



UNIVERSITY OF
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STRUCTURAL AMBIGUITY AND REANALYSIS - THE CASE OF SWEDISH *FORTSATT*

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Layout of the talk

Disposition:

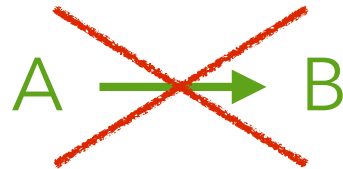
1. Introduction
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4. *Fortsatt* as a clause adverbial
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6. Conclusions.

Data sources:

- Språkbanken Korp: <https://spraakbanken.gu.se/verktyg/korp>
- Svenska dagstidningar (KB): <https://tidningar.kb.se/>

1. Introduction

Grammatical change does not happen in sudden shifts from one stage to another.



An intermediate stage, where two analyses are possible, seems to be necessary.



Indeed, A probably never “becomes” B without an intermediary stage in which A and B coexist.

Hopper & Traugott 2003:49

1. Introduction

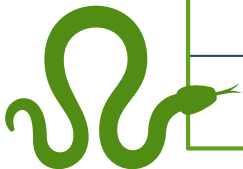
The stage A/B is a bridge context. From a structural perspective, two analyses are possible, and from a semantic/pragmatic perspective two interpretations are possible.

But the alternative analyses/interpretations are only available in bridge contexts. In other contexts only the source construction (A) is possible.

And the change only becomes clearly visible in contexts that disallow the source construction and accordingly must be analysed/interpreted as the goal construction (B).

Two simple examples are the changes to give rise to *nickname* and *adder*.

SOURCE CONSTRUCTION	BRIDGE CONTEXT	GOAL CONSTRUCTION
eke name	an eke name	nickname
nadder	an nadder	adder

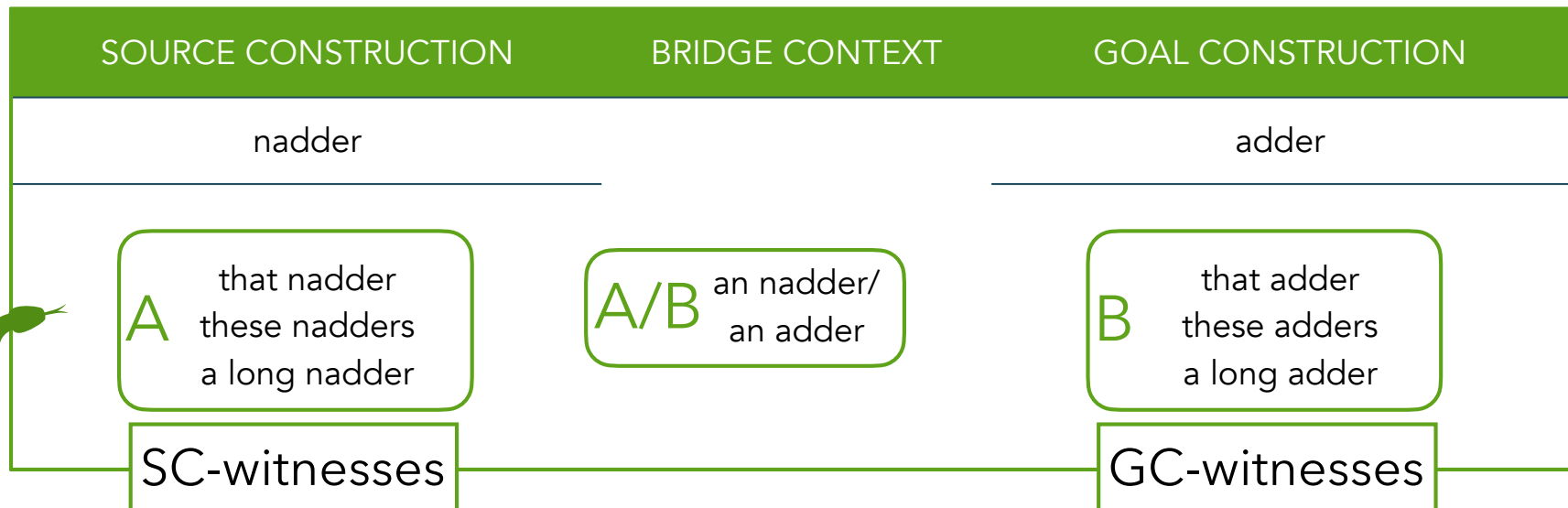


1. Introduction



SOURCE CONSTRUCTION	BRIDGE CONTEXT	GOAL CONSTRUCTION
eke name	an eke name	nickname
nadder	an nadder	adder

The bridge context is ambiguous and may lead to a new analysis – a reanalysis. The reanalysis can only be detected when the new construction appears in non-ambiguous contexts.



1. Introduction

In grammatical language change, reanalysis is thus essential. And ambiguity is in turn necessary for reanalysis:

To summarize, the conditions necessary for reanalysis to take place are that a subset of the tokens of a particular constructional type must be open to the possibility of multiple structural analyses, where one potential analysis is the old one (applicable to all tokens) and the other potential analysis is the new one (applicable to a subset).

Harris & Campbell 1995:72

Roughly, reanalysis can be defined as a process that changes the actual (underlying) linguistic structure without necessarily affecting the visible or audible surface manifestation of that structure. So it presupposes ambiguity in linguistic structures [...].

Burridge & Bergs 2017:108

The consensus among proponents of reanalysis is that structural ambiguity is a necessary precondition.

Denison 2017:313

The trigger that enables reanalysis is ambiguity, especially structural ambiguity [...]

Weiß 2021:21

1. Introduction

Reanalysis is discussed by everyone that is interested in structural change (cf. Langacker 1977, Lightfoot 1979, Lass 1980, Harris & Campbell 1995, Hopper & Traugott 2003, Fischer 2007, Roberts 2007, Burridge & Bergs 2017).

The condition for reanalysis – structural ambiguity – has received less attention (but cf. Wurzel 1997, Denison 2017).

Question:

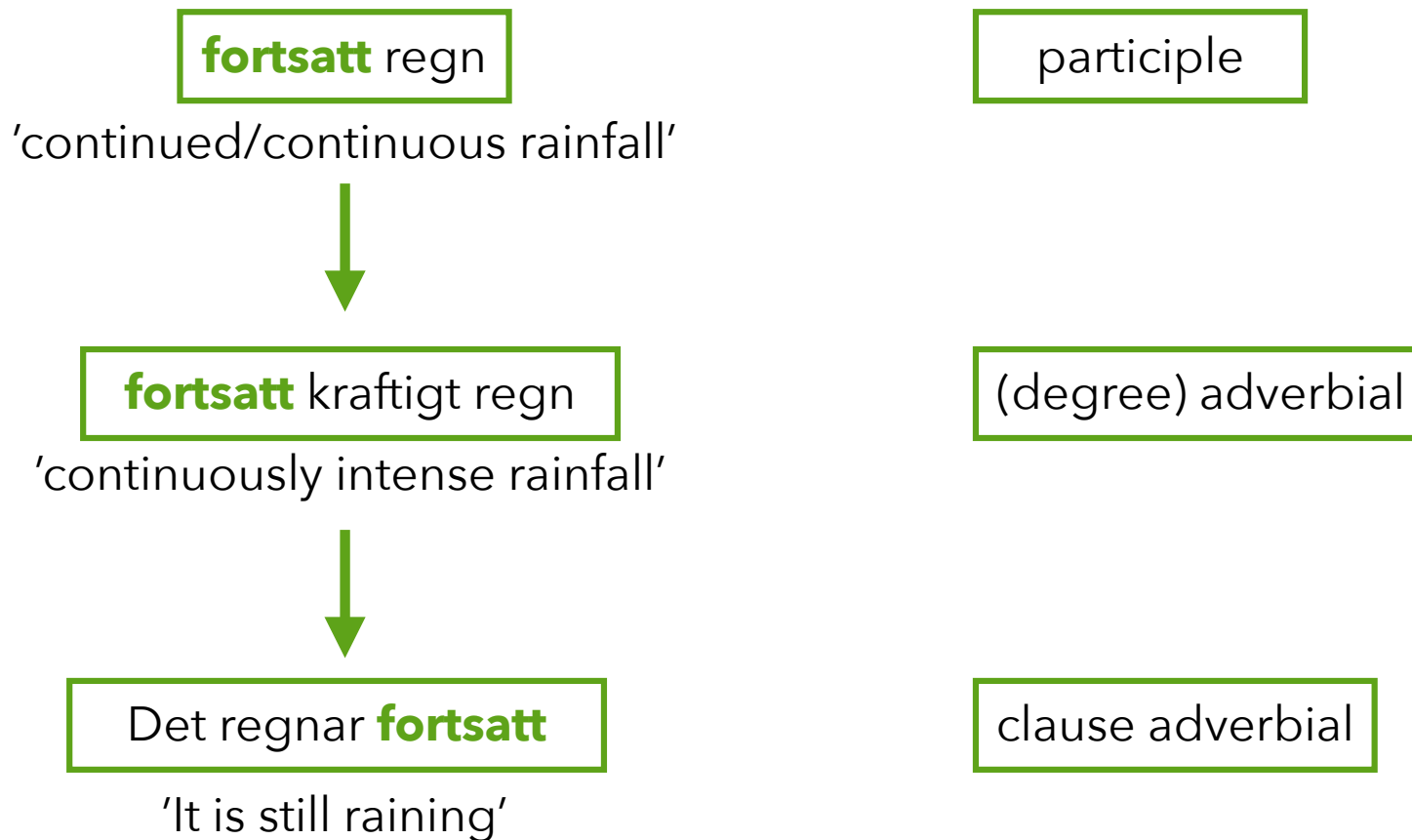
- Does the frequency of bridge contexts affect structural change?

An answer requires a diachronic study where the frequency of ambiguous constructions can be quantified. The case study here is the development of Swedish *fortsatt* (the past participle of *fortsätta* 'to continue').

2. *Fortsatt*

Fortsatt is the participial form of the verb *fortsätta* 'to continue'.

The changes of *fortsatt* - a quick overview.



2. *Fortsatt*

Fortsatt appears in attributive and predicative positions until the 19th century.

1. Archangelske handelen blef sedan mer och mer **fortsatt**. (SAOB 1761)
'the A. trade was more and more continued'
2. så at för desse Stiftets districter Wi endast astunda en **fortsatt** räkning (Hwad Nytt 1781)
'so that for the districts of this parish we only wish for a continued count'

From the middle of the 19th century, *fortsatt* is only attributive.

3. Efter ett ögonblick lyfte fågeln vingarne, flög sakta under **fortsatt** sång bortifrån det avhuggna trädet (Almqvist 1843)
'after a moment, the bird raised its wings, flew slowly during continued song away from the felled tree'
4. Det blev en ny väntan, nya rykten, **fortsatt** fredsagitation och **fortsatt** tysk tillbakamarsch. (ORDAT 1944)

'there was a new wait, new rumours, continued peace agitation and continued German retreat'

All examples are compatible with the process meaning of *fortsätta* 'to continue'.

3. *Fortsatt* in noun phrases

The attributive *fortsatt* may be reanalysed as a modifying adverbial when it cooccurs with another attributive constituent.

ett fortsatt arbete

'a continued job'

≈

'arbetet är fortsatt'

'the job is continued'

attributive
fortsatt

ett fortsatt hårt arbete

'a continued hard job'

≈

'arbetet är fortsatt och hårt'

'the job is continued and hard'

attributive
fortsatt

ett [fortsatt hårt] arbete

'a continuously hard job'

≈

'arbetet är fortsatt hårt'

'the job is continuously hard'

adverbial
fortsatt

Constructions such as [*fortsatt* ADJ NOUN] are bridge contexts – a reanalysis may give rise to an adverbial *fortsatt*.

3. *Fortsatt* in noun phrases

The reanalysis is however dependent on semantic agreement between the (modified) attribute and the process meaning of *fortsatt*.

en fortsatt tysk tillbakamarsch

'a continued German retreat'

≈

'marschen är fortsatt och tysk'

'the retreat is continued and German'

*en [fortsatt tysk] tillbakamarsch

'a continuously German retreat'

≈

= *'marschen är [fortsatt tysk]'

'the retreat is continuously German'

Criteria for ambiguity attributive/adverbial *fortsatt*:

- the head of the noun phrase must be compatible with the meaning of *fortsatt*
- the additional attribute must also be compatible with *fortsatt*.

3. *Fortsatt* in noun phrases

The first instance of *fortsatt* that is semantically incompatible with the head of the noun phrase is from 1945 (5). In the 1970s, this usage is quite frequent.

5. Med undantag av kommunisterna [...] eftersträvade alla finska partier en **fortsatt** nordisk orientering (ORDAT 1945)
 'With an exception for the communists, all Finnish parties sought a continued Nordic orientation'
6. Även om alltså kakaomarknaden på sistone försvagats verkar förutsättningar föreligga för **fortsatt** höga priser (Press 76)
 'Even if the cocoa market recently has been weakened, there seem to be prerequisites for continuously high prices'

In (6), *fortsatt* is both semantically and morphologically incompatible with *priser*.

3. *Fortsatt* in noun phrases

Schematically, the contexts that reveal whether *fortsatt* is attributive or adverbial can be illustrated as below.

SOURCE CONSTRUCTION	BRIDGE CONTEXT	GOAL CONSTRUCTION
<i>fortsatt</i> : attr. participle		<i>fortsatt</i> : adverbial
[ART <i>fortsatt</i> NOUN] [[<i>fortsatt</i> and ADJ] NOUN] [PREP <i>fortsatt</i> NOUN]	[<i>fortsatt</i> ADJ NOUN-comp.]	[[<i>fortsatt</i> ADJ] NOUN-incomp.] NOUN <i>is/was</i> [<i>fortsatt</i> ADJ]
SC-witnesses		GC-witnesses
		first GC-witness: 1945

4. *Fortsatt* as a clause adverbial

In the 1980s, examples appear that indicate that *fortsatt* has developed further.

7. Hernu är **fortsatt** borgmästare i Villeurbanne, som är högborgerliga Lyons arbetarstad. (DN 1987)

'Hernu is still mayor in Villeurbanne, which is the labour town of the bourgeois Lyon'

*borgmästaren fortsatte, *en fortsatt borgmästare

'the mayor continued', 'a continued mayor'

Fortsatt in (7) is incompatible with *mayor* and does not modify any attributive adjective. It must be analysed as a clause adverbial (as indicated by the translation *still*).

4. *Fortsatt* as a clause adverbial

So, when do we find the first instances of *fortsatt* as a clause adverbial?

In order to find such examples I have searched for:

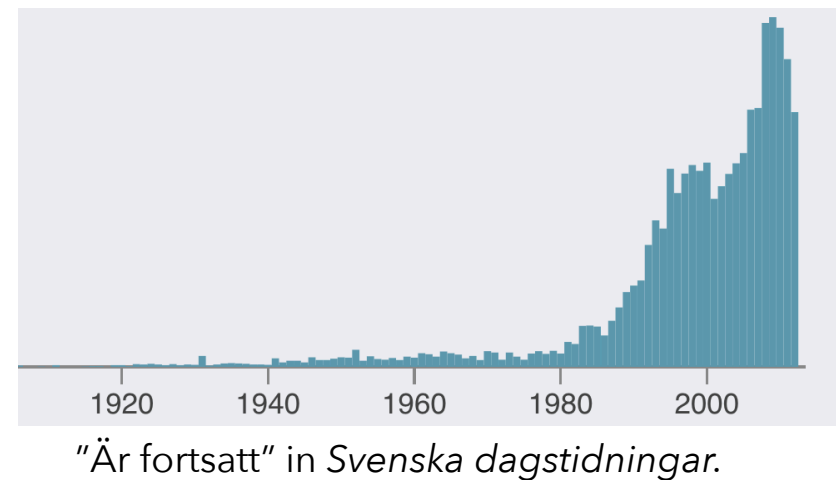
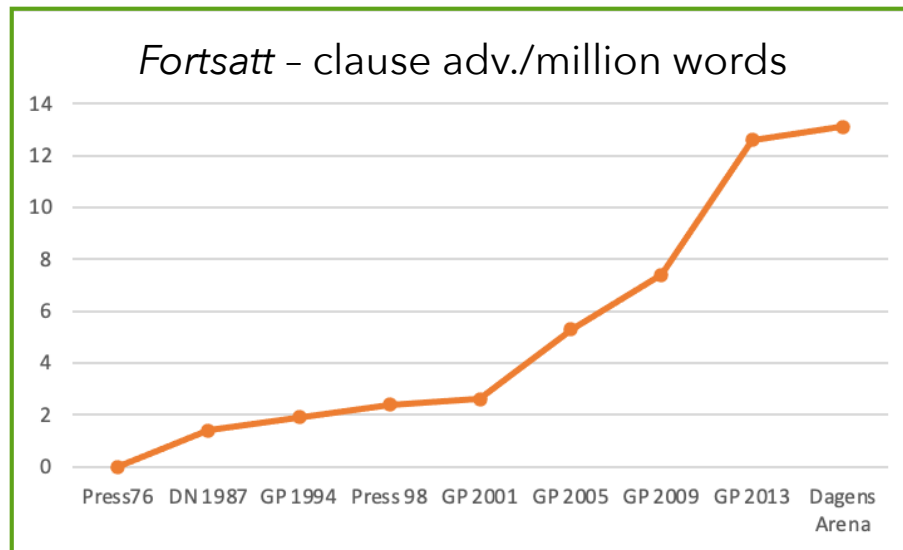
- "är fortsatt" ('is *fortsatt*')
- "fortsatt inte" ('*fortsatt* not')
- "måste/kan/ska fortsatt" ('must/can/shall *fortsatt*')

Hits are (preliminarily) classified as clause adverbials.

CORPUS	WORDS (MILLIONS)	"ÄR FORTSATT"	"MÅSTE/KAN/SKA FORTSATT"	"FORTSATT INTE"	CLAUSE ADV. / MILLION WORD
ÄLDRE SVENSKA ROMANER	4,3	0	0	0	0
RUNEBERG CA 1880–1940	28,5	0	0	0	0
ORDAT 1923–1958	1,5	0	0	0	0
PRESS 65	1,1	0	0	0	0
PRESS 76	1,3	0	0	0	0
DN 1987	5,1	7	0	0	1,4
GP 1994	21	39	2	0	1,9
PRESS 98	10,7	26	0	1	2,4
GP 2001	17	41	3	0	2,6
GP 2005	23	117	4	1	5,3
GP 2009	17,5	120	8	1	7,4
GP 2013	17	205	8	1	12,6
DAGENS ARENA 2007–2021	9,5	92	30	3	13,1

4. *Fortsatt* as a clause adverbial

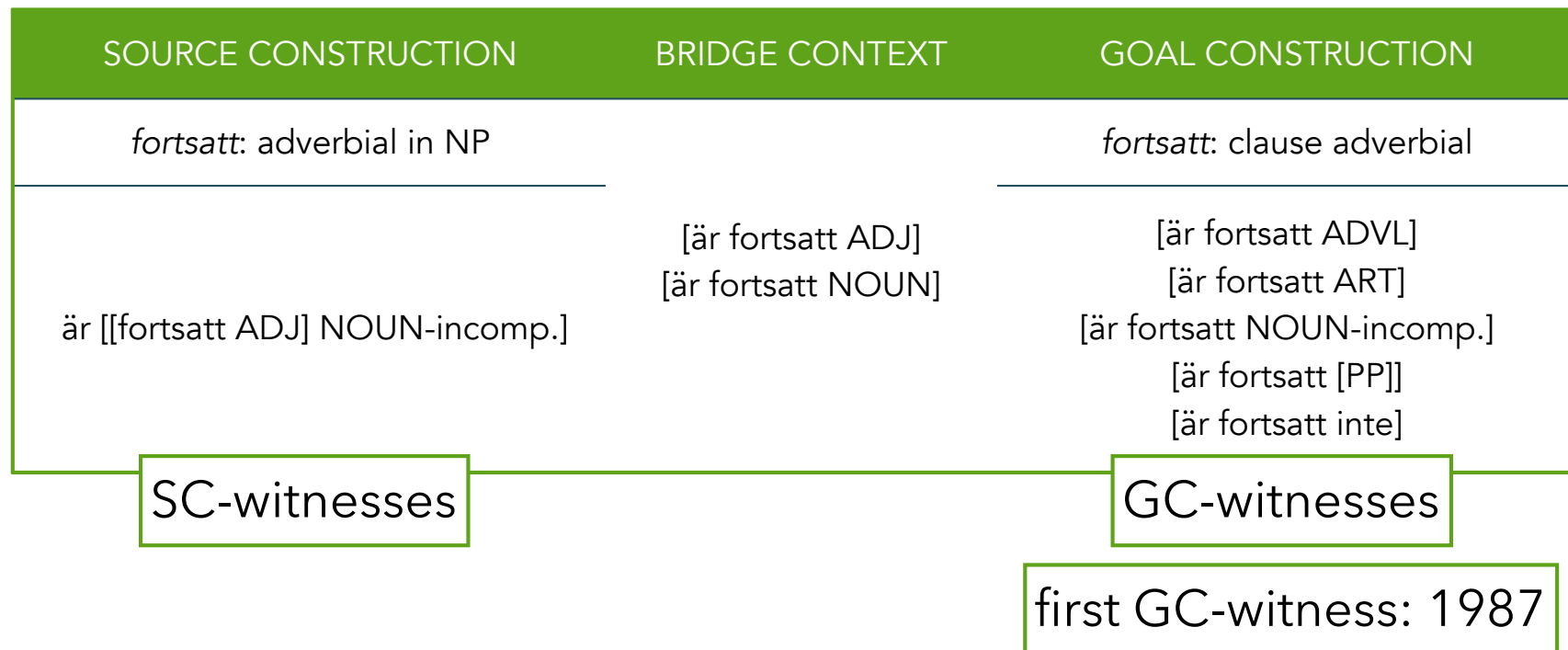
- The frequency of *fortsatt* as a clause adverbial increases from 1987.



- The construction that propels the change seems to be *är fortsatt*.

4. *Fortsatt* as a clause adverbial

The key construction seems to be *är fortsatt*. Two frequent constructions with *är fortsatt* may function as bridge contexts.



5. *Fortsatt* and ambiguity

However, out of the 7 instances of *är fortsatt* in DN 1987, six are ambiguous. They are instances of the bridge context [*är fortsatt* ADJ].

DN 1987	
I stallet är man dock uppåt: ' Formen är fortsatt fin och hon är snabb ut.	
' Formen är fortsatt bra ', meddelar stallet.	
pollenhalter och pollenhalten av sälg och vide är fortsatt låga.	
Investeringsaktiviteten är fortsatt hög.	
Investeringsaktiviteten är fortsatt hög.	
Rymdsatsningen är fortsatt mycket energisk och medveten, bland annat har man nu provat en ny	
Hernu är fortsatt borgmästare i Villeurbanne, som är högborgerliga Lyons arbetarstad.	

Formen är [fortsatt fin].

'the shape is continuously good'

/

Formen är fortsatt [fin].

'the shape is still good'

5. *Fortsatt* and ambiguity

How many instances of *är fortsatt* are ambiguous?

Principles for categorization:

- paraphrasing:
 - *intresset är fortsatt stort* may be paraphrased as *ett fortsatt stort intresse* = AMBIGUOUS
 - *trenden är fortsatt uppåt* cannot be paraphrased as **en fortsatt uppåt trend* = ADVERBIAL
 - *är fortsatt* cannot be paraphrased as *är fortfarande* ≠ CLAUSE ADVERBIAL
- syntax:
 - *Det är fortsatt röda siffror* = ADVERBIAL (no agreement)
 - *är fortsatt en/ett/den/de...* = CLAUSE ADVERBIAL (not in NP)
 - *är fortsatt [PP]* = CLAUSE ADVERBIAL
 - *är fortsatt och intensifierad sanering...* = ADVERBIAL

5. *Fortsatt* and ambiguity

Different usages of *är fortsatt*.

CORPUS	"FORTSATT" IN NP	"FORTSATT" AS CLAUSE ADVL.	AMBIGUOUS CASES
DN 1987	0	1	6
GP 1994	2	0	37
PRESS 98	0	5	21
GP 2001	0	5	36
GP 2005	0	27	90
GP 2009	2	46	72
GP 2013	1	118	86
DAGENS ARENA	1	66	24

5. *Fortsatt* and ambiguity

In order to determine the role of ambiguity, the ambiguous cases need to be quantified. There are three simple ways of doing this.

1. stating ambiguous cases as absolute numbers
2. providing the frequency of ambiguous cases relative to the number of words in the corpus
3. providing the frequency of ambiguous cases relative to total number of the relevant construction - in this case *är fortsatt*.

Only option three will provide a relevant result.

ambiguity index (ambix): $\text{ambiguous instances} / \text{all instances}$

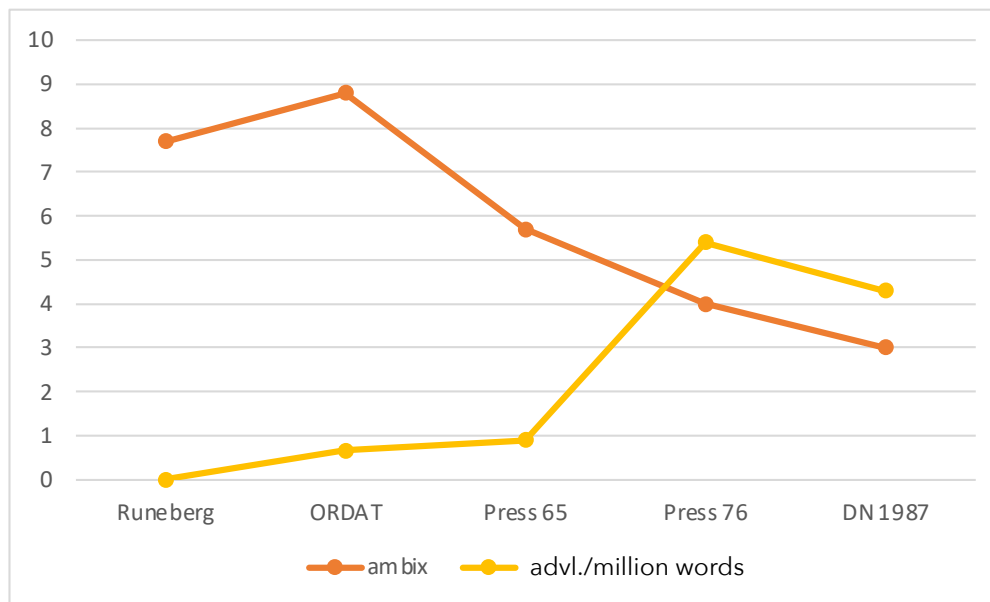
5. *Fortsatt* and ambiguity

The ambiguity index for *är fortsatt* drops steadily from 2001.

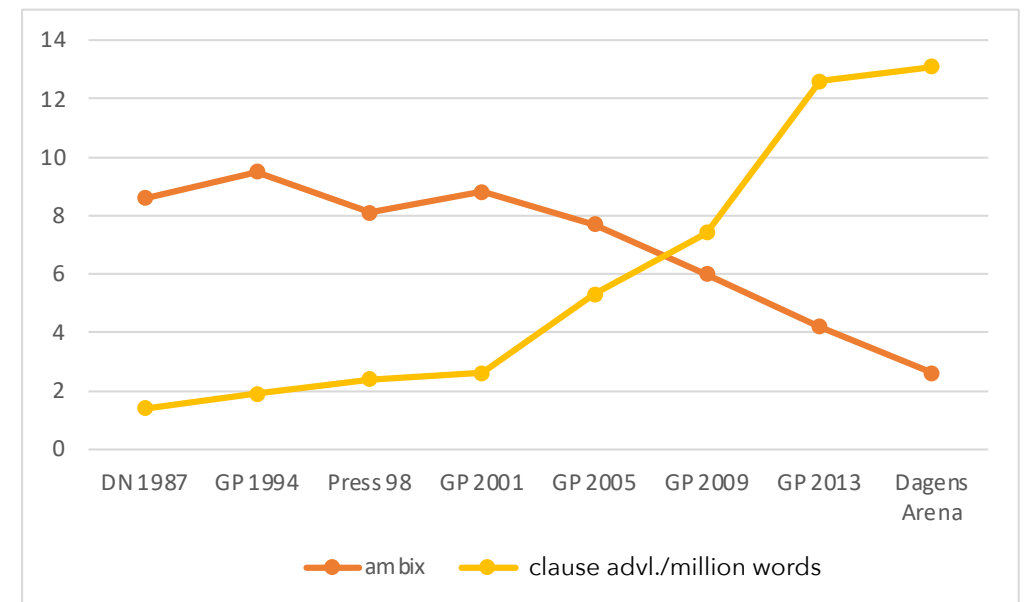
CORPUS	"FORTSATT" IN NP	"FORTSATT" AS CLAUSE ADVL.	AMBIGUOUS CASES	AMBIGUITY- INDEX
DN 1987	0	1	6	0,86
GP 1994	2	0	37	0,95
PRESS 98	0	5	21	0,81
GP 2001	0	5	36	0,88
GP 2005	0	27	90	0,77
GP 2009	2	46	72	0,60
GP 2013	1	118	86	0,42
DAGENS ARENA	1	66	24	0,26

5. *Fortsatt* and ambiguity

Applying the same method for the first change (from participle to adverbial), the role of ambiguity for both of these changes can be illustrated in diagrams.



Change 1: from participle to adverbial.



Change 2: from adverbial to clause adverbial.

The frequency of ambiguous constructions drops while the frequency of GC-witnesses increases.

5. *Fortsatt* and ambiguity

Is this a common property of structural language change? Delsing's study (Delsing 2022) can be used as a testing ground.

Table 3: Agreement and Q-quote for *liten/lite(t)* 1725–2000

Period	Adjectives	Ambiguous	Quantifiers	Q-quote
1. 1725–1750	3	6	4	57%
2. 1775–1800	2	6	8	80%
3. 1825–1850	1	3	7	88%
4. 1875–1900	0	7	19	100%
5. 1925–1950	1	11	25	96%
6. 1975–2000	0	12	50	100%

Delsing 2022: From 'big' to 'much':
On the grammaticalization of two
gradable adjectives in Swedish.

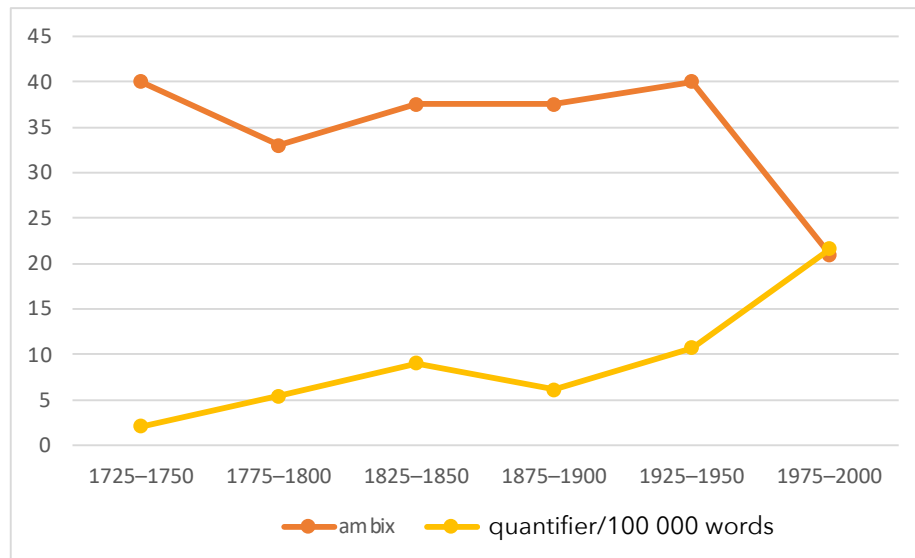
In: Larsson & Petzell 2022:
*Morphosyntactic change in Late
Modern Swedish.*

Table 4: Agreement and Q-quote for *mycken/mycket* 1725–2000

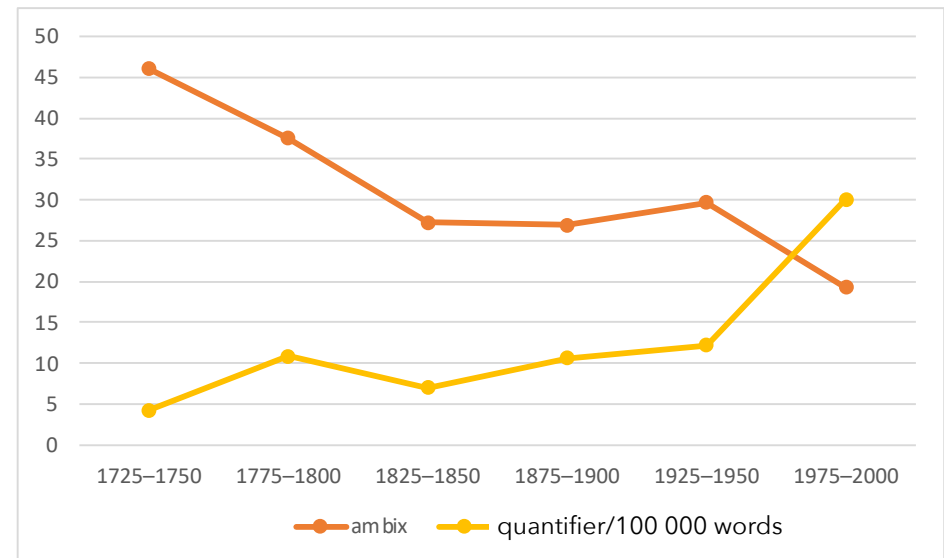
Period	Adjectives	Ambiguous	Quantifiers	Q-quote
1. 1725–1750	16	12	2	11%
2. 1775–1800	18	11	4	18%
3. 1825–1850	11	12	9	45%
4. 1875–1900	9	12	11	55%
5. 1925–1950	3	17	22	88%
6. 1975–2000	0	10	36	100%

5. *Fortsatt* and ambiguity

The changes described by Delsing (2022) show a similar pattern.



Change of *mycket* ('much').

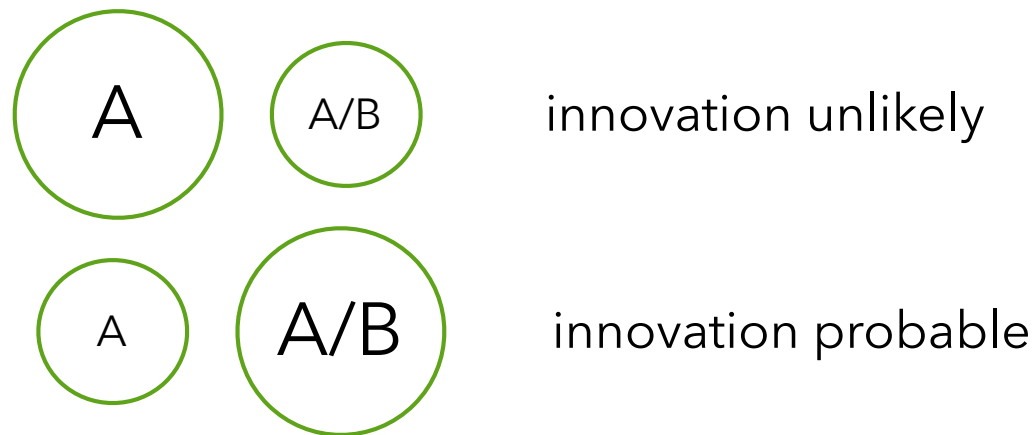


Change of *litet* ('little').

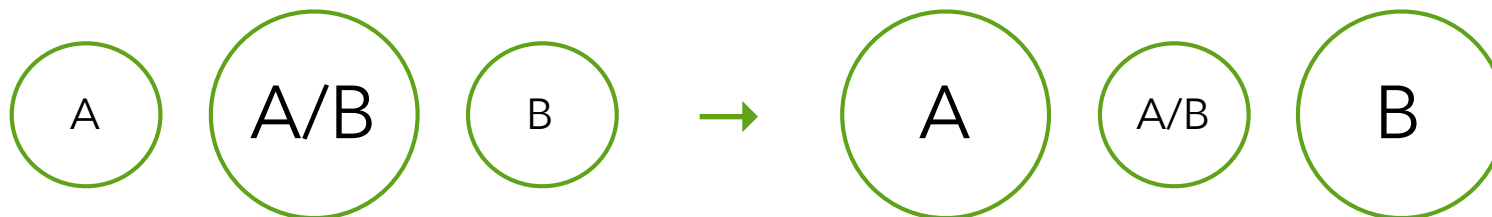
Note that ambix does not reach 50% at any point – this may relate to the fact that these changes proceed slowly.

6. Conclusions

- 👉 A large proportion of ambiguous structures seem to facilitate structural language change.



- 👉 The spread of the innovation leads to a drop in ambix - more and more instances (and contexts) are non-ambiguous.



6. Conclusions



It may be important not to exclude ambiguous constructions in studies of structural change - they can provide an understanding of *why* and *how fast* a change occurs, and not only *how* it occurs.



Thank you
for listening!

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(contact me for references)