Using Cross-linguistic Evidence to Ground Morphosyntactic Change

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Soft syntax

- The study of differences in grammaticality contrasts across the world's languages (hard contrasts) has implications for the synchronic study of preferential/frequency contrasts (soft contrasts) within a single language.
- See Bresnan (2007); Bresnan and Ford (2010) for recent discussion.

Soft syntax and diachronic variation

The cross-linguistic study of both grammaticality and frequency contrasts can be crucial to the proper characterization of patterns of diachronic change.

Neg Qs vs NPIs

- We investigate the replacement of postverbal negative quantifiers (Neg Qs : nothing, nobody. . .) by negative polarity items under negation (NPIs : *not. . . anything, not. . . anybody*. . .) in the history of English.

(1) a. I know nothing. — Neg Q
b. I don't know anything. — NPI

- Old and Middle English were predominantly negative concord languages (Jespersen, 1940; Traugott, 1972; Jack, 1978, among others).

(2) for þam þe þa Iudeiscan noldon naefre brucan nanes þinges mid
because the Jews not-had never use no things with
þam haeþnum
the heathens
'Because the Jews would never have anything to do with the heathens.'
(AElfric, Homilies 5.124, cited in Tottie (1991a :453))

- The use of any indefinites within the scope of negation developed in the early Modern English period (Barber, 1976; Jack, 1978; Tottie, 1991a; Fischer, 1992; Nevalainen, 1998, among others).

Widely held view

NPIs are replacing Neg Qs in all postverbal positions through a process of lexical/constructional diffusion conditioned by frequency.

(See Tottie, 1991a,b; Bybee and McClelland, 2005; Bybee, 2010; Pérez, 2014; Childs et al., 2015, 2016, among others)

Important consequence

Frequency of syntactic constructions can be a driving force behind syntactic change.

We argue. . .

- A frequency-based diffusion analysis makes wrong predictions when it comes to the nature of the variation actually observed both synchronically and diachronically.

We show. . .

A new quantitative study of Neg Q/NPI variation in the Toronto English Archive (TEA : Tagliamonte 2010-3) focusing on syntactic structure.

New empirical result

Variation between Neg-Qs and NPIs is almost categorically conditioned by the particular structural syntactic position that the Neg-Q/NPI occupies (high/low).

- High/low syntactic position creates grammaticality patterns in other languages (Scandinavian, Dutch etc.).

Soft syntactic constraints

New proposal

Patterns of Neg Q/NPI variation should be analyzed as arising from the soft (variable) syntax of the language, not frequency.

- Neg Q/NPI variation in the history of English does not constitute an argument in favour of diffusion as a driving force in syntactic change.

Plan

Tottie (1991a,b)

- Variation in the use of a Neg Q or an NPI is significantly conditioned by the particular construction in which the indefinite appears.

	Early Modern English (Helsinki)	
Existential be	50/54	93%
Stative have	50/62	81%
Copular be	34/64	53%
Lexical verbs	117/252	46%
Total	251/432	58%

TABLE – Use of Neg-Q/NPI in Early Modern English (Tottie 1991a)

Modern English

	Modern Written (LOB)		Modern Spoken (LLC)	
	N	%NegQ	N	%NegQ
Existential be	111/113	98%	35/40	88%
Stative have	48/50	96%	21/33	64%
Copular be	36/39	36%	14/72	19%
Lexical verbs	85/184	46%	27/137	20%
Total	280/386	72%	97/282	34%

TABLE – Use of Neg-Q/NPI in Modern English (Tottie 1991a)

Why this pattern ?

1. The newer NPI form (any) is replacing the older negative quantifier form (no) in **all** postverbal syntactic positions (Mitchell, 1985; Smith, 2001; Nevalainen, 1998; Pérez, 2014; Childs et al., 2015, 2016, a.o.).
   - Change appears to be diffusing across constructions.
2. Construction frequency constrains change (Bybee, 1985; Hopper, 1987; Bybee and Hopper, 2001; Bybee, 2010, a.o.).
   - The high frequency of existential constructions makes them resistant to change.
   - The low frequency of regular lexical verbs makes these environments favourable to innovation.

Consequence 1 : Replication

- Construction effect is robust across dialects and time periods (Pérez, 2014; Childs et al., 2015, 2016, a.o.).

	Toronto		NE England		York	
	N	% NegQ	N	% NegQ	N	%NegQ
Existential be	327	93%	160	98%	285	95%
Copular be	50	96%	36	94%	57	88%
Have got	8	88%	79	87%	32	66%
Have	272	66%	79	77%	27	64%
PPs	63	40%	14	64%	27	63%
Lexical verbs	390	13%	111	36%	223	19%

TABLE – Use of Neg-Q/NPI in English dialects (Childs et al. 2015)

Consequence 2 : Frequency and syntactic change

- No $\rightarrow$ not. . . any in English is taken as a clear case of syntactic change proceeding through frequency-conditioned diffusion (Bybee and McClelland, 2005; Moore, 2007; Bybee, 2010; Clark, 2009, a.o.)
- Contrasts with other cases of syntactic change not proposed to involve diffusion (Lightfoot, 1979; Kroch, 1989; Pintzuk, 1991, a.o.).

Questions for frequency + diffusion

- The particular “diffusional" construction hierarchy observed does not always correspond to expectations if this pattern were uniquely the result of frequency.

(Tottie, 1991a, 448) :

> *“copular be sentences were a maverick category which, in spite of their high frequency of occurrence, had a high incidence of not-negation and which thus constituted an exception to the rule that frequency of occurrence would trigger no-negation, something which would have to be explained".*

Alternatives ?

Observation

Structural properties that create grammaticality contrasts in some languages determine preferential contrasts in other languages.

(Givón, 1979; Keenan and Comrie, 1977; Keenan and Hawkins, 1987; Hawkins, 2004; Bresnan et al., 2001; Rosenbach, 2002, 2005; Bresnan, 2007; Burnett, 2016; Bresnan et al., 2007; Thullier, 2012; Tagliamonte, 2014, a.o.)

Proposal

We should ground our explanations in the non-variable syntax of negative quantifiers and NPIs in the world's languages.

Negative indefinites in Scandinavian

- In Norwegian and other Scandinavian varieties, negative quantifiers headed by ingen 'no' have a much more restricted distribution than their equivalents in English (Christensen, 1986; Kayne, 1998; Svenonius, 2002, a.o.).

(3) Jon leser ingen romaner.
John reads no books
'John reads no books.' (Kayne, 1998, 224)

(4) *Jon har lest ingen romaner.
John has read no novels
Intended : 'John has read no novels.' (Kayne, 1998, 224)

(5) *Svenskene ga Norge ingen poeng.
Swedes gave Norway no points
Intended : 'The Swedes gave Norway no points.'
(Svenonius, 2002, 121)

(6) *Han flirer av ingen vitser.
he laughs of no jokes
Intended : 'He laughs at no jokes.'
(Svenonius, 2002, 121)

In a nutshell. . .

Syntactic constraint (cf. Haegeman and Zanuttini, 1991)

The negative polarity of a negative clause must always be expressed in the same syntactic position in that clause.

(7) Vi vant ikke konkurransen.
We won not the.competition.
'We didn't win the competition.' (Svenonius, 2002, 123)

(8) Vi vant$_i$ [$_{NegP}$ ikke ...[$_{VP}$ t_i [$_{DP}$ konkurransen]]]

Higher vs Lower domains

- NegP and higher $\Rightarrow$ higher domain
- Lower than NegP $\Rightarrow$ lower domain

Constraint in Modern Norwegian

Negation must be expressed in the higher domain (NegP).

(9) Jon leser$_i$ [$_{NegP}$ ingen romaner$_j$ . . . [$_{VP}$ t_i [$_{DP}$ t_j]]]

Syntactic change

- Previous stages of Norwegian allowed raising to Spec NegP.

(10) Han har ingen penger fått. Archaic Norwegian
He has no money received.
'He has received no money.' (Svenonius, 2002, 123)

- Loss of raising ⇒ ungrammaticality.

(11) *Jon har$_i$ [t_i [$_{VP}$ lest [$_{DP}$ ingen romaner]]]

(12) *Svenskene ga$_i$ . . . [$_{VP}$ t_i . . . [Norge [$_{DP}$ ingen poeng]]]

(13) *Han flirer$_i$ [$_{VP}$ t_i . . . [$_{PP}$ av [$_{DP}$ ingen vitser]]]

Hard syntactic constraints

- Norwegian ingen is generally excluded from the lower domain.
- Pattern also found with Dutch geen 'no' (see Broekhuis and den Dikken, 2012).

English does not have these hard constraints :

(14) a. John has no car.
b. John doesn't have a car.

Soft syntax of Neg Qs in Toronto English

- A new quantitative study of postverbal Neg Q/NPI variation in the Toronto English Archive (TEA).
- Childs et al. (2015) find the usual construction-based conditioning pattern.

Change in progress ?

Social factors investigated

1. Gender (M/F)
2. Age (continuous)
3. Education ((post)secondary)

Syntactic position

- It is often not clear from the surface form of an utterance which parse is most appropriate.

(15) It's nothing.

a. It $[_T$ is$_i$ $[_{NegP}$ nothing$_j$ $[\ldots[_{VP}\ t_i\ [_{DP}\ t_j\ ]]]]]$

Higher nothing

b. It $[_T$ is$_i$ $[\ldots[_{VP}\ t_i\ [_{DP}$ nothing$]]]]]$

Lower nothing

Lower domain

- It is often clear when the indefinite is in the lower syntactic domain.

(16)
a. I can't have any form of gluten. (Toronto, F/52)
b. I don't envy any of them. (Toronto, F/75)
c. . . . write my music and not need any influence. . . (Toronto, M/24)
d. I told her for no reason. (Toronto, F/24)

Syntactic position : lower vs $\diamond$ higher

Pragmatic widening

- Any DPs can be used to make stronger, more emphatic statements than simple bare plurals or singular indefinites.
- Can be used to widen the domain of quantification of indefinites, taking into account pragmatic alternatives that otherwise would not matter in the context.

(17) Kadmon and Landman (1993)
A : Will there be French fries tonight ?
B : No, I don't have potatoes.
A : Not even just a couple of potatoes that I can fry in my room ?
B : Sorry, I don't have ANY potatoes.

Coding for pragmatic widening ?

- We can find many clues to the particular interpretation of any phrases in the lexical material that it appears with.
- Modification by means of emphatic and/or understating modifiers signal that the domain has been widened to include even unlikely alternatives.

(18) Your grandfather was busy earning a living and our first child was on the way and you, we were sort of consumed with that and staining our own furniture which we bought unfinished 'cause we didn't have anything at all when we were first married. (Toronto, F/75)

(19) I'd been gone for two weeks. I hadn't really seen any news, and um-and literally turned it on, you know, ten min– five minutes after the second plane got into it. (Toronto, M/40)

Final Dataset

- 1154 utterances from the speech of 88 speakers.
- Step-up/step-down logistic regression analyses in Rbrul (Johnson, 2009), with *speaker* as a random effect.

(20) Grammatical factors

a. Structural position : Lower vs ◇ Higher
b. Pragmatic widening : Widened vs ◇ Not Widened

(21) Social factors

a. Gender : Male vs Female
b. Age : Continuous factor over exact ages.
c. Education : Postsecondary vs No postsecondary

Results

Syntactic Position	Neg Q	NPI	%Neg-Q
◇ Higher	568	28	95.3%
Lower	35	523	6.3%
Total	603	551	52.3%

TABLE – Neg-Q/NPI variation in the TEA by syntactic position

Statistical results

Total : 1154			Input 0.52	
Factor Group	Factor	Fact. Weight	% NegQ	N
Synt. Position	◇ Higher	0.962	95.3%	596
	Lower	0.038	6.3%	558
$p < 0.001$	Range : 92.4			
Prag. Widening	◇ Not widened	0.788	53.9%	1086
	Widened	0.212	26.5%	68
$p < 0.001$	Range : 57.6	Log likelihood : -229.042 ; df = 4		

TABLE – Factors conditioning Neg-Q/NPI variation in the TEA

Higher syntactic domain favours widening

	NPIs		Neg Qs	
	◇ Higher	Lower	◇ Higher	Lower
Widened	7	43	18	0
◇ Not widened	21	480	550	35
%Widened	25%	8.2%	3.2%	0%

TABLE – Evidence of Pragmatic Widening by Syntactic Position

Summary

- Enormous effect of syntactic position.
  - Hard syntactic patterns in Norwegian/Dutch are realized as soft patterns in spoken English.
- Pragmatic widening appears to be correlated with the higher syntactic domain.
- No effect of social factors.
  - Suggests change is not in progress.

Comparison with diffusion+frequency

- Replace {syntactic position, widening} with {verbal construction}.

Total : 1154			Input 0.52	
Factor Group	Factor	Fact. Weight	% NegQ	N
Construction	Existentials	0.892	92.5%	334
	Be	0.572	68.2%	66
	Have	0.555	66.8%	274
	Lexical verbs	0.068	13.8%	480
$p < 0.001$	Range : 82.4	Log likelihood : -486.25 ; df = 5		

TABLE – Factors conditioning Neg-Q/NPI variation (by construction)

- The syntactic position+widening model has a higher log likelihood than the construction-based model. (-229.042 ; 4df vs -486.25 ; 5df).
- The difference in loglikelihood values is significant ($\chi^2 = 514.46$, $p < 0000001$).

Conclusion

The syntactic position+widening analysis makes better predictions than the construction frequency-based diffusion analysis.

Conclusion

- A new quantitative analysis of Neg-Q/NPI variation in a variety of North American English (Toronto, Canada).
- The soft syntax of English negative indefinites lines up with the hard syntax of these expressions in other Germanic and Scandinavian languages.
- The syntactic position (higher vs lower domain) almost categorically determines whether a negative quantifier or a polarity item is used.

Conclusion

- A syntactic position + pragmatic widening analysis made better predictions for Neg-Q/NPI variation than the alternative frequency + diffusion analysis.

A new characterization of an old change

Rather than a slow change in progress, where any is gradually replacing no in all postverbal positions, we suggest that any NPIs are only replacing Neg-Qs in the lower syntactic domain.

- Given the near-categorical nature of the patterns observed in the TEA, we suggest that this change is largely completed, at least in Toronto.

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