

## Pragmatic Strengthening and conventionalized implicature

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The chapter discusses how pragmatic strengthening can lead to semantic change and how we detect conventionalized implicatures. I introduce the core terms *bridging context*, *separating context* and *reanalysis* that serve to describe the process. The use of corpora in the study of pragmatic enrichment will be demonstrated by the German example *selbst*<sub>Intensif</sub> > *selbst*<sub>even</sub>. I propose that we should distinguish between normal pragmatic strengthening and evidence for *lexified implicature*. While the distinction has been assumed in earlier theories of semantic change, it remains open what kind of data constitutes empirical evidence for lexified/conventionalized implicature. In those accounts, bridging contexts are identified *post hoc*, thus weakening theories' predictive potential. I argue that attestations with implicature "beyond reason" are important, so-far overlooked data points in the diachronic record and offer early evidence for language change.

*Reanalysis, bridging context, separating context, construction grammar, semantic composition, intensifier, going-to future*

### 1. Introduction

Pragmatic strengthening allows us to convey and understand more than what has literally been said. When you are told, "Tom ate the soup. Afterwards, he got sick," you tend to understand that the soup somehow caused Tom's illness. Pragmatic strengthening and implicature have been extensively studied in synchronic linguistics but are also a driving factor in language change. A prominent example is the change of German temporal conjunction *weil* 'at the time/while' to newer causal *weil* 'because'. In the word's older sense, a speaker would assert that two events co-occur in time "**Weil** die Sonne scheint, wurde Tom schläfrig" (= 'while the sun was shining, Tom got sleepy'). But hearers would often enrich the literal meaning to a causal statement 'because the sun was shining, Tom got sleepy'. The enriched message is tantamount to using *weil* in its newer sense, which emerged by reanalysis. Parts of meaning may also get lost during change. In the case of *weil*, the temporal component has disappeared. Causal *weil* can relate events that are not co-temporal, older temporal *weil* could not.

- (1) *Weil es morgen regnet, gießt Susanne heute nicht die Blumen.*  
because it tomorrow rains, waters Susanne today not the flowers  
Susan doesn't water the flowers today, because/\*while it will rain tomorrow.

The present article reviews the advances in linguistic theory that were necessary to capture this process. Section 3 introduces precise terms to describe pragmatic enrichment, conventionalized implicature and reanalysis. Section 4 studies how the stages of meaning change in pragmatic enrichment are reflected in corpora during phases of ambiguous language use and latent semantic change. Section 5 discusses lexified implicatures. I argue that we have to distinguish contextual implicatures (Grice 1975) and lexified implicatures in order to better understand why sometimes, but not always, pragmatic enrichment leads to change. The proposal is aligned with earlier accounts, specifically Traugott's model of generalized invited inferences (Traugott 1999), Heine's four-stage context model (Heine 2002) and diachronic construction grammar (Traugott 2008, 2015). I argue that relevant data points have been neglected in earlier literature. Section 6 summarizes.

## 2. Background

Etymological dictionaries assemble philological studies on meaning change in natural languages. While such records are invaluable for writing word histories and interpolating links between older and newer language stages, their concept of meaning remains vague and informal (Stern 1931, Bynon 1977). This makes it difficult to diagnose precisely when meanings change and how. Lacking a precise notion of semantic composition, classical authors managed to assess the results of composition but were unable to cleanly distinguish literal meaning and pragmatic enrichment. It was difficult or even meaningless to ask questions like *which parts of the utterance meaning are literal and which ones arise by pragmatic reasoning?* Likewise, clear criteria as to whether an utterance entails or implicates a piece of information were still outside reach.

With the advent of formal semantics, it became possible to delineate literal sentence meaning and utterance meaning. Grice's Maxims of Conversation allowed to capture implicatures and pragmatic enrichment as a rule-based process (Grice 1975). This was a crucial precondition to identify literal meaning and facilitated the detection of meaning change, i.e., change in literal meaning. We also can model how pragmatic enrichment turns into part of literal content, as illustrated in our initial example.

Unfortunately, Grice's *terminology* wasn't ideally suited to trace semantic change by pragmatic enrichment. Grice allowed for conventional implicature as a lexical property of words (Potts 2005) in addition to contextual implicature as a productive process. Yet Grice's own lead example of conventional implicature, the word *but*, doesn't plausibly arise by conventionalization of an earlier implicature: The conjunction *but* is assumed to mark contrast by conventional implicature (Grice 1975:44f, Carston 2002:53). The diachronic development of *but*, however, leads from OS *biutan* 'outside' via an exceptive construction 'without' (OED, stages A.2a, A.3, B) to modern contrastive *but* (OED, stages C). The OED lists no stage where *but* means 'and' and triggers a conversational implicature of contrast. We can thus say that Grice's conventional implicature is not what historical linguists mean by 'conventionalized implicature' and Grice's examples of conventional implicature are typically *not* examples of pragmatic enrichment in the sense of grammaticalization theory. The next section takes a closer look at pragmatic enrichment and semantics.

The present paper doesn't aim to compare different implementations of Gricean theory and their relation to diachronic semantics. The reader is referred to Levinson (2000) for a Neo-Gricean version of pragmatics geared to capture the grammaticalization of English reflexives *self*. Traugott (2012) offers a detailed comparison of different Neo-Gricean theories and their suitedness to explain specific cases of language change.

## 3. Pragmatic enrichment and change

When thinking about meaning change from content word to function word, many people share the intuition that semantic content "gets lost" or meanings get "paler", as in our initial example. The noun *while* / *Weile* can be defined in terms of time intervals or event durations. The meaning of the causal connective *weil* ('because') is much harder to delineate and seems a blurry mix of how facts cause other facts and how the speaker derives one fact from another. Many authors, therefore, talk about loss in meaning, or bleaching (von Stechow 1995).

Traugott and König (1991) were the first to defend the claim that losses are balanced by semantic gains. They argue their case based on *going-to<sub>Move</sub>* as a movement expression, which grammaticized into the *going-to* future in English. While they observe that *going-to<sub>Fut</sub>* no longer entails physical movement, they stress that entailments about future events are present in *going-to<sub>Fut</sub>* but absent from *going-to<sub>Move</sub>*. The core argument is this: If the meaning of *going-to<sub>Fut</sub>* was just a bleached version of older *going-to<sub>Move</sub>*, all sentences based on *going-to<sub>Move</sub>* in the old sense should entail the same sentence with the new *going-to<sub>Fut</sub>*. This works out in some examples. For instance, (2) entails (3) under the plausible assumption that Tom reached the kitchen successfully and managed to get the salt.

- (2) *Tom was going (to the kitchen) to fetch salt.* (movement)  
 (3) *Tom was going to fetch salt.* (future)

However, other examples do not give rise to the entailments predicted by a bleaching analysis.

- (4) *Tom wanted to fake an illness in order to avoid the exam. **At eight in the morning, he was going (to his doctor) to get a sick certificate.** But the doctor refused to certify a perfectly healthy kid as being ill.*  
 (5) ***At eight, Tom was going to get a sick certificate.*** (future)

In the described context, (4) is true, but (5) is false. The sentence in the *going-to<sub>Move</sub>* sense does not entail the *going-to<sub>Fut</sub>* sense. Thus, a simple bleaching analysis must be wrong.

Clearly, there are more lexical differences between older and newer *going-to*. For instance, the newer *going-to<sub>Fut</sub>* can combine with state descriptions (*the shirt is going to be dry in two hours*) and take subjects that cannot *go* in the movement sense (*the bomb is going to explode*) whereas the older *going-to<sub>Move</sub>* cannot. Such differences are useful to diagnose the sense of *going-to* in historical attestations in corpora, yet the crucial evidence for pragmatic enrichment are non-entailments like in (4)/(5).

Let me introduce some notation that allows us to refer to the stages in semantic change more precisely, using the example *weil<sub>old/new</sub>* for illustration. In the following,  $\omega$  is a word, morpheme, or construction under change. Let moreover  $S(\omega)$  stand for a sentence or utterance  $S$  containing  $\omega$ . Subscripts will specify whether  $\omega$  is used in an older or newer sense: Let  $\omega_{old}$  stand for the older lexical entry for word/construction  $\omega$ , specifically in its older meaning or grammatical features. Similarly,  $\omega_{new}$  refers to the lexical entry for  $\omega$  in its new meaning or grammatical properties. As Hopper pointed out,  $\omega_{old}$  and  $\omega_{new}$  can co-occur in the same lexicon, described as layering in (Hopper 1991:23).

In order to highlight the meanings of sentences as independent entity, we use the bracket notation of formal semantics.

1.  $\llbracket S(\omega) \rrbracket$  stands for the literal meaning of  $S(\omega)$ , and similarly for  $\omega_{old}$  and  $\omega_{new}$ .

In addition to the literal meaning of a sentence in context, it makes sense to track pragmatic enrichment of the sentence uttered in the given context. This will be notated as follows.

2.  $\llbracket S(\omega) \rrbracket \& \llbracket \rrbracket$  stands for the literal meaning of  $S(\omega)$  and pragmatic enrichment  $\llbracket \rrbracket$  in the given utterance content (similarly for  $\omega_{old}$  and  $\omega_{new}$ ).

I use the symbol & to indicate that pragmatic enrichments can go beyond logical conjunction and might include new presuppositions or non-at-issue content. Put simply,  $\llbracket S(\omega) \rrbracket \& \Pi$  is what you'd intuitively call the information conveyed by utterance  $S(\omega)$  in the given context. *Bridging contexts* are attestations in historical sources that are ambiguous between older and newer sense of the critical item  $\omega$  (Heine 2002, Diewald 2002). These can be characterized as follows.

3. *Bridging contexts* are attestations where  $\llbracket S(\omega_{\text{old}}) \rrbracket \& \Pi = \llbracket S(\omega_{\text{new}}) \rrbracket$ .

Note that, according to this definition, bridging contexts can only be identified *post hoc*. Without some newer sense  $\omega_{\text{new}}$  attested in the data, we would have no basis to diagnose an ambiguity. Bridging contexts lead to reanalysis, i.e. restructuring the utterance in terms of  $\omega_{\text{new}}$ . As bridging contexts can only be identified *after* a new item has emerged, we can even say that *all* bridging contexts must have led to reanalysis. Section 4 below discusses how such circular definitions can be avoided by making use of evidence for lexified implicature.

Finally, *separating contexts* are contexts where  $\omega_{\text{old}}$  no longer makes sense (termed switch contexts in Heine 2002, isolating contexts in Diewald 2002).<sup>1</sup> They offer evidence that a new item has emerged.

4. *Separating contexts* are early attestations of  $\omega$  where  $\llbracket S(\omega_{\text{old}}) \rrbracket \& \Pi' \neq \llbracket S(\omega_{\text{new}}) \rrbracket$  for any reasonable pragmatic enrichment  $\Pi'$  in the given context.

Let me illustrate these terms with *weil*. In its older sense, *Weil(e)* was a noun meaning a time span 'while' in temporal constructions similar to 'the while that...'

$\omega_{\text{old}}$ : 'Weile': noun,  
literally: 'time span, time interval'  
constructions like: die Weile, die... ('the while that...')

(6) shows an example of the older use. Both content and the (archaic) *die-weil* form ensure a temporal interpretation. *Die weil(e)* in (6) is used in an adverbial clause. The sentence doesn't suggest that Peter sang *because* Hans slept.

- (6) *Die weil(e) Hans schlief, sang Peter.*  
the while Hans slept, sang Peter  
'While Hans was sleeping, Peter was singing.'

Next, we find bridging contexts with pragmatic enrichment. The following example is hypothesized in Grimm (DW: entry *weil*, III.) to illustrate this stage.

- (7) *(die) weile, (die) der meister die werkstatt verliesz,*  
the while, that the master the workshop left,  
*arbeitete der gesell lässiger*  
worked the apprentice more sloppily

$\llbracket S(\omega_{\text{old}}) \rrbracket \& \Pi$   
'As long as the master left the workshop, the apprentice worked more sloppily'  
& 'the absence caused the sloppiness'

<sup>1</sup> I use the terms *bridging context* and *separating context* in the remainder of the paper.

[[ S( $\omega_{new}$ ) ]]

‘Because the master left the workshop, the apprentice worked more sloppily.’

A separating context is exhibited in the following example in Grimms’ attestations. *Weil* arguably can only be interpreted in the novel sense (b).

- (8) *weil er jenem dienst sich weihte,*  
because he that service himself devoted  
*hat er bei uns das bürgerrecht verwirkt*  
has he with us the right of citizen lost  
(Grimm, DW: entry *weil*, III.A1)

(a) [[ S( $\omega_{old}$ ) ]] literally: ‘as long as he **devoted** himself to that other service, he no longer **has** right of citizen with us’

(b) [[ S( $\omega_{new}$ ) ]] = ‘because he devoted himself (earlier) to that service, he no longer has right of citizen with us.’

Interpretation (a) amounts to a reading asserting that two states are cotermporal, and one is in the past and the other the present. This is contradictory and (a) is, in fact, unavailable. Therefore the example attests an unambiguous use of *weil<sub>new</sub>*.<sup>2</sup>

Pragmatic enrichment has mostly been studied in grammaticalization, where the term highlights the fact that functional words have meanings (von Fintel 1995, Eckardt 2006). Yet, pragmatic enrichment also pervades in semantic change of lexical words (Fritz 2005: 108f). For instance, the German adverb/adjective *nachhaltig* ‘sustainable’ was first attested around 1750 in the corpus *Deutsches Textarchiv* (DTA)<sup>3</sup>. It emerged in the debate around sustainable management of forests (*nachhaltige Forstwirtschaft*, Hölzl, 2010) and supported the logical entailment ‘the resource management *can* be continued infinitely long.’ This is the point of the following quote about *sustainably profitable management*.

- (9) [*Viele vorsichtige Wirthe sehen also noch immer die Brache*]  
*als die Basis eines sichern und **nachhaltig einträglichen** Feldbaues [an].*  
(Thaer 1809; DTA)  
‘...as the basis of safe and sustainably profitable agriculture’

The utterance entails a possibility, not a fact. It is thus consistent to exert *sustainable forest management* for a short time and then switch to other management regimes. However, in many

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<sup>2</sup> A brief terminological warning: The term *context* is used in three senses in the pragmatic and grammaticalization literature. In pragmatics, *context* refers to the situation in which a sentence is uttered. Context determines the current question under debate, speaker’s and addressee’s current aims and beliefs — factors that influence the implicatures raised by the utterance (Grice 1975, Levinson 2000). In historical linguistics, the term *bridging context* refers to attestations in a given historical document, and *separating context* uses the term in the same sense. This sense is loosely related to the one in pragmatics, but while pragmatic context means “everything surrounding the utterance”, historical contexts refer to “sentence and its ties to text around it”. Finally, *context* can refer to the sentential environment of  $\omega$  (e.g.,  $\omega$  in a negated context,  $\omega$  in a subordinate clause context etc., e.g. in Haumann and Killie 2019). This use is restricted to syntactic studies in change, and we will not use *context* in the syntactic sense here.

<sup>3</sup> Balanced online corpus with texts between 1600 – 2000, see <https://www.deutschestextarchiv.de/>

examples there is an implicature that sustainable management/cultivation actually *will* last long.<sup>4</sup>

- (10) *Der Wald wird nachhaltig bewirtschaftet*  
The forest AUX sustainably managed  
Implicature: the forest is cultivated/farmed to last for a long time

However, in recent decades the implicature was reanalysed to be part of the literal meaning of *nachhaltig<sub>new</sub>* in a new sense. The adverb *nachhaltig* in the new sense entails that a state lasts for a long time. The following quote illustrates this use.

- (11) *McLaren nachhaltig verärgert über Alonso.*<sup>5</sup>  
McLaren sustainably annoyed about Alonso  
'McLaren is annoyed by Alonso (once) and McLaren will remain annoyed for a long time'

In this novel sense, it is no longer consistent to say *Alonso annoyed McLaren nachhaltig* but *McLaren soon stopped being annoyed*. In the transition from older to newer sense, we find the following losses and gains.

loss of semantic restrictions

*nachhaltig<sub>old</sub>*:

applies to an activity of forestry, cultivation, farm management

*nachhaltig<sub>new</sub>*:

less restricted, applies to resultative actions in general

pragmatic enrichment, implicature turns into lexical content

*nachhaltig<sub>old</sub>*:

conversational implicature, cancellable: activity/state lasts for long time

*nachhaltig<sub>new</sub>*:

entailment, non-cancellable: long lasting activity, activity with long-lasting effects

Examples of pragmatic enrichment in the lexical domain are rarely included in the theoretical debate. Traditional treatments of meaning change class them as semantic shift without taking a closer look into the causing factors (Fritz 2005, Bynon 1977, Stern 1931). Yet, cognitive approaches to meaning change propose to link changing prototypes and changed extension, as for example in Geeraerts' pioneering study on the development of clothing terms (Geeraerts 1997). Geeraerts' work is exemplaric also in that it provides dense track records of pragmatic enrichment in diachronic corpora – to which we turn in the next section.

### 3. Corpus evidence

Traditional word histories were based on manual search and often provided but a spotted record of attestations. The sparseness of data is also a structural problem at very early language stages. Large corpora allow for comprehensive data records that not only tell us what happened but also what did not happen. We can thus ask new questions about change and enrichment.

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<sup>4</sup> <https://www.planet-wissen.de/natur/pflanzen/baeume/pwierohstoffholz100.html> (March 2023), slightly simplified.

<sup>5</sup> <https://www.motorsport-total.com/formel-1/news/mclaren-nachhaltig-veraergert-ueber-alonso-03070106> (Jan 2023)

1. **Intermediate phase.** Do clear uses of  $\omega_{\text{new}}$  occur aside of uses of  $\omega_{\text{old}}$  abruptly, or do we see a phase of ambiguous uses of  $\omega$  that could be interpreted in either way? How long would such phases last?
2. **Local emergence.** Are ambiguous uses restricted to specific genres or texts, or do they typically occur across the board, i.e. in all kinds of test sources at a given time?

The term *bridging context* already suggests that we expect an intermediate phase between older and newer language stage, and ambiguous in-between uses have been provided in case studies. Corpus studies, however, remind us forcefully that there are many ambiguous uses of language, of which only very few lead to change. Corpus studies also show substantial time lag between first bridging contexts and first separating contexts, as my case study will illustrate. Extended phases of inertia were first described as *semantic polygenesis / semantic change from subsets* by Geeraerts (1997: chap. 2.3).

The second question likewise requires comprehensive data records. There is anecdotic evidence for cases where a novel sense of a word emerged from a specific genre or text type. For instance, the term *premises* ‘estate’ emerged in legal language: Contracts started with a description of the estate, which was then anaphorically referred to as *premises<sub>old</sub>* ‘aforementioned’ in subsequent text. Reanalysis of the anaphor led to *premises<sub>new</sub>* ‘estate’ (Stern 1931:354). Another case is made in (Eckardt 2023, t.a.), arguing that the South German preterite loss started in merchant diaries and sales accounts.<sup>6</sup> Apart from such anecdotic observations, the genre or text type where changes originated is usually unknown. Corpora can serve to fill this gap.

The present section reports a corpus study on the development of *selbst<sub>old</sub>* ‘self’ into *selbst<sub>new</sub>* ‘even’ in German. Earlier data records (Eckardt 2001, 2006) will be complemented by new data and the study will answer the two leading questions. Let me first recapitulate the stages of *selbst*. The older use of *selbst*, matching the use of intensifying PRO-*self* in English, is illustrated in (12).

- (12) *Die Bischöfe trugen eine Mitra;*  
 the bishops wore a mitre  
*der König selbst trug eine Krone.*  
 the king himself wore a crown  
 The bishops wore a mitre, the king himself wore a crown.

The use of *selbst<sub>old</sub>* is typically stressed; *selbst<sub>old</sub>* associates with a preceding NP (‘*der König*’) which is presented as the centre of an entourage (e.g., *king — king’s bishops*). The sentence compares centre and entourage—(12) is about compared head gears—but examples need not have a mirative component: In (12), it is unsurprising that the king doesn’t wear a mitre but his own ceremonial gear.<sup>7</sup> Here is an attested use from 1100.

- (13) *si sint selbe sculdig des si anderi zihent.*  
 they are self guilty that:GEN they others accuse  
 ,they are themselves guilty of what they accuse others’  
 Wiener Notker, ca. 1100. (Referenzkorpus Mittelhochdeutsch, I·0·P\_WNot-017ra,09)

<sup>6</sup> The study also illustrates the challenges of compiling a comprehensive data record for this specific case of grammaticization where relevant sources were systematically neglected in traditional editorial work.

<sup>7</sup> see Eckardt (2001) for a comprehensive formal account.

*Selbst* relates to the subject *si* ('they') and rests on the centre-entourage structure 'they — those whom they accuse'.

Occasionally we find mirativity implicatures: *selbst<sub>old</sub>* examples implicating 'it is surprising that the central element — in addition to the entourage — acts in a certain way'. Here is an early attestation in the epos *Dietrichs Flucht* (c.1220 – 1300). The sentence follows a passage where the women of town accuse Dietrich and his men of the damage they caused.

- (14) *do giengen al die vrowen von der stat ... Fvr des hoves porten. (...)*  
*mit weinen solich vnmazen wart da sere getan. beidiv von vrowen vnd von man.*<sup>8</sup>  
*vof stvot **selbe** her dietrich.*  
 up stood **selbst** Herr Dietrich.  
 'Herr Dietrich himself stood up'  
 Dietrichs Flucht (Referenzkorpus Mittelhochdeutsch, IV·1·V\_Diet-03097)

(14) states that Dietrich stood up instead of sending one of his men. The text implicates that this is exceptional. Dietrich's noble character is highlighted as he answers the townsfolk himself.<sup>9</sup>

Certain *selbst*-uses in the data stick out in the record. These are sentences where (a) center and entourage share a property P and (b) the center is least likely to have P. I will call this a *scalar center-periphery construction* (SCPC). Here is an example from 17<sup>th</sup> century.

- (15) *Die Bienen fliegen **selbst** vor Schmertz vnd Trawrigkeit*  
 the bees fly **selbst** for pain and sadness  
*verjrrt jetzt hin/ jetzt her/ vnd tragen grosses Leid*  
 erring now here now there and carry great sorrow  
 'The bees themselves (even the bees) fly hither and thither erringly for their pain and sadness, and are in great mourning' (Opitz 1624:54)<sup>10</sup>

(15) allows a construal both as *selbst<sub>old</sub>* and *selbst<sub>new</sub>*. In the sense *selbst<sub>old</sub>*, the sentence states that (a) the bees flee and are sad, (b) all other creatures are also sad, (c) the bees are the *centre* in an entourage of less 'happy' animals, and therefore (d) it is more surprising for bees to show sorrow than for any other animal; this is the *scalar* component. In retrospect, one feels that readers may alternatively compute the simpler message 'even the bees were sad' with *selbst<sub>new</sub>* associates with focussed "die Bienen". (15) is thus a bridging context. Other typical aspects of the example are that it occurs in poetry and against the general background of Greek mythology. We may suspect that not every reader was aware of the presupposed centre-periphery structure (*bees – other animals*). Such readers had to accommodate the necessary beliefs to compute the meaning of the SCPC.

In a corpus search in the DTA, I annotated uses of *selbst* as intensifier, SCPC, focus particle or other. One finding was an increase in the ratio of SCPC after 1600. All SCPC examples turned out as bridging contexts. Attestations are particularly biased towards an 'even' interpretation

<sup>8</sup> Here's the full passage and translation: '*do giengen al die vrowen von der stat / Mit chleglichem leide / als ich iv nv bescheide. / Fvr des hoves porten. / mit gelichen Worten. Islichiv sprechen began. wider ir chint vnd zv ir man. "wem welt ir vns lazen" / mit weinen solich vnmazen / wart da sere getan / beidiv von vrowen vnd von man.*' Translation (RE): There went all women of town, in miserable pain (as I now describe to you) before the court's doors with these same words: Each started to talk, about their children and to their men: „to whom do you want to leave us?“ With endless crying this was done, painfully, by both women and men.

<sup>9</sup> The example also shows that the position of *selbst* relative to the antecedent was flexible, being preposed if required by metre or rhyme.

<sup>10</sup> see <https://www.projekt-gutenberg.org/opitz/gedichte/chap006.html> , visited March 2023.



when *selbst* precedes the correlate, as in the following example, an ode to the returning King Ferdinand of Austria (1641).

- (16) *Ob man das Deutsche Reich sieht vnterm Throne kniehn;*  
whether one the German Reich sees under.the throne kneel  
*Ob selbst der Wahltag eilt; ...*  
whether **self/even** the elector hurries  
Czepko, Daniel von (1641, p. 15)

We find a center ('Wahltag' lit. 'the election day,' metonymical for electors), a periphery (other chieftains), and a scalar component (electors are least likely to hurry). *Selbst* in the second line precedes its correlate 'der Wahltag'. The text presents it as surprising that the electors hurry to welcome King Ferdinand. The passage thus could alternatively be analysed as an instance of *selbst<sub>new</sub>* 'even', preceding its associate focus 'der Wahltag'.

While SCPC attestations suggest that *selbst<sub>new</sub>* 'even' was in close reach, a comprehensive search in the DTA reveals that separating contexts occurred only around 1730 when authors regularly used *selbst<sub>new</sub>*. (17) shows one of the earliest clear separating contexts in DTA.

- (17) *Sie haben es dahin gebracht, Daß wir selbst ihre Fehler ehren.*  
they have it there brought that we **even** their errors honor  
(Brockes 1730, p.39)  
'They have brought it about that we even honor their errors' in a pamphlet against the *Weltweisen* (philosophers).

The example arguably is a separating context: (i) *selbst* precedes the possible correlate 'ihre Fehler' (unlike *selbst<sub>old</sub>* 'self', which follows the correlate constituent), and (ii) the text nowhere suggests that philosophers' errors are the center in any suitable entourage. It is pragmatically less costly to assume that 'philosophers' errors' can trigger focus alternatives such as "philosophers' claims, deeds, writings or achievements".<sup>11</sup>

To get a clearer picture, I conducted three DTA searches for the years between 1600 and 1759. A pre-search ascertained that searching the string 'selbst' covers all spelling variants of the relevant uses. All attestations were classed as intensifier, SCPC, focus particle or other. Syntactic position was coded as 'preceding' or 'following' the associated element. The first search targeted a random sample of attestations in the full corpus between 1600–1759, of which the first 10 instances per decade were taken into account. The results are given in fig. 1. Intensifying *selbst<sub>old</sub>* predominates over the whole time interval, with SCPC ranging below 20% throughout. With overall 2 attestations, the focus particle *selbst<sub>new</sub>* (1680 and 1740) is still rarer; the search protocol was thus not suited to determine whether the newer use is entrenched or not. This was remedied in the second and third search.

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<sup>11</sup> A second conservative reading is possible and translates to 'that we ourselves honor their errors'. It is pragmatically unsupported, as the use of intensifying "we ourselves" – as opposed to who? – is unmotivated.

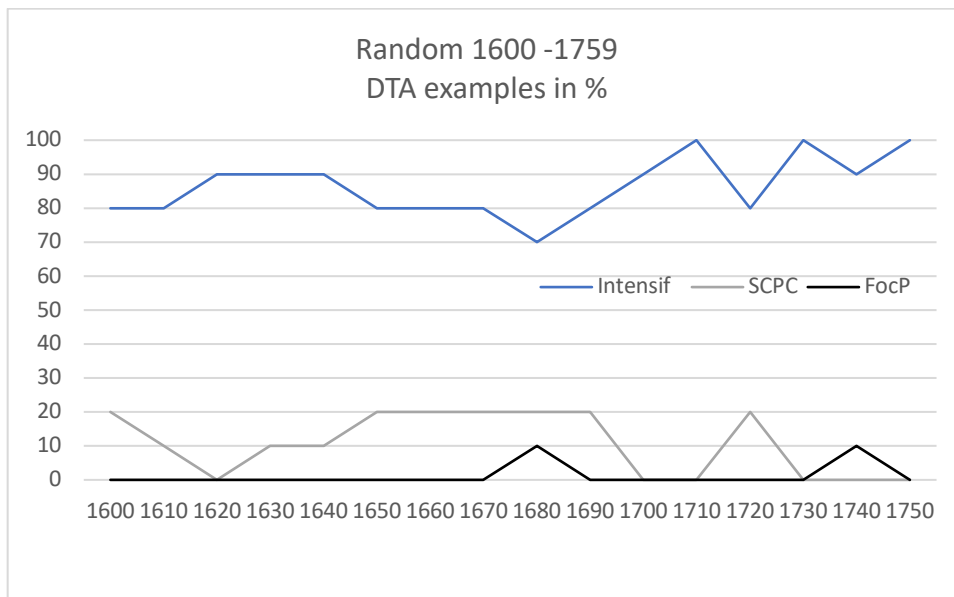


fig. 1

Next I searched subcorpus *Belletristik: Lyrik* (poetry) to track SCPC in poetic uses like (15) in educated speaker groups. As DTA doesn't support randomized search in time intervals, the *Lyrik* search covers the first 10 hits per decade. The results are depicted in fig. 2 (the data gap is caused by lack of *selbst* attestations between 1680 – 1689)

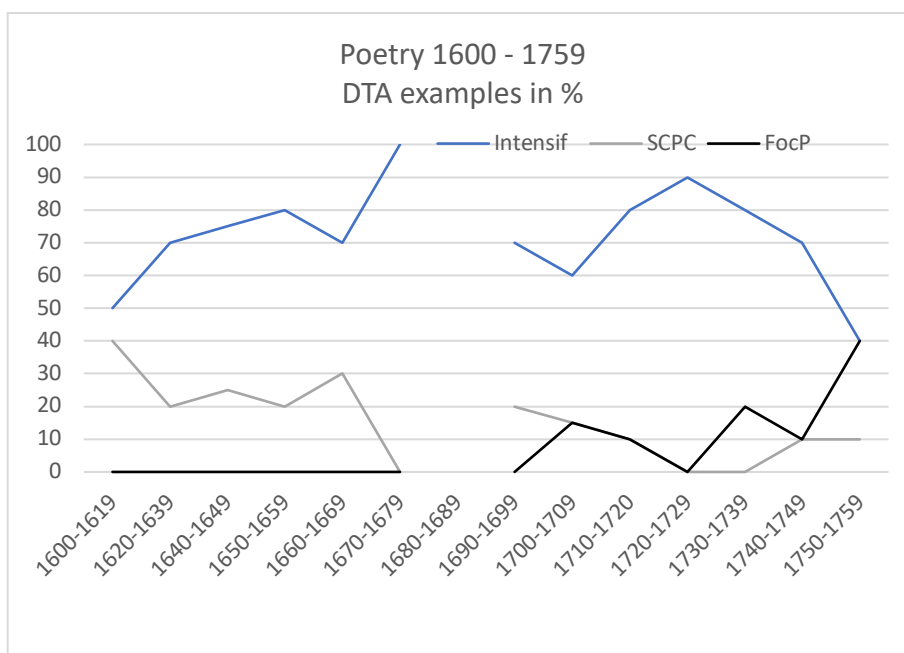


fig.2 Poetry (lacking *selbst* between 1680 – 1689)

In *poetry* (including prefaces and commentaries), we see a higher proportion of SCPCs as compared to the full DTA search. Some authors show a clear liking for SCPCs and a comprehensive statistical evaluation should include the factor “author” as a further random effect. For instance, Klopstock (in work between 1750-59) regularly used *selbst<sub>new</sub>*, which I take to show that the new entry was established in his lexicon.

Finally, I searched the subcorpus *Gebrauchsliteratur* (general texts, i.e. non-fiction, non-science) which cover genres of everyday life topics (with a slight bias on religious topics).

The search in *Gebrauchsliteratur* covers the first 10 uses of *selbst* in each decade between 1600 and 1800, in random order.<sup>12</sup> The results are shown in figure 3.

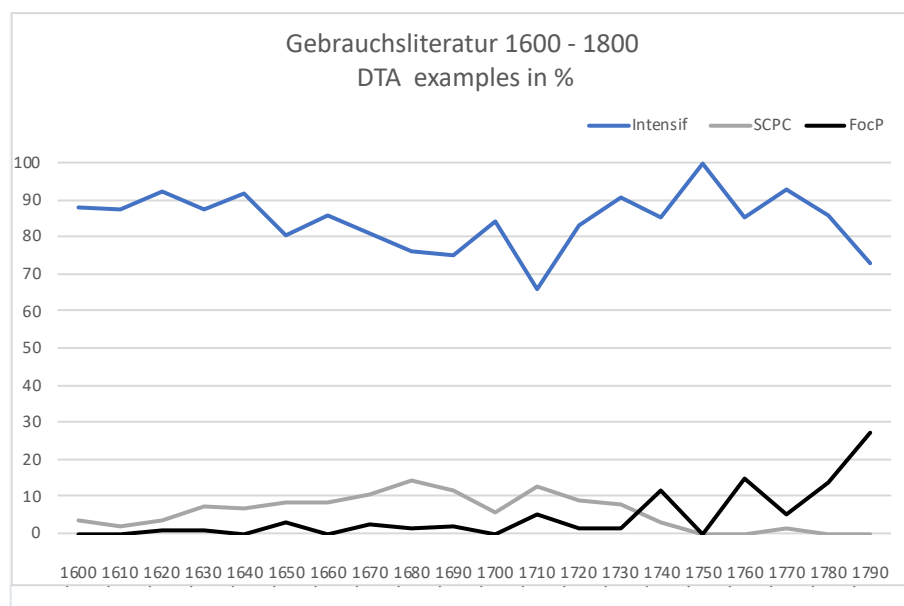


fig. 3 *Gebrauchsliteratur*

We see a decrease of SCPC examples and the rise of *selbst<sub>new</sub>* attestations, crossing around 1730. As the subcorpora *Poetry* and *Gebrauchsliteratur* partially overlap, the search revealed further attestations in lyrical texts. Example (18) shows a bridging or very early separating context in a poem by Daniel von Czepko.

- (18) *Die Nachbarn seh' ich ferne ziehn/...*  
the neighbours see I far leave (...)  
*Ja selbst der Blutts-Verwandten Schaar*  
prt **even** the blood relatives' crowd  
*die sich von meinem Namen nennen:*  
who themselves of my name call  
*den ekkelt stark vor der Gefahr/*  
those sicken much of the danger  
'I see the neighbours leave far away (...) and **even** my blood relatives – who call themselves by the same name as I – sicken at the danger.'  
Czepko, Daniel von. *Sieben-Gestirne Königlicher Busse* (1641)

The poem names 'my friends', 'my neighbours' and 'my blood relatives'. The use of *selbst<sub>old</sub>* refers to 'blood relatives' as the centre of these people. Syntactically, *selbst* precedes 'blood relatives' which is uncommon for *selbst<sub>old</sub>*. Readers who assume *selbst<sub>new</sub>* can assume that it associates with focussed "Blutsverwandte", which relates to 'friends' and 'neighbours' as focus alternatives. Facts thus stand against the use of *selbst<sub>old</sub>* and favour a construal as focus particle.<sup>13</sup> Still, each individual speaker (including the author) was free to assume the necessary centre-entourage and allow for some syntactic freedom in poetry.

<sup>12</sup> In DTA search, the requests „random order“ and „between <date> and <date>“ are mutually exclusive. A random order was simulated by running a random search in the *whole* subcorpus and then manually searching for the first 10 hits per decade.

<sup>13</sup> Interestingly, 7 out of overall 8 attestations of *selbst<sub>new</sub>* 'even' before 1700 occur in poems (as part of a text classed as *Gebrauchsliteratur*), which confirms the genre as the source of innovation.

Unambiguous separating contexts show up much later. Here is a separating context in a treatise on how to swim, written in 1742.

- (19) *Allein bey einem Schiffbruch (...) würde dieses Mittel nicht zureichen,*  
alone at a ship wrecking would this means not suffice  
*und selbst das Kork-Holz wäre bey solchen*  
and **even** the cork-wood was with such  
*betrübt Umständen nicht von grosser Hilfe ...*  
sad circumstances not of big help  
'Yet, in a ship wrecking this means would be insufficient, and even the cork-wood  
would not be of great help under such sad circumstances.'  
Bachstrom, Johann Friedrich: Die Kunst zu Schwimmen. Berlin, 1742.

The text *How to swim* treats a topic of practical interest, and describes cork-wood as the most advanced amongst contemporary swimming aids. Here, both syntax (preposed *selbst*) and ontology (cork-wood belts are not an established centre of any domain) favour an interpretation as *selbst<sub>new</sub>*. Few years later, Klopstock's writings regularly exhibit the focus particle *selbst* (1749 – 1774).

In summary, the DTA data record supports the rise of modern *selbst* from the language of poetry. While in randomly chosen text a ratio of 20% SCPC uses were common after 1600, poetry shows an early peak (about 30% between 1600 – 1650). The maximum in Gebrauchsliteratur was reached around 1670 – 1700 and shows lower ratio (ca. 12%). Possible separating contexts occur early, but *selbst<sub>new</sub>* is regularly used only by 1740-1749. SCPC uses decline in poetry and Gebrauchsliteratur slightly *before* focus particle *selbst* is established. This suggests that *selbst<sub>new</sub>* 'even' replaced the older SCPCs. The phase of latent change spans from c.1620 – 1740.<sup>14</sup> It thus took about 120 years before the results of reanalysis were fully rooted in the community, which means that we have to consider generations of speakers rather than a few years of innovation and imitation. This data record warns us against taking early examples like (15) (= Opitz 1624) as signs of imminent change. More than just ambiguity seems necessary to kick off language change. In the next section, I argue that bridging contexts can be of two kinds. Some uses are simply ambiguous between old/new construal, but some uses can only be interpreted in the conservative way when readers are willing to accommodate extra information. I will call these implicatures "beyond reason" and discuss their nature in the next section.

#### 4. Lexified implicature

Studies in semantic change commonly focus on the earliest attestations that constitute bridging/separating contexts. Less attention is paid to the phase between first bridging contexts and first separating contexts, which we might call the phase of latent change. We can only tell *post hoc* whether reanalysis took place. The above corpus study reveals how much time can elapse between the first bridging contexts and the first separating contexts. Is there any chance to distinguish a bridging context from any other pragmatically enriched context unless we look ahead and see change? At first sight, this seems difficult. Implicatures and pragmatic enrichment are omnipresent in language use, and most pragmatic enrichment occurs without any diachronic effect. Levinson (2000) makes this point most clearly, stressing that implicatures increase efficiency in synchronic communication. In a similar vein, the same implicatures can

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<sup>14</sup> Realistically, the audience of contemporary poetry in the early 17th century was limited.

lead to change in one language but fail to trigger change in another. For instance, English developed a *going-to* future, but German didn't. Likewise, we have non-emergence of a *wollen*-future in German (unlike English *will*) or non-emergence of *while* in a causal sense in English (unlike German *weil*).

This section argues that there are two kinds of bridging contexts. There are contexts that are simply ambiguous, and there are attestations that can only be interpreted in the old way if the hearer/reader is willing to draw implicatures “beyond reason”. In our case *selbst*, the SCPC leads to an implicated universal statement ‘all x have property P’. In most contexts the universal is triggered by conversational implicature. Yet we have seen examples where, in all likelihood, readers/hearers didn't believe the necessary presuppositions *before* reading the text. Here is another case.

- (20) *Da vnsers Landes Kron vnd Haupt mit seinem Leben /*  
 there our land's crown and head with his life  
*Der werden Nymf/ oft selbst die Zeit in frewd zubringt /*  
 the.GEN worthy nymph often self the time in joy passes  
*Da jhr manch Vögelein zu ehren lieblich singt*  
 there her some bird to honour lovely sings

Opitz, *Vom Wolfsbrunnen bey Heidelberg*. In: *Teutsche Pöemata* (1624).  
 referring to the Wolf-well at Heidelberg ‘where our country's king with his life, (and where) the worthy nymph herself spends joyful times, as quite a few birds sing to her honour’<sup>15</sup>

The SCPC in (20) presupposes (a) that nymphs are the center of an entourage that includes the king and (b) that nymphs are most picky when it comes to passing a good time. This leads to the desired universal: ‘everyone, including nymphs, spends a joyful time at the well (and by entailment, the king does, too)’. None of the presuppositions are explicated in the preceding text. Some readers may have shared Opitz' beliefs about nymphs, yet any reader then or today can interpret the passage as SCPC. These readers accommodate (a) and (b) *after* reading the passage, in order to provide the common ground CG expected by the author.

Gricean theory of implicature predicts that lack of knowledge will suppress implicatures. Indeed there is ample evidence for failed implicatures, for instance, failed irony or lacking implicatures in language acquisition (Noveck, 2001). Yet, *selbst* in (20) was not perceived as a failed implicature. The poem is included in all later editions of Opitz' poetry collection and classed as “extremely significant”.<sup>16</sup> If readers had perceived the poem as austere or inaccessible, it would not have attracted high praise. We can conclude that it was successfully interpreted as coded universal by readers trained to make sense of *selbst*. They accommodated the necessary presuppositions (that nymphs are central and the king peripheral; that nymphs are picky about leisure locations) and drew the pragmatic inference. Such backward inferencing can only be explained if an implicature is part of the conventional meaning of a construction — i.e. part of the lexical entry of the SCPC. Let us call this a *lexified implicature*.<sup>17</sup> We saw more examples with implicature “beyond reason” in (15), (16) or (18). All these show that the

<sup>15</sup> DTA, [https://www.deutschestextarchiv.de/book/view/opitz\\_poemata\\_1624/?hl=oftt&p=95](https://www.deutschestextarchiv.de/book/view/opitz_poemata_1624/?hl=oftt&p=95)

<sup>16</sup> H.J. Jakob, in *Kindler's Literaturlexikon Online* (2020), [https://link.springer.com/referenceworkentry/10.1007/978-3-476-05728-0\\_12667-1](https://link.springer.com/referenceworkentry/10.1007/978-3-476-05728-0_12667-1)

<sup>17</sup> The term is intended as more narrow than Grice's conventional implicature, in that it draws directly on conversational implicatures at the same time in history.

author could rely on readers to accommodate whatever necessary in order to derive the desired implicature. In other words, the implicature was lexically expected.

If implicatures “beyond reason” are a precondition for semantic change by pragmatic enrichment, this kind of attestation should be missing in cases where some change did not occur. A prominent minimal pair are the *going to* construction in English (which turned into a future) and the *gehen*+ infinitive in German as a case of non-change. The comparison is compelling as we do find futurate implicatures in German. Here are some examples for *gehen*+infinitive in DTA.

(21) Marinelli: *Ich gehe sogleich, Sie zu melden.*  
(M): I go presently you to announce  
'I am going to announce you'  
Lessing, Emilia Galloti (1772), DTA

(22) *Ich gehe, der Putzmacherin den Hut (zu) bringen.*  
I go the milliner the hat (to) bring  
'I am going to bring the hat to the milliner.'  
Wedekind, Erdgeist (1895), DTA

(21) triggers the implicature that the speaker will actually make the announcement, and (22) implicates that the hat will be brought to the milliner's. The implicature is particularly obvious in (23), where the protagonist Anton reacts to a knocking at the door.

(23) *Er ging zu öffnen ... und Käthchen drang herein.*  
He went to open ... and Käthchen got in  
'He went to open ... and Käthchen stormed in.'  
von Holtei, *Die Vagabunden* (1852), DTA

We understand the first clause as implicating ‘Anton did open the door’, a necessary prerequisite for Käthchen to get in. German speakers must have drawn implicatures like these for a long time, yet reanalysis of a *gehen*-future never happened.<sup>18</sup> If implicatures were all that is needed for change, German discourse had all it needed to develop a *gehen* future.

Yet, DTA search between 1600 and 1850 reveals that there are no attestations for *gehen* + *V*<sub>infinitive</sub> where the implicature is forced “beyond reason”, i.e. where readers have to accommodate presuppositions in order to derive a futurate implicature. The DTA offers just one unusual quote given in (24).

(24) *Jch gehe das letzte zu beweisen,*  
I go the last to prove  
(ob gleich hier mir noch ein sehr angenehmer Spaziergang vorläge, es nach den Regeln der Sulzerschen Theorie des Vergnügens zu berechnen,...)  
'I am going to prove the last point, although it would be an agreeable excursion to compute it based on the rules of Sulzer's Theory of Pleasure ...'  
Herder. *Abhandlung über den Ursprung der Sprache* (1772), p.114

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<sup>18</sup> In a similar vein, Geeraerts (1997) reports examples where a stage with bridging contexts for  $\omega$  ends without result, and the affected word  $\omega$  retains its older sense until a second wave of bridging contexts is eventually followed by separating contexts and a new lexical entry for  $\omega$ .

The use of *gehen* in (24) is incompatible with bodily movement. Most likely we see a metaphoric use of *gehen* as an intellectual movement from argument to argument, which is confirmed by the mention of *Spaziergang* (*stroll, pleasure walk* in the physical sense). (24) does not qualify as *gehen* with a futurate implicature “beyond reason” because attestations with implicature “beyond reason” are compatible with the literal sense of the word, which (24) is not. The DTA data record shows that the construction *gehen* + V<sub>infinitive</sub> in German never had a lexified implicature to the end ‘V will happen in the near future’. All implicatures of *gehen* + V<sub>infinitive</sub> to future are regular conversational implicatures.

Let us compare this situation to the data record of *be going to* in English. The comparison must be fragmental, as such data have not so far received attention in the literature. Yet, first observations suggest a picture different from German. Gregersen (2018) draws attention to attestations of *be going to* with passives in the 17<sup>th</sup> century. Passive sentences like (25), if they occur early enough, could indeed show implicature “beyond reason”.<sup>19</sup>

(25) *Peter is going to be photographed.*

As the speaker is not the agent but the patient of *to photograph*, the speaker (literally) doesn’t have agentive control over the event of photographing. The interpretation requires the hearer to accommodate the belief that the subject *Peter* has indirect control (e.g. by ordering someone). Without this assumption, “going with the intention to do V” would be incompatible with the passive. I propose that accommodation was triggered by the lexified implicature of *going to* that an event happens in the near future. When implicatures turn into lexified implicatures, this creates a new lexical entry for the word/construction. The new entry (i) copies the previous entry and (ii) adds the lexified implicature. Passives like (25) in English can evidence lexified implicature. It is important to clarify that not all passives share the same pragmatic potential: The much-quoted attestation *Schoole-boy is going to bee Whipt* from 1628 is a passive, but the example uses *going* without physical movement (the Schoole-boy is standing still, he is *not* going anywhere; see Gregersen 2018: (3) for the full example). This is therefore a separating context and unsuited to investigate the initiation of change. Note that combinations of *gehen* and passive are unattested in German.

In sum, German corpora include attestations of *gehen* + V<sub>infinitive</sub> with a futurate implicature, but lack attestations showing pragmatic enrichment “beyond reason”. English corpora around 1600, in contrast, include attestations that require enrichment “beyond reason”, triggered by the hearer’s expectation to derive a futurate implicature. While the details remain to be worked out, it seems plausible to assume that stasis goes along with lack of lexified implicature, whereas change is foreshadowed by evidence for lexified implicature.

The remainder of this section aims to align this hypothesis with earlier theories of semantic change by pragmatic enrichment. I discuss the frameworks in Traugott (1999), Heine (2002), and diachronic Construction Grammar (Diewald 2006, Traugott 2008, 2015), and test how well they deal with the dynamics of latent change in *selbst* or *going to*, as opposed to the stasis for *gehen* + V<sub>infinitive</sub> in German. While all authors allude to some stage between enrichment and reanalysis, I argue that none diagnosed the empirical evidence correctly.

Traugott (1999) assumed that meaning change builds on conventionalized pragmatic enrichment, which she called *generalized invited inferences* GIINs (Geis & Zwicky 1971,

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<sup>19</sup> Made-up example, after *I believe next news I heare will be that you are going to bee married* (1672, see OED *go* v., 51.a.(a)) The OED example dates too late for the (English) phase of bridging contexts without separating contexts.

Lewis 2000). The term suggests that some implicatures have a different status from Grice's conversational implicatures in that they are more general or more invited, but the exact difference remains vague. If we look at the case of *selbst<sub>old</sub>*, SCPCs rest on richer knowledge and trigger logically stronger implicatures than other uses of *selbst<sub>old</sub>*, as shown above. The implicature can be captured as conversational implicature (Grice 1975, see (15)). Conversational implicatures occur regularly over ca. 100 years, but the question is whether this is sufficient to call them *generalized* and *invited*. — If we turn to the case of *gehen* + V<sub>infinitive</sub> in German, we find a very similar picture in terms of implicatures. The use of *gehen* + V<sub>infinitive</sub> regularly triggers the implicature that V happens after the time referred to, see (21) – (23). Yet, these were probably not GIINs, or German should have developed a *gehen* future. One might propose that *generalized* and *invited* refer to the frequency of attestations. Yet, we saw that the frequency of SCPC in uses of *selbst*—a case of imminent change—in random text was also overall low (fig. 1). The data record, therefore, suggests that *generalized* and *invited* inference must be something different than “an implicature that speakers experience in *n*% of all uses of word  $\omega$ ” for some threshold *n*. It is thus nontrivial to spell out which historical data can tell us (beyond *post-hoc* diagnosis) whether an implicature is a GIIN or not.

Heine (2002) also tried to overcome the *post-hoc* nature of diagnosing pragmatic enrichment. He linked change to attestations and described *Stage 2* attestations as “there is a specific context giving rise to an inference in favor of a new meaning” with the comment: “target meaning foregrounded”. *Stage 3* attestations are those where “there is a new context which is incompatible with the source meaning,” i.e., “source meaning backgrounded” (Heine 2002:86). Heine situated bridging contexts at stage 2 and separating contexts at stage 3. It remains open what a foregrounded meaning amounts to in our examples. When *selbst<sub>old</sub>* is used in SCPCs, the information aimed at is the implicated universal ‘all *x* do *P*’. For instance, the passage (15) describes the death of a young woman, mourned by firstly the green field, and seesecondly the flowers. Thirdly, the *bees* are mourning, which implicates that *everybody* is mourning. Is this enough to highlight content? The same reasoning could apply to *gehen* + V<sub>infinitive</sub>: In (20) Marinelli, current host of Odoardo's daughter and wife, implicates that he will announce Odoardo's arrival. Whereupon Odoardo asks: *Warum melden?* (‘Why announce?’)<sup>20</sup>, thus challenging the future act of *announcing*, not the event of *going*. Is this, then, highlighted content? As Heine fails to name empirical criteria for highlighted content, we see a *post-hoc* diagnosis again.<sup>21</sup> Crucially, such *post hoc* criteria mean that statements like ‘bridging contexts foreshadow language change’ are tautological.

Construction grammar, finally, was advocated as a framework to study meaning change by pragmatic enrichment (Diewald 2006, Traugott 2008, 2015). Constructions allow to code complex meanings of phrases and integrate all levels of linguistic description. The format also can capture implicatures as part of a construction's lexical entry (Traugott 2008:33f.)<sup>22</sup> Traugott uses the case of *going to* in several papers that adjust terms of construction grammar to capture conventionalized pragmatic enrichment (Traugott 2008, 2015). Yet the data track in these studies is sparse (Gregersen 2018) and inconclusive (Gregersen 2018, Börjars et al. 2015). While no existing study monitors data before the first bridging examples (Garrett 2012), Gregersen provides a dense data record after bridging, and argues that isolating contexts appear in fact much earlier than Traugott's account would allow. It seems thus fair to say that Traugott correctly identified a stage with implicatures as lexical requirement but missed out on the empirical impact of attestations with implicatures “beyond reason”.

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<sup>20</sup> The reason being that these are in the company of Prince Gonzaga, secret lover of the daughter.

<sup>21</sup> Heine's focus is on areal variation in African languages, where the written record is sparse. He offers no examples to illustrate the notion „highlighted content“.

<sup>22</sup> The following discussion rests on Traugott's (2008) construction format.



## 5. Summary and conclusion

Pragmatic enrichment is an important process in semantic change. With the advent of large corpora, a richer data record allows to better understand the difference between pragmatic enrichment as synchronic process (very frequent) and pragmatic enrichment leading up to change (rare). I argue that in phases of latent change of a word/construction we find attestations that trigger implicatures “beyond reason” and offer evidence for lexified implicature. While conversational implicature is a forward process where utterance, maxims of conversation and shared knowledge lead to an implicature, lexified implicature arises by backward inference: an utterance plus *expected* implicature are what triggers accommodation of *necessary knowledge*. Only when necessary knowledge has been adopted does the implicature follow.

My cause was illustrated by the case of *selbst*. SCPC examples offer evidence for implicature beyond reason, as illustrated by (15), (16), (18) and (20). The record shows that these uses precede separating contexts, which attest the change. The case of *going-to/gehen* is one where stasis (a potential change *not* occurring) correlates with lacking evidence for lexified implicature, while change correlates with implicature “beyond reason”. While the current data record supports the hypothesis, a detailed comparison of German and English would be desirable.

Lexified implicatures can also help us to understand speakers’ linguistic competence in phases of latent change. Speakers seem to recognize a word/construction as a regular means to achieve a conventionalized rhetorical point. While *selbst* was adopted to convey a coded universal, German *gehen* + V<sub>infinitive</sub> was never conventionalized as a means to convey futurity. In triggering implicatures beyond reason, speakers thus rely on a link between word and rhetorical aims coded in the lexicon (Lewis 2000).

While some accounts of semantic change remain deliberately agnostic about the semantic/pragmatic division of labor (as the constant-entailment approach by Gergel and Beck, 2015), there have been various attempts to acknowledge the difference between ordinary implicatures and implicatures leading to change. Traugott’s *generalized invited inference* (GIIN) as well as Heine’s notion of *highlighted content*, can be read in this sense. None of these, however, acknowledged the importance of attestations that show lexified implicature. These seem to constitute important *ante-hoc* evidence for imminent change. I propose that *both* compositional semantics and construction grammar are necessary to understand lexified implicature. Without a compositional derivation of implicatures, we would not be able to distinguish utterances with contextual implicatures from utterances with lexified implicatures. Construction grammar, on the other hand, allows to code lexified implicatures easily. In compositional semantics, lexified implicatures must be coded by case-by-case adjustments in the lexicon which blur the common force behind the process.

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