be rethought using the framework sketched above.

3. A constructional approach to grammaticalization

Morphosyntactic change, most specifically grammaticalization, has been of major interest in historical linguistics since the nineteen-eighties, spear-headed by Givón’s (1979: 209) now famous cline in (2):

- (2) discourse > syntax > morphology > morphophonemics > zero

This early hypothesis about unidirectional development together with one of the two change-types that Meillet (1958[1912]) focused on: lexical > grammatical change, contributed to characterizations of grammaticalization as reduction and loss. One example is Lehmann’s (1995: 164) identification of processes leading to “strong grammaticalization” such as attrition, paradigmaticization, obligatorification, condensation, coalescence, and fixation. Another is Haspelmath’s characterization of grammaticalization as “a diachronic change by which the parts of a

constructional schema come to have stronger internal dependencies” (2004: 26).⁴ However, some recent characterizations of grammaticalization have shifted focus to conceptualizing grammaticalization as extension (e.g. Traugott 1995; Himmelmann 2004). Himmelmann’s insight is that grammaticalization (which he calls “grammaticization”) typically involves expansion of host-class (collocate), syntactic, and semantic-pragmatic contexts.

Close investigation of changes as reflected in historical electronic corpora shows that these characterizations are not orthogonal or contradictory, since reduction and expansion are closely intertwined. Consider, for example, Lehmann’s “integrity parameter” (Lehmann 1995: 164). This involves the attrition of semantic features to “few semantic features” and of multiple phonological segments to monosegmental phonology. Loss of semantic features is widely known as “bleaching”. It is loss of content meaning. However, it is also gain of grammatical/procedural meaning (Sweetser 1988). It leads to host-class expansion. Eventually, repeated use (token productivity) may lead to segmental loss.

A prototype example is the development of *BE going to* (for fuller discussion see Traugott & Trousdale 2013). The potential for change (the “critical” contexts for it, Diewald 2002) can be found in examples in which the clause is passive and the verb immediately follows *to*, e.g.:

- (3) ther passed a theef byfore alexandre that *was goyng to*
 there passed a thief before Alexander who was going to
 be hanged whiche saide ...
 be hanged who said
 (1477 Mubashshir ibn Fatik, Abu al-Wafa’, 11th C; *Dictes or sayengis of the philosophres* [LION: Early English Books Online; Traugott 2012: 234])

It is almost certain that *was goyng to* in (3) is a motion expression, given the context *passed* and the absence for nearly one hundred and fifty years afterwards of any examples in which a temporal reading is the only likely one. On a grammaticalization analysis, the fact that an auxiliary has arisen is evidenced by the use of *BE going to* with host-classes (verbs) that are incoherent with or at least unlikely to be associated with motion, as in (4):

- (4) So, for want of a Cord, hee tooke his owne garters off; and as he *was going to* make a nooze (‘noose’), I watch’d my time and ranne away.
 (1611 Tourneur, *The Atheist’s Tragedie* [LION; Garrett 2012: 69])

4. Haspelmath here uses the word “constructional” with reference to a constituent, not a form-meaning pairing.

In (4), as Garrett says, 'he' does not need to go anywhere to take his garters off, he only needs to bend down, so a literal *go*-motion reading is implausible here. After the first decade of the seventeenth century several examples like this appear, indicating loss of the semantics of motion and expansion of the verbs that serve as host-classes for *BE going to* (e.g. *leave, think*). Expansion of syntactic contexts is illustrated by the appearance in the eighteenth century of raising constructions like (5):

- (5) I am afraid there *is going to* be such a calm among us, that ...
(1725 Odingsells, *The Bath Unmask'd* [LION: English Prose Drama])

Semantic-pragmatic expansion is illustrated not only by the development of the motion-temporal polysemy in the seventeenth century, but also by the later semantic change from relative future *be about to* (Núñez-Pertejo 1999; Garrett 2012) to deictic future. During the nineteenth century token frequency increased (Mair 2004), leading to morphophonological reduction to *BE gonna* (attested in the early twentieth century).

A constructional approach to the history of *BE going to* readily addresses these facts and leads to modification of the traditional grammaticalization account. On the constructional account, the development of the critical contexts prior to constructionalization as an auxiliary can be seen as a set of small-step constructional constraints on the form and syntactic distribution of *go*: association with *-ing*, occurrence with V immediately after *to*, and a tendency to be used in the passive. Together these constraints are associated with concomitant increase in the accessibility of the temporal implicature arising from the purposive *to*-clause. This is because *-ing* is a temporal marker (and highly unusual at the time, since progressive had not yet fully developed), adjacency of *to* with V renders prospective eventhood salient (contrast *that was going to Newgate to be hanged*, where location would seem to be salient), and passive demotes agency. Replication of these constraints led to the semanticization of the temporal reading.

From a constructionalist perspective, there is no evidence that a new form-meaning pair arose in the seventeenth century, only that there was semantic-syntactic mismatch (Francis & Michaelis 2003), in other words a semantic constructional change. The constructionalization of *BE going to* as an auxiliary can be dated to the early eighteenth century after some initial host-class expansion. Evidence comes from a significant increase in inanimate subjects (only two examples have been found so far in the early seventeenth century, both cited in Garrett 2012) and most definitively from the attestation of use in raising constructions such as (5). This evidence suggests that the mismatch had been resolved by the first decades of the eighteenth century and that *BE going to* was available as a meaning_{new}-form_{new} sign (temporal meaning linked to auxiliary syntax). This new

construction coexists, and continues to coexist, with the original purposive construction with a motion verb. Subsequent changes to auxiliary *BE going to* involve significant increase in both host-class expansion of V-complements and token frequency, and later also morphophonological reduction. These are constructional changes.

The chief difference from a grammaticalization account is the hypothesis that full reanalysis as an auxiliary did not occur until approximately a hundred years after the semantic change. On the view presented above, only in the eighteenth century did *BE going to* join the set of periphrastic auxiliaries (*BE to*, *HAVE to*, *ought to*). Although these may well have served as partial exemplar models as early as the seventeenth century, they were formally distinct from *BE going to* in that they had no *-ing* and were already attested with inanimate subjects and in raising constructions. For example, *ought to* appears in deontic uses with inanimate subjects as early as the 1300s (mainly in passives):⁵

- (6) before þe noun
 before the noon-time
 Whan goddys seruise *owþ to* be don
 When god's service ought to be done
 'Before noon, when God's work should be done'
 (1303 Robert of Brunne, *Handl. Synne* 1024 [Visser 1969:1815;
 Nordlinger & Traugott 1999:309])

They were also semantically different in that none expressed either relative ('be about to') or deictic ('will') future.

The data calls into question Fischer's (2011:40) proposal that holistic changes can be projected back on the past because there is contemporary evidence that speakers process entrenched patterns holistically: "Speakers do not reanalyse, they substitute one pattern holistically for another". The corpus data for *BE going to* and many others changes (see e.g. Vandewinkel & Davidse 2008 on the development of *pure* as an intensifier, De Smet 2012 on the development of *about* as an approximator) show that changes do not develop holistically, but rather feature by feature. Nevertheless, a constructional approach provides a natural framework in which to investigate analogical developments in the context of extant schemas, as Fischer (2007, 2011, and elsewhere) advocates. Prior to constructionalization, *BE going to* can be thought of as partially networked with some members on the basis of temporal (future-oriented) meaning but not becoming a full member in terms of semantics and formal distribution until the eighteenth century.

5. Like *must*, *ought* is a frozen past tense form, in this case of the verb *owe*.

The history of *BE going to* is often cited as an example of grammaticalization understood as a “lexical > grammatical” change. For Meillet (1958[1912]) this type of development was only one kind of grammaticalization. He also discussed syntacticization (fixing) in French of earlier “free” word order in Latin. As we now understand them, word order changes, at least in many languages of Europe, are closely tied to information structuring (Hinterhölzl & Petrova 2009). While word order changes have not yet been studied in terms of constructionalization, some particular kinds of changes in information structuring have been, among them the development of IT-clefts (Patten 2012) and pseudo-clefts (Traugott & Trousdale 2013). They lend themselves as readily to constructional analysis as do argument structure changes such as the loss of “impersonal” constructions of the type V NP.DAT NP.GEN, as in (7):

- (7) him ofhreow þæs mannes
 3SgMasc.DAT pity.3.SgPast the.GEN man.GEN
 to-him was-pity because-of-the-man
 ‘He pitied the man’ or ‘The man caused pity in him’
 (ÆCHom I XIII.281.12 [Trousdale 2008c: 301])

These can be accounted for in terms of morphological changes intersecting with and bringing about schema changes (for detailed studies of such changes in Icelandic see Barðdal 2008).

Trousdale (2008c and elsewhere) has argued that procedural constructionalization involves increase in schematicity and productivity and loss of compositionality. This insight encompasses Himmelmann’s (2004) context expansions as well as Lehmann’s loss of integrity. It does not constrain the order in which the shifts occur and therefore allows for the intertwining of expansion and reduction illustrated above. Such change is not unidirectional in the sense usually associated with Lehmann’s parameters, but captures the observations that (i) grammaticalization leads to more abstract structures (similar to schematicity) and type frequency (similar to productivity), but not always token frequency, see Hoffmann (2005), and (ii) some kind of reduction is likely, most especially between meaning and form.

In other words, aspects of most of the factors that have been studied in the last forty years in morphosyntactic change and that have been included under the rubric of “grammaticalization” are encompassed by constructionalization. Some other morphosyntactic changes such as argument structure changes that are less easily accounted for by grammaticalization can also be reconceptualized in constructional terms. The framework favors thinking in terms of analogizing to sets and schemas and of gradual (micro-step) changes. Although the term “grammatical

constructionalization” has often been used to refer to changes of the type discussed above, the term “procedural constructionalization” is preferable for several reasons: it signals the fact that the changes under discussion lead to the cueing of relationships between constructions; it avoids the problem of being interpreted in terms of narrow definitions of grammar that exclude pragmatic elements such as discourse markers like *I think*; and it does not evoke definitions of grammaticalization as reduction.

4. A constructional approach to lexicalization

Lexicalization can likewise be reconceptualized and seen not to be restricted to reduction, as is typically suggested.

The many ways in which lexicalization had come to be understood by the early part of this century are outlined in Brinton and Traugott (2005; see also Lightfoot 2011). As mentioned in Section 1 in Brinton and Traugott, the position taken was that lexicalization is reduction of complex lexical items, in accordance with several earlier researchers (e.g. Lipka 2002). The focus is on reduction in terms of in segmental makeup and morphological compositionality. Focusing on changes occurring after lexical fixing, Himmelmann (2004:37) proposes an additional kind of reduction in lexicalization, decrease of productivity, on the grounds that a lexical item is fixed and “a given expression is no longer ‘freshly’ assembled from its constituent parts”. He contrasts this decrease in productivity with increases in productivity in grammaticalization (associated with increase in the applicability of pattern). Himmelmann does, however, suggest that, like grammaticalization, lexicalization may occur in expanding contexts, especially metaphorical ones.

The tradition of work in lexicalization typically starts with a string that is already used in a conventionalized and fixed way and comes to be used as a “word”, whether a compound such as *daredevil*, or a phrase such as *whodunit* (a term for a detective story based on a colloquial form of *Who did it?*). Focus is almost always on specific items, not classes of items. However, if the rise and development of new contentful constructions is considered in parallel with that of new procedural ones, it can readily be seen that patterns emerge over time resulting in both contentful and procedural construction-schemas. One obvious domain is that of word formation with originally lexical bases, such as *-hood* as in *childhood* (< OE *had* ‘condition, rank, quality’), *-dom* as in *kingdom* (< OE *dom* ‘condition, dignity, jurisdiction (cf. *doomsday*)), *-man* as in *countryman* (< OE *mann* ‘man, person’). Another is that of larger expressions such as “snow-clones” of the type *X is the new Y* (e.g. *Pink is the new black* in promoting

YouTube design).⁶ A constructional perspective is especially helpful because it allows distinctions to be made between changes at the abstract level of the pattern or schema as well as that of the specific item.

I illustrate the constructionalization (i.e. rise and crystallization) of a word-formation-schema followed by its reduction with a pattern arising in late OE from compounds based on X-RÆDEN⁷ (see Dalton-Puffer 1996; Trips 2009; Haselow 2011). *Ræden* appears occasionally as an independent noun meaning ‘condition, estimation, rule’. It is mainly used in compounds for the judicial sphere (e.g. *burhræden* ‘civil right’, *mannræden* ‘man contract, service’) or for social relations (e.g. *freondræden* ‘friendship’, *feondræden* ‘enmity’) (Haselow 2011: 164). By later OE it came to be used relatively productively, and can be considered to be an “affixoid”, a construction-type on a gradient between highly contentful free forms (e.g. *friend*), and highly abstract derivational affixes (e.g. *-er*) (Booij 2010: 57). By ME the affixoid -RÆDEN was in competition with several other affixoids meaning ‘condition, status’, notably -SHIP, -HOOD and -DOM. All three, especially -HOOD, came to be used more productively than -RÆDEN and forms that were already in variation in OE came to be preferred, e.g. *brotherhood* was preferred over *brothorreden*, *freondship* over *freondreden* (Haselow 2011: 165). The X-RÆDEN schema came to sanction fewer and fewer type-constructions, and by the end of ME was no longer productive. There were, however, two relics, which had become relatively non-compositional in both meaning and form: *hatred* and *kindred* (from *kin-reden*, with an intrusive *d* between *n* and *r*). These were individual constructional changes. By contrast the loss of *-en* ending of -RÆDEN (/En/ > /ən/ > /ə/ > 0) is a particular instance of the systemic change in ME that affected several *-en* forms, among them infinitive and third person verb forms.

The rise and fall of the X-RÆDEN schema is a short-lived one, but in other respects it is typical of several schemas for nominal derivation the initial stage of which is fixing of a phrase as a compound. For an individual phrase compounding involves reduction of syntactic freedom (word order variation and case relations between N1 and N2 are reduced) and some referential narrowing. At the same time the development of a new compound expands the inventory of compounds. Using Booij’s (2010) notation for morphological constructions, the X-RÆDEN schema can be formalized as:

$$(8) \quad [[[X]_{Nk} [-ræden]_{iNj}] \leftrightarrow [[[\text{condition}_i \text{ with relation R to SEM}_k]_{ENTITY}]_j]$$

This is to be read as: a nominal compound consisting of Noun-RÆDEN is associated with the meaning “condition related to the meaning of the Noun X”. The

6. (<http://www.thepinkeblack.com/>) (9 May 2013).

7. Caps are used to generalize over different spellings and phonological changes over time.

schema arose gradually in later OE, as more combinations with the restricted meaning of *-RÆDEN* were innovated and conventionalized. Loss of members and of the schema itself in ME was also gradual, as was the morphophonological reduction of *hatred* and *kindred*. The changes are in other words very similar to those undergone by procedural constructions. There is one significant difference, however, which is that specific new individual compounds and word-formations arise instantaneously. This can be seen by thinking about contemporary word formations based on e.g. *-dom*. Although the development of the X-DOM schema was gradual in OE, the creation of the specific word-formation *Obamadom* by a specific individual was an instantaneous innovation in 2008. It was then adopted by a number of different speakers, and used in a number of contexts; in other words it was conventionalized.

A central argument in this section has been that a constructional account of the development of lexical constructions needs to distinguish the development of (partial) schemas from that of individual, substantive constructions. On this view there is not only expansion (the development of a new schema), but also two types of reduction:

- (a) for specific lexical constructions, early fixing and narrowing of meaning, later segment coalescence and morphophonological reduction,
- (b) for lexical schemas, possible obsolescence of the schema or of elements within it.

Only the first of these has been the subject-matter of traditional work on lexicalization, and is often associated with univerbation. Therefore lexicalization in the traditional sense is only a small part of the equation in any constructionalist analysis. As in the case of “grammatical constructionalization”, a term other than “lexical constructionalization” is called for. “Contentful constructionalization” captures the fact that the output is (mostly) referential. It is also avoids association with “lexicalization” and is general enough to cover idioms and other expressions not identifiable as “lexical items”.

The development of (partial) schemas is a case of increase in schematicity, which results in increased productivity, at least over a short period of time. Initially, a few phrases or clauses are used in such a way that speakers and hearers construe them as units, with associated meanings. At this point they are still analyzable enough that one element may be construed as the exponent of a template with a slot. The result is two-fold:

- (a) The subsystem of the inventory of constructions (the constructicon) is expanded,
- (b) The number of bases sanctioned by X is expanded. This second type of expansion is a kind of host-class expansion (Himmelman 2004), where the base is the host.

Some similarities to the rise of word-formation templates can be seen in the rise of idiomatic expressions such as “snowclones”. A snowclone is “a multi-use, customizable, instantly recognizable, time-worn, quoted or misquoted phrase or sentence that can be used in an entirely open array of different jokey variants by lazy journalists or writers” (Pullum 2003).⁸ In a snowclone a fixed specific expression becomes less fixed by virtue of introducing a variable (a formal change), while the original meaning of the micro-construction generalizes. This is constructionalization of a partial schema. For example, *My cup runneth over* (Psalms 23:5) means ‘I have more than I need’ while *My X runneth over* may simply mean ‘X is beyond my capacity’, ‘X is too much’ etc. In a snow-clone there is always some indexical pragmatics (pointing in this case to a historical English version of the Bible, not only conceptually, but morphologically with *-eth*). Snowclones have limited variants: a search of COCA in May 2013 for variants of *My X runneth over* returned 41 token hits and 19 types. These are the original *X’s cup runneth over* with 21 instances, and 1 or at most two instances each of 17 other types with e.g. *ego*, *inbox*, *DVR*, *garage(s)*, and *mouth* in *X*. Some hybrid versions are attested that combine EModE *-eth* morphology with PDE syntax, as in (9), suggest that for these writers at least *runneth over* has become a completely fixed phrase within a generalized partial schema:

- (9) a. If the ice melts, it doesn’t cause this cup to *runneth over*.
(2006 CNN, Encore Presentation [COCA])
b. Fangio’s ego does not *runneth over*.
(2011 Kroichick, Sporting Green, San Francisco Chronicle [COCA])

Other snowclones have a wider range. A search in COCA for variants of *X BE the new Y* returns several type hits, many of them colors but some with other forms like *trust*, *saving* and *Jesus*. A Google search provides many more examples, such as *Fake is the new real*, *Programming is the new literacy*. A diagrammatic representation of many of the *X BE the new Y* expressions identified by 2005 can be found at: http://thediagram.com/6_3/leisurearts.html.⁹ Within the schema [X BE the new Y], a subschema [*X is the new black*] has drawn particular attention. A 2012 wikipedia article says of it:

8. The term “snowclone”, coined by Glen Whitman, originated in a joke recalling the debate about the number of terms for snow in Eskimo that Pullum had written about. Pullum (2004) accepted the term and cited several types of snowclone at (<http://itre.cis.upenn.edu/~myl/languagelog/archives/000350.html>). O’Connor (2007) is an informal snowclone database.

9. Accessed March 2nd 2012.

“_____ is the new black” is an expression used to indicate the sudden popularity or versatility of an idea at the expense of the popularity of a second idea. It is the originator of the phrasal template “X is the new Y”. The phrase seemed to have started in the 1950s or 1960s. Since then it has often been used for ironic or humorous purposes. (http://en.wikipedia.org/wiki/The_new_black, accessed March 2nd 2013)

Some uses of this snowclone have a primarily socio-political rather than (or as well as) a humorous purpose. Thelma Golden, curator of an art show called Post-black Art used the comment *Post-black was the new black* in a 2001 exhibition catalog to explain the purpose of the exhibition: to highlight art created by the post-civil rights generation of African-American artists.¹⁰ At the same time, use of the snowclone situates the agenda in the discourse of the Civil Rights movement.

In the case of snowclones, a construct (token instance of use) has been reused as the basis of a pattern, “customized” to the particular discourse moment, and generalized in a way that makes it recognizable. Zwicky (2006) argues that snowclones arise in several stages:

- (a) A pre-formula stage in which variations on an expression occur, all understood literally, and requiring no special knowledge (*What one person likes, another person detests*),
- (b) A catchy fixed formula is used (with similar meaning) often drawing on a proverb, title, or quotation (*One man’s meat is another man’s poison*),
- (c) The fixed expression may be quickly extended with the development of open slots or playful allusion to it, e.g. via puns or other variations of it (*One man’s Mede is another man’s Persian*),
- (d) Snowcloning, a second fixing as variants become (relatively) routinized as formulas with open slots in them (*One man’s X is another man’s Y*).

On this analysis, snowclones can be said to arise by lexical constructionalization of a schema as in (d) after a number of constructional changes as in (b) and (c).

Because most snowclones that have been studied so far are fairly recent and not very frequently used, it has not been feasible to track obsolescence of specific examples. It remains to be determined to what extent they are a product of recent mass communication, advertising, and political rhetoric or whether they can be found in earlier textual records. If they can, a question to investigate is whether they come to be reduced morphologically and phonologically as did *hatred* and *bosun* (< *boat swain* ‘man’).

10. (http://en.wikipedia.org/wiki/Post-black_art); New York Times Nov 30th 2012.

In terms of Himmelmann's expansion-types, again we find host-class expansion. While the syntactic shape of snowclone templates appears to be fairly fixed, there is evidence that slots may over time sanction expanded syntactic types, e.g. X is the new Y sanctions expressions in which X and Y are nouns, not only adjectives, e.g. *Yoga is the new jazzersize*.¹¹ In the case of snow-clones there is significant semantic-pragmatic expansion, since a snow-clone is evocative of similar expressions, often playful, or socially-oriented.

Like procedural constructionalization, contentful constructionalization involves both expansion and reduction. Trousdale's (2008a, b) view of lexical constructionalization as decrease in formal and semantic compositionality was based on earlier views of lexicalization as reduction. On the view adopted here (and in Traugott & Trousdale 2013), contentful constructionalization clearly involves increase in schematicity and productivity as well as reduction, and, as in the case of procedural constructionalization, increase and reduction are intertwined.

5. Major similarities and differences between contentful and procedural constructionalization

The discussion of the rise of contentful constructions above largely confirms and also extends earlier arguments that lexicalization and grammaticalization, although they have different outputs, undergo many similar processes of change, notably gradualness, coalescence and fusion (see e.g. Brinton & Traugott 2005; Lightfoot 2011). Both undergo increase in schematicity and productivity, as well as decrease in compositionality and in both these factors are intertwined.

But there are significant differences, some of which are as follows:

- (a) Once a contentful schema has come into being the new expressions it sanctions are coined instantaneously. By contrast, in the procedural domain, new members typically arise slowly via tiny modulations of morphosyntactic contexts. By hypothesis there are no cases of instantaneous procedural constructionalization.
- (b) Contentful constructionalization typically involves only minimal syntactic expansion, specifically in word-formation extension of bases to more syntactic categories, e.g. from only N bases to Adj as well as N bases. A recent phenomenon characteristic of much word-formation is the expansion from simple to complex to phrasal bases, cf. *maximum likelihood, god-manhood, wife and*

11. http://thediagram.com/6_3/leisurearts.html (2 March 2012).

motherhood, *great powerdom*, all attested in BNC (Trips 2009: 78, 79, 119). Snowclones are built on clauses, but there is no evidence so far that their use is expanded to non-predicational clause types. Use of procedural constructions, however, typically expands to different syntactic clause-constructions, cf. expansion of auxiliary *BE going to* to raising constructions in the eighteenth century, and of the preposition *beside(s)* in EModE to use as a complementizer (cf. the type *besides that he left*, Rissanen 2004).

- (c) In contentful constructionalization bleaching (loss of semantic content) is rather limited.

6. The value added of a constructional approach

The domains of procedural and contentful constructionalization extend far beyond the few cases mentioned. For example, some aspects of degrammaticalization can be reinterpreted as cases of constructionalization (Trousdale & Norde 2013). However, I hope to have shown that the proposed model of constructionalization encompasses and reorganizes many of the factors that have been identified in work on grammaticalization and lexicalization and that it addresses at least some of the problems posed with respect to their development. Most importantly:

- (a) Constructionalization is a framework for thinking about sign change. It therefore requires focus on form and meaning equally, thereby encouraging work on changes to language as a system that is both communicative and cognitive.
- (b) Evidence of a continuum between contentful and procedural poles of the constructional gradient shows that grammaticalization and lexicalization are not orthogonal developments.
- (c) An approach based in form-meaning pairings obviates the need for elaborate interfaces between modules.
- (d) The ability to see how networks, schemas, and micro-constructions are created or grow and decline, as well as the ability to track the development of patterns at both substantive and schematic levels, allows the researcher to see how each micro-construction has its own history within the constraints of larger patterns, most immediately schemas, but also related network nodes.
- (e) Schemas and networks provide a principled way of thinking about analogy.
- (f) Expansion and reduction are intertwined. Therefore, directionality of change is more nuanced than has often been thought.

The potential of the model outlined here needs to be tested against a wide variety of changes not only in the history of English but most especially in other languages.

Zahn (2012) analyzes the development of Chinese copula construction *shì* using an earlier version of the model, but much more work needs to be done on many more constructions in many more languages.

Readers may have noted that I have not addressed issues of phonological change, except in passing. Prosody is well-known to be closely tied to information structuring such as contrastive focus-marking (e.g. Lehmann 2008) and in the development of pragmatic markers such as *I think, in fact* (e.g. Defour, D'Hondt, Simon-Vandenberg, and Willems, Forthcoming). It is a topic ripe for investigation from a constructional perspective. Issues in segmental phonology may be harder to address since correlates with meaning are less apparent, or non-existent. While many constructional changes are phonological, only research can determine to what extent phonological change is involved in constructionalization defined as the development of form_{new}-meaning_{new} signs.

Data Bases

- BNC *British National Corpus*, version 3 (BNC XML Edition). 2007. Distributed by Oxford University Computing Services on behalf of the BNC Consortium. (<http://www.natcorp.ox.ac.uk/>)
- COCA *The Corpus of Contemporary American English*. 2008-. Compiled by Mark Davies. Brigham Young University. (<http://corpus.byu.edu/coca/>)
- LION Literature on Line. (<http://lion.chadwyck.com>)

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