Sociolinguistic typology and syntactic complexity
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Outline of the talk:

1. Introduction

2. Case study: from stage II to stage III of Jespersen's Cycle

3. Case study: the loss of null subjects

4. Complexification

5. Conclusion and outlook

1. Introduction

1.1 Sociolinguistic typology

- ⚴ Trudgill (2011): different types of language contact situation may give rise to different types of change. The basic insight:
  - ◦ short-term adult (L2) language contact tends to lead to simplification
    - ▪ e.g. loss of morphological distinctions in verb forms in Nubi Creole Arabic, spoken in Kenya & Uganda (Owens 1997, 2001)
  - ◦ long-term, co-territorial language contact tends to lead to additive complexification
    - ▪ e.g. development of case marking and 5-way evidential system in Amazonian language Tariana under the influence of Tucano (Aikhenvald 2003)
  - ◦ isolation tends to lead to spontaneous complexification
    - ▪ e.g. exaptation of *–y* ending for intransitive infinitives in dialects of the south-west of England (Ihalainen 1991)
- ⚴ Supported by case studies from morphology and (in chapter 5 of the book) phonology
  - ◦ Explicitly does not address syntax
- ⚴ Aim of today's talk: if correct, does Trudgill's insight carry over into historical syntax? If so, how can this be understood in terms of syntactic theory?

1.2 Syntactic complexity

- There are several different characterizations of complexity out there:
    - **Representational** complexity (Roberts & Roussou 2003: 201; van Gelderen 2009, 2011)
    - **Derivational** complexity (Mobbs 2008)
    - **Node counts** (Szmrecsanyi 2004)
    - **Processing** complexity (Hawkins 1994, 2004)
- Without denying the relevance of any of the above to language change more generally, we opt (following Trudgill 2011) to investigate a different type of complexity: **L2-difficulty** (Dahl 2004).
    - L2-difficulty is simply how difficult a natural language (or aspect of language) is to acquire for post-critical-period learners.
    - Has its roots in early biolinguistics (Lenneberg 1967): L1 and L2 acquisition appear to be different in kind from one another.
    - L2-difficulty = greater complexity; L2-ease = greater simplicity.
- This paper rejects the *equicomplexity hypothesis* that 'the total grammatical complexity of any language, counting both morphology and syntax, is about the same as any other' (Hockett 1958: 180–181).
    - Within limits imposed by UG and 3ʳᵈ factors (i.e. possible languages), no particular reason to believe that languages may not vary in this regard.

1.3 L2-difficulty in a Minimalist framework

What counts as syntactically L2-difficult, given a Minimalist view of syntax in which the locus of cross-linguistic variation is the featural content of individual lexical items (Borer 1984; Baker 2008: 353)? Two possibilities, from the L2 acquisition literature:

- **Nothing** is universally L2-difficult (*Full Transfer/Full Access/Full Parse*; Schwartz & Sprouse 1994, 1996).
    - Initial state of L2 is constrained only by final state of L1.
    - In case of parsing failure, all universally permitted options are available.
    - If this model is correct, L2-difficulty is always relativized to individual L1s and so no broad generalizations are possible; as a result we think it's more interesting to explore alternatives.
- **Uninterpretable** features are universally L2-difficult (*Interpretability Hypothesis*, a *partial access* hypothesis: Hawkins & Hattori 2006; Tsimpli & Dimitrakopoulou 2007).
    - Uninterpretable features not selected during L1 acquisition (from the set made available by UG) are no longer available in post-critical period L2 acquisition.

- Support for the Interpretability Hypothesis:
  - L1 Japanese speakers learning English at an advanced level fail to acquire [uWh] feature on C^0 (Hawkins & Hattori 2006)
  - L1 Greek speakers learning English at an advanced level do not disprefer resumptive pronouns in *wh*-constructions at a target-like level (Tsimpli & Dimitrakopoulou 2007)
  - L1 Arabic speakers learning English at an advanced level do not accept grammatical examples of VP ellipsis (Al-Thubaiti 2009)
- There also exist a number of arguments *against* the Interpretability Hypothesis (empirical, cf. e.g. Campos Dintrans 2011, and conceptual, see Lardière 2009).
- We will assume the Interpretability Hypothesis here.

1.4 Predictions

- Given the Interpretability Hypothesis as a characterization of L2-difficulty, then in situations involving high levels of adult L2 acquisition and transmission of 'imperfect' adult L2 varieties, at the population level, **uninterpretable features will be lost**.
- These are the short-term contact situations discussed by Trudgill (2011), i.e. contact situations not involving high levels of balanced bilingualism.
- We will look at two potential case studies of this:
  - the transition to stage III of Jespersen's Cycle
  - the loss of null subjects.

2. Case study 1: from stage II to stage III of Jespersen's Cycle

Jespersen's Cycle = a development in which

- a single negative particle exists   (Stage I)   e.g. *ne*   (Old French)
- it is then joined by another one   (Stage II)   e.g. *ne … pas* (Classical French)
- the original particle is then lost   (Stage III)   e.g. *pas*   (Colloquial French)

2.1 Analysis of stage II of Jespersen's Cycle

The original negator in Neg^0 bears a [uNeg] feature; the 'new' negator in SpecNegP bears an [iNeg] feature (see e.g. Wallage 2008 for Middle English; Breitbarth 2008, 2013a for Middle Low German; based on Zeijlstra 2004). Focusing on Middle Low German:[1]

- Preverbal (head) negator: *en/ne*   [uNeg]
- Postverbal negator: *nicht*   [iNeg]

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[1] For more details of the corpus and the language, and details of indefinites, see Breitbarth (2013b).

Example:

(1)   *We*   *des*   **nicht en***wete*   *de*   *latis*   *sik*   *berichten*
      who   this.GEN   NEG   NEG-know   REL   let-it   rel   report
      'Everyone who does not yet know this should endeavour to learn about it'
      (Braunschweig, 1349)

Tree (simplified; dotted lines indicate Agree relation):
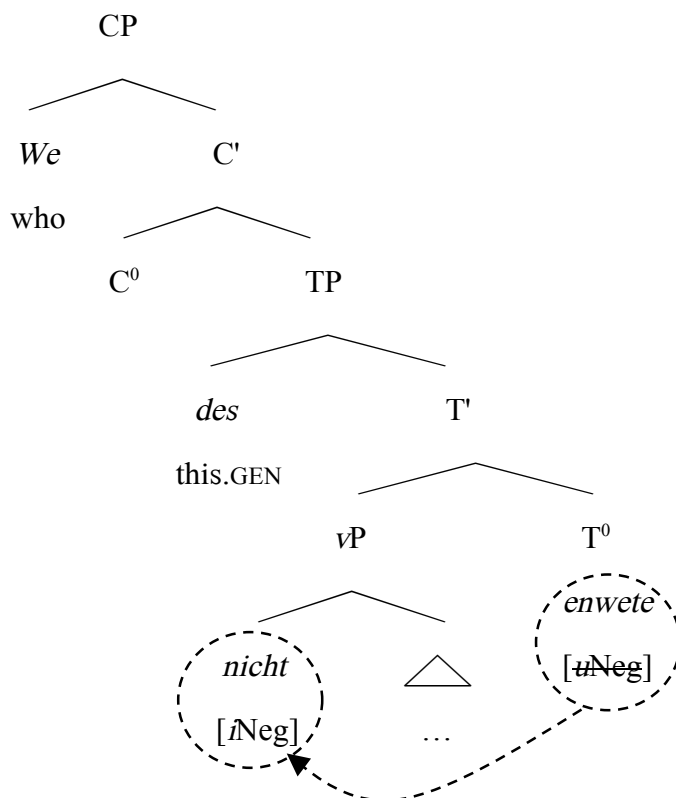
2.2 The transition to stage III in Middle Low German

Stage III also attested in Middle Low German:

(2)   *we*   *sek*   *des*   **nicht** *leddigen*   *wel*   …
      who   REFL   this.GEN   NEG   rid   will
      'Whoever does not want to rid him/herself of this…'
      (Braunschweig, 1380)

Different scribal dialects make the change at different speeds.
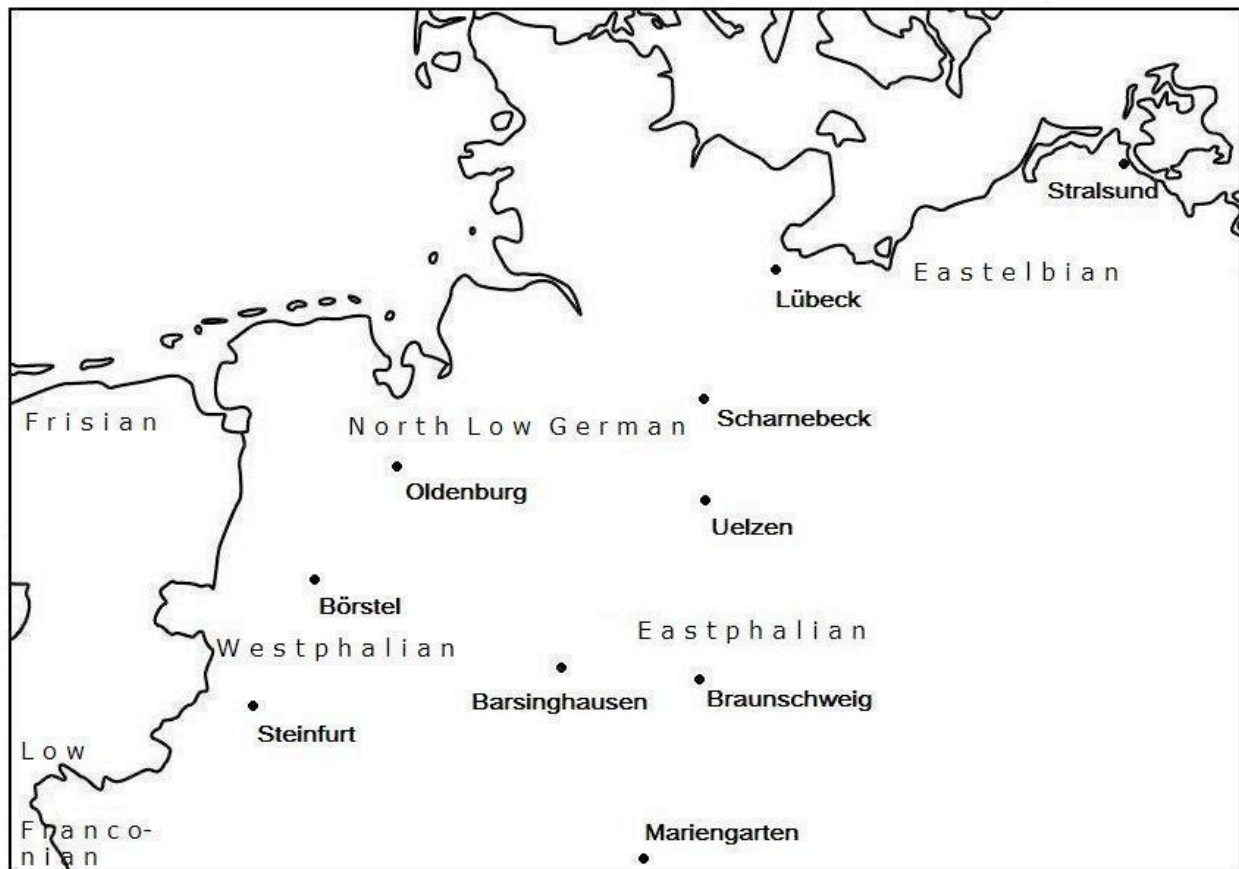
Map of the Middle Low German scribal dialects

Table 1: The use of Stage II (preverbal particle with nicht*), by scribal dialect (Breitbarth 2013)*

	Westphalian	Eastphalian	North Low Saxon	Hansa cities
1325–1374	22 (78.6%)	56 (72.7%)	37 (56.1%)	3 (50%)
1375–1424	25 (83.3%)	52 (71.2%)	42 (33.1%)	12 (18.5%)
1425–1474	3 (37.5%)	25 (52.1%)	75 (33.0%)	20 (29%)
1475–1524	14 (35.8%)	15 (14.6%)	62 (31.2%)	10 (7.8%)
1525–1574	8 (21.1%)	18 (10.2%)	3 (12%)	2 (12.5%)

Preverbal negator *en*/*ne* (the bearer of the uninterpretable feature) is lost much faster and earlier in the north-eastern Hansa cities (e.g. Lübeck, Stralsund) than in West- and Eastphalian. Why?

- North-eastern area was colonized later; area formerly inhabited by Slavonic speakers.
- Cities such as Lübeck and Stralsund were centres of Hanseatic trade.
    - Typical scenario of urbanization/levelling/koinéization (cf. Peters 2000: 1414)
- Situation of 'receptive multilingualism' (Braunmüller 2007).

Assuming a) the Interpretability Hypothesis (section 1.3) and b) the analysis sketched above (section 2.1), this development is consistent with the prediction we made in section 1.4.[2]

2.3 The transition to stage III beyond Middle Low German

Obviously quite detailed investigation of specific varieties is needed in order to test the prediction further – in some corpora, e.g. Old and Middle English, dialectal differences are difficult to assess (Wallage 2005: 229, 238). Another language that is consistent with the prediction:

- **French**:
  - In Montreal French, a new world variety, the original negative particle *ne* is almost completely absent (Sankoff & Vincent 1977).
    - The variety arose in a colonization scenario with short-term adult language contact in the 17th c. between speakers of different Oïl languages using the Paris koiné (itself a levelled output of migrant dialects) as their lingua franca (Wittman 1995).
  - In the Picard dialect of the north of France, *ne* is rarely if ever omitted (Coveney 1996: 62; Auger & Villeneuve 2008). Here, two typologically and historically close varieties are in long-term contact (all speakers of Picard are bilingual with French) under a receptive multilingualism scenario (cf. the discussion whether Picard is a dialect of French or a separate language, reported in Auger & Villeneuve 2008) without leading to the loss of *ne*.
  - Pohl (1968: 1352, cited in Coveney 1996): *ne* is lost…
    - more in France than in Belgium
    - more in Paris than in the provinces
    - more in towns than in the countryside
    - more among monolinguals than among bilingual/bidialectal speakers
  - Pohl and Coveney argue that socio-economic factors contributed to the loss of *ne*, accelerating in the mid-19ᵗʰ century, specifically, the opening and extension of social networks as a result of the development of the railway and the migration to towns and cities. This again is a typical urbanization scenario with short-term adult language/dialect contact leading to levelling/simplification.

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[2] In this and the next case study we're actually assuming that uninterpretable features are difficult to acquire in L2 acquisition *regardless of* whether or not they're present in the L1. We think the facts support this version of the Uninterpretability Hypothesis.

- **Dutch**:
    - The old preverbal negation particle *en* was lost much earlier from northern Dutch dialects (during the 17th century) than from southern ones (beginning in the 19th century, still present in some Flemish dialects today; Burridge 1993, Beheydt 1998). After their independence at the end of the 80 Years' War, the northern provinces, especially Holland, enjoyed a great economical upturn (*Gouden Eeuw* 'golden age/century') and became an international centre of trade and intellectual life, attracting a large amount of migration from within the low countries and from outside, resulting in dialect levelling and koinéization (Breitbarth 2013b).

2.4 Summary
Evidence from the diachrony of negation seems to fit quite well with our hypothesis.

3. Case study 2: the loss of null subjects
The development and loss of null subjects has been argued to be a cyclical development much like Jespersen's Cycle (cf. Rowlett 1998: 136, Faarlund 2011, van Gelderen 2011, Walkden 2012):

- Subject pronouns are grammaticalized as ('rich') agreement markers   (Stage I)
- These markers are reinforced by new subject pronouns   (Stage II)
- Markers are lost; pronouns become obligatory   (Stage II)
    - between stages II and III is a partial null subject stage (Walkden 2012)

3.1 Analysis of null subjects
Based on Holmberg (2010), Walkden (2012: ch. 5).

- **Consistent** null subject languages (NSLs) have definite null subjects, which are typically obligatory in some contexts (e.g. obviation effects), but no generic inclusive null subjects (null *one*)
- 'the property which consistent NSLs have, that partial NSLs don't have, is a D(efinite)-feature as part of the φ-feature make-up of finite T' (Holmberg 2010: 94)
    - Checked/valued by Agree with a null topic in the C-domain (cf. Frascarelli 2007)
    - Allows a φP subject to incorporate into T^0, as its features are a subset of those of the probe (based on theory of head-movement in Roberts 2010)

Illustrated here using Italian (simplified; dotted lines show Agree; solid lines show incorporation):

(3)

ShiftP

Op
Ø
$[iD]$

Shift'

Shift⁰   CP

C⁰   TP

T⁰ vP
Parla
$[uD]$ $t_{\varphi P}$ v'

v^0 △
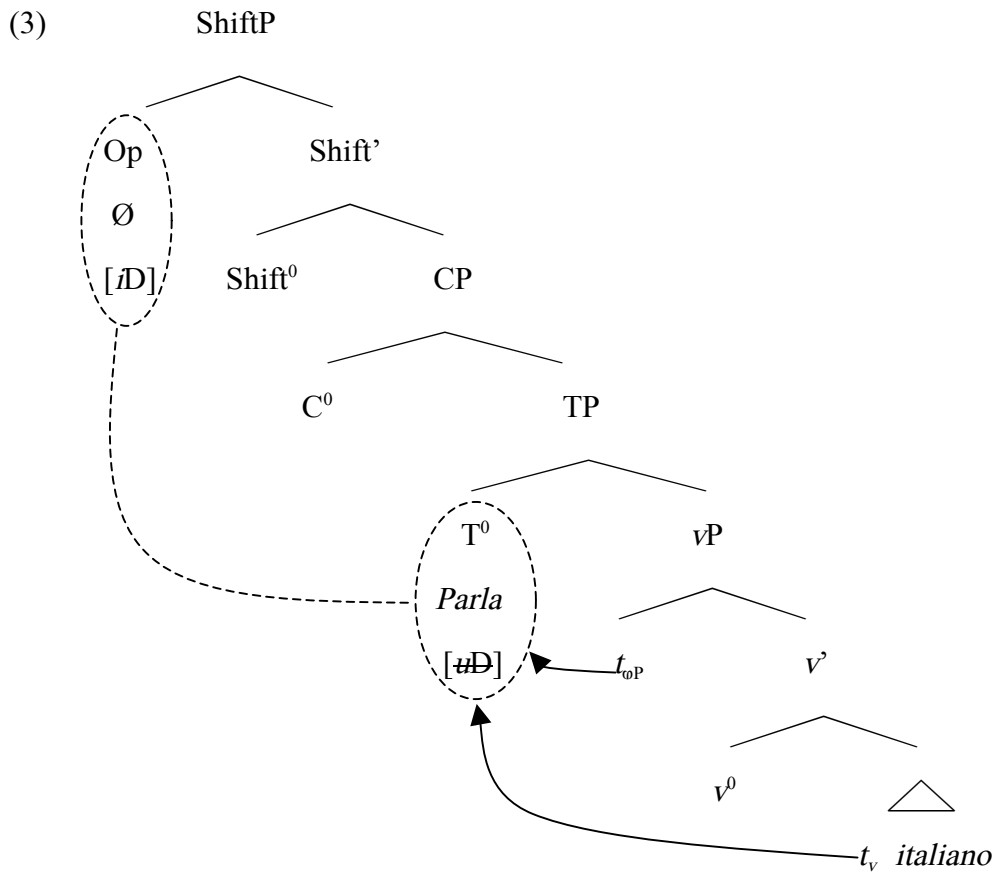
t_v *italiano*

Parla	*italiano*
speak.3SG	Italian

'He/she/it speaks Italian'

- **Partial** NSLs have definite null subjects only in some contexts (e.g. 1ˢᵗ & 2ⁿᵈ person), but these are not obligatorily null, and also generic inclusive null subjects (null *one*)
- No $[uD]$ feature on T⁰; instead must have DP subjects that become null by chain reduction

Illustrated here using Finnish (simplified; dotted = Agree; thick dots = movement; solid = HM):

(4)
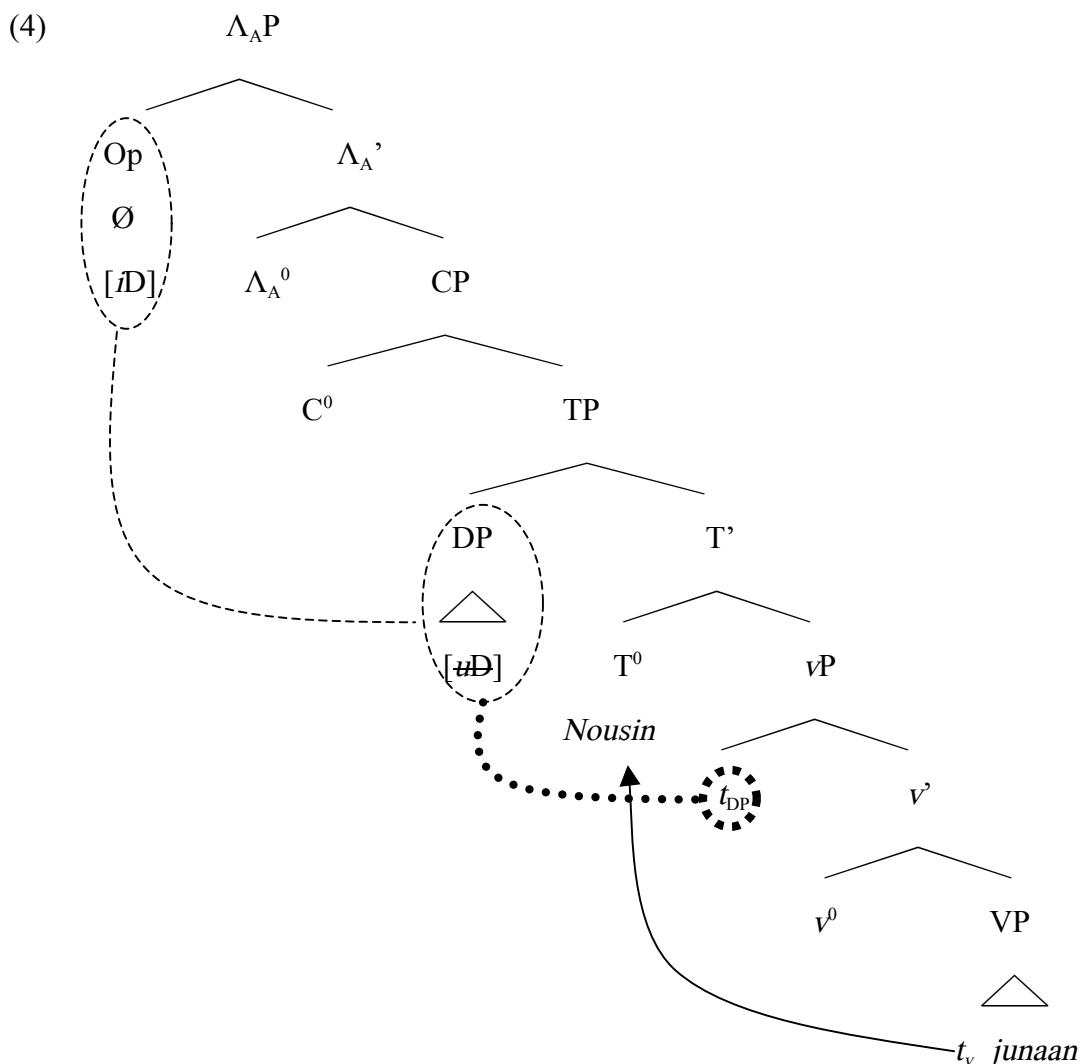
Nousin junaan
boarded train
'I boarded the train'

3.2 The loss of null subjects

- Historical record shows many partial NSLs have developed from consistent NSLs:
  - Brazilian Portuguese (partial) < early European Portuguese (full) (Roberts 2011)
  - Marathi (partial) < Sanskrit (full) (Kiparsky 2009)
  - Russian (partial) < ≈ Old Church Slavonic (full) (Eckhoff & Meyer 2011)
  - Hebrew (partial) < ≈ Biblical Hebrew (full) (Holmstedt 2010)
- Crucial feature in transition from consistent to partial NSL: loss of [uD] feature on T^0.

- Historical record shows (less convincingly) that some partial NSLs have developed into non-NSLs:
    o Standard Finnish (partial) ≈ > Colloquial Finnish (non-NSL) (Holmberg 2010)
    o Old English (partial) > Modern English (non-NSL) (Walkden 2012: ch. 5)
- Crucial feature in transition from partial NSL to non-NSL: loss of [*u*D] on DPs.
- L2 acquisition literature shows that null subjects are (in general) not produced at a target-like rate by L2 acquirers:
    o Bini (1993): L1 Spanish speakers learning Italian (both consistent NSLs!) systematically overproduce 'redundant' overt pronouns in their L2
    o Sorace et al. (2009: 464): L2 learners of *any* null subject language appear to 'use overt subject pronouns as a compensatory "default" strategy', regardless of the structure of their L1
- This is consistent with the Interpretability Hypothesis.

Assuming a) the Interpretability Hypothesis (section 1.3) and b) the analysis sketched above (section 3.1), we predict that these changes will progress further/faster in situations involving high levels of adult L2 acquisition and transmission of 'imperfect' adult L2 varieties, at the population level.

- Testing ground 1: heritage languages. *To the extent that these involve L2 acquisition of the heritage language*, we predict loss of null subjects.
    o Yes: Otheguy, Zentella & Livert (2007). In heritage varieties of Spanish used in New York, the rate of pronominal subject use is much higher in second- and third-generation speakers than in Spanish-born speakers.
    o Yes: Heap & Nagy (1998). In Faetar – a Francoprovençal partial NSL variety spoken in southern Italy – apparent-time data indicate increased use of subject pronouns.
    o Yes: Chociej (2011). In heritage Polish spoken in Toronto, the rate of pronominal subject use is much higher in second- and third-generation speakers than in Spanish-born speakers.
    o No: Torres Cacoullos & Travis (2011). English code-switching in New Mexico Spanish does not seem to increase the use of first-person subject pronouns (once priming effects are factored in).
    o No: Nagy et al. (2011). Cantonese, Italian and Russian heritage language subject pronoun use in Toronto not affected by generation, identity etc.
- Testing ground 2: new world and colonial varieties of NSLs. These are likely to present a prime case of dialect levelling/koinéization due to the circumstances of settlement.

- o Brazilian Portuguese vs. European Portuguese: same starting point, but clear (and historically visible) shift to partial NSL in the former.
- o Caribbean Spanish vs. General Spanish (Toribio 1996, Kato 2012): again, same starting point, but shift to partial NSL in the former.
- o Chabacano (Philippine Creole Spanish) (Lipski 1999): partial NSL with generic inclusive null subject.

3.3 Summary

Certain instances of loss of null subjects seem to support the hypothesis. However, the data (and interpretation) are not always clear:

- Do heritage languages undergo the right kind of contact (short-term, involving L2 acquisition) for simplification?
- Since English is a non-NSL, do studies of contact with English (e.g. all of the heritage language studies mentioned above, except Heap & Nagy 1998) really tell us anything?
- Could there be an interaction with concomitant loss of rich agreement morphology (also predicted under Trudgill's account)?

4. Complexification

We won't have much to say about complexification here, but…

- Additive complexification (i.e. transfer) under this approach specifically involves the transfer of uninterpretable features from one grammar to another.
- Additive complexification, i.e. the transfer of uninterpretable features from one language to another, is predicted to arise typically in situations involving long-term stable bilingualism.
  - o *Sprachbund* phenomena bear this out.
- Spontaneous (non-additive) complexification, i.e. the emergence of new uninterpretable features, is likely to occur in situations without contact (e.g. Trudgill's 'traditional dialects').
  - o The emergence of uninterpretable features from interpretable features is a reasonably well-understood phenomenon, and is characteristic of grammaticalization (van Gelderen 2009, 2011)

5. Conclusion

- The approach to syntactic change taken here accords a central position to L2 acquirers and their subsequent influence on the PLD of new L1 acquirers.
- The predictions can sometimes be rather unclear, since they hold at population level rather than at the level of the individual.

- The approach depends on:
  - the validity of the Interpretability Hypothesis as a characterization of L2-difficulty
  - the validity of Trudgill's (2011) insight on how different types of acquisition play out at the population level
  - the validity of the individual syntactic analyses proposed
- All of these are questionable! Still, the evidence from the diachrony of negation and of null subjects seems to be at least consistent with the basic hypothesis laid out in section 1.4: that in situations involving high levels of adult L2 acquisition and transmission of 'imperfect' adult L2 varieties, at the population level, uninterpretable features will be lost.

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