On the historical origin of pro-drop

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1. Introduction

- Given the often-stated correlation between pro-drop and rich verbal inflection (cf. e.g. Jaeggli & Safir 1989, Roberts 1993, Vikner 1997, Rohrbacher 1999, among many others) one might suspect that pro-drop develops historically when the richness of verbal inflection crosses a certain threshold. Furthermore, the rise of pro-drop is expected to proceed in an across the board fashion, affecting all persons and numbers.

- <u>Basic claims</u>:
    (i)   The historical development of pro-drop takes place in a more piecemeal fashion (affecting certain person/number combinations before others).
    (ii) The development of null subjects is not sensitive to properties of the agreement paradigm as a whole; instead, it is more directly related to the (mechanisms governing the) reanalysis of individual pronominal clitics as verbal agreement markers. That is, null arguments may develop to fill the gap left by pronominal elements that have turned into agreement markers.
    (iii) The latter change is governed by an acquisition strategy (dubbed the Blocking Principle) that motivates the reanalysis of pronominal clitics if the resulting agreement markers are more distinctive than the existing inflections.

- In addition, I will briefly review an alternative historical path toward null arguments that does not involve the development of agreement markers, focusing on the rise of (discourse-oriented) pro-drop in creole languages.

2. The development of partial pro-drop in Bavarian

- Bavarian exhibits null subjects in 2nd person contexts (plus 1pl in some dialects, see below) (cf. e.g. Bayer 1984, Weiß 1998, 2002):

(1)   a. Kummst *pro* noch Minga, dann muaßt *pro* me b'suacha.
          come-2SG   to   Munich then must-2SG   me   visit
          'If you come to Munich you must visit me.'
          (Bayer 1984: 211)
      b. Kummts *pro* noch Minga, dann müaßts *pro* me b'suacha.
          come-2PL   to   Munich then must-2PL   me   visit
          'If you come to Munich you must visit me.'

(2)   a. *Kumm   *pro* noch Minga...
          come-1SG   to   Munich
          'If I come to Munich, ...'

    b. *Kumm-t   *pro* noch Minga?
       come-3SG   to   Munich
       'Will he/she/it come to Munich?'
       (Bayer 1984: 239)

- These are the very same contexts in which Bavarian exhibits the phenomenon of complementizer agreement (Pfalz 1918, Bayer 1984, Altmann 1984, Zwart 1993, Weiß 1998, 2002; see appendix I for some arguments that *-st/-ts* are not clitics, but rather true inflections):

(3) a. ob-**st**   (du)   noch Minga   kumm-**st**
         whether-CLIT.2SG you.SG to   Munich come-2SG
         'whether you come to Munich'
     b. ob-**ts**   (εs/ihr) noch Minga   kumm-**ts**
         whether-CLIT.2PL you.PL to   Munich come-2PL
          'whether you(PL) come to Munich'

On the relation between pro-drop and complementizer agreement

- According to Bayer (1984), the overt manifestation of agreement in C (with 2sg, 2pl) serves to license referential *pro* in present-day Bavarian.

- However, in other varieties such as West Flemish and dialects spoken in the east and south of the Netherlands, the presence of complementizer agreement does not license pro-drop (examples taken from Zwart 1993: 257):

    West Flemish
(4) da-t *(=ze)   werk-t
     that-3SG=CLIT.3SG.FEM work-3SG
     'that she works'

    Eastern varieties
(5) a. Speul-e   *(we)?
        play-1PL we
        'Do we play?'
     b. datt-e *(wij) speul-t
        that-1PL we   play-1PL
        'that we play'

- Thus, it seems that is not possible to construct a systematic synchronic correlation between pro-drop and complementizer agreement.

- Furthermore, from a purely synchronic point of view, the restriction to 2nd person cannot be attributed to some special morphological property of the 2nd person agreement suffixes, in the sense that 2nd person forms are more distinctive than e.g. 1sg or 3sg:

1sg	-∅
2sg	-st
3sg	-t
1pl	-an
2pl	-ts
3pl	-an

Table 1: Verbal agreement paradigm (pres. indic.) of Bavarian

2.1 Toward a diachronic analysis of the relation between pro-drop and complementizer agreement in Bavarian

Basic claims:

(i) The restrictions on pro-drop (and complementizer agreement) follow from a set of syntactic and morphological factors that determined the reanalysis of subject clitics as agreement markers in the history of Bavarian.

(ii) Syntax: this reanalysis could only take place in inversion contexts; it forced the learner to assume the presence of (i) a null subject, and (ii) agreement features in C, leading to complementizer agreement.

(iii) Morphology: the change in question is shaped by blocking effects that favor the use of more specified forms over less specified forms (Kiparsky 1973, 1982; Anderson 1986, 1992; Halle 1997). More specifically, the person/number restrictions observed above follow from the fact that the change affected only defective/underspecified slots of the verbal agreement paradigm.

Syntactic aspects

- In Bavarian (and a number of other Germanic varieties), new verbal agreement suffixes developed via a reanalysis of subject enclitics attached to the finite verb in inversion contexts. This change led to an enlargement of the existing inherited agreement endings (e.g. 2sg *-s+t(hu)* >>> 2sg *-st*; Brinkmann 1931, Braune & Reiffenstein 2004: 261; cf. Bayer 1984, Weiß 2002, Fuß 2005 for an analysis of the changes affecting Bavarian):[1]

(6)   [$_{CP}$ XP [$_{C'}$ V$_{fin}$ [$_{TP}$ subj. clit. ...]]] >>> [$_{CP}$ XP [$_{C'}$ V$_{fin}$+AGR [$_{TP}$ *pro*...]]]

- Rise of pro-drop: the reanalysis of the former clitic as an agreement morpheme forced the learner to assume the presence of a referential null subject (*pro*) which receives the thematic role associated with the external argument, giving rise to the limited pro-drop properties of the present-day language (cf. Weiß 2002 for a related proposal).

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[1] As has been suggested occasionally (cf. e.g. Paul 1879: 549), this change was presumably promoted by the fact that other verbs already already showed *-st* for the 2sg present indicative (notably, the class of preterit-presents, e.g. *kanst*, *tarst*, *muost*, *weist* and the 2sg of 'be' *bist*, which resulted from an independent and earlier development, cf. Lühr 1984).

- The evidence available to us suggests that the rise of new verbal agreement morphology proceeded as follows (cf. Fuß 2005, ch. 5 & 6 for details):

(7) a. V + enclitic → V+Agr/inversion contexts (reanalysis of clitics as Agr-on-C)
     b. extension to other elements located in the C-system such as complementizers, relative pronouns etc. (confined to Bavarian)
     c. extension to verbs in clause-final positions

- For example, Pfalz (1918: 232) observes that in some northeastern Bavarian dialects, the new ending for 2pl *-ts* still attaches only to conjunctions and verbs in C, but crucially not to verbs that occur in clause-final position:

(8) [CP wei-**ts**   iwə   t'pruk   khumt [C' sea-**ts**   [IP s'wiətshaus]]]
         when-2PL over the-bridge come   see-2PL   the-tavern
     'When you cross the bridge, you'll see the tavern.'

- This suggests that the new agreement morpheme was first grammaticalized as part of the feature content of C (attaching to verbs and other elements located in the C-system) and spread later to verbs in clause-final position (further support for the sequence of changes in (7) comes from Lower Bavarian dialects which exhibit a related grammaticalization process affecting 1pl forms, cf. Bayer 1984, Weiß 1998, 2002; Fuß 2005).
- In Lower Bavarian, the 1st person plural subject enclitic *-ma* developed in a similar way as the 2nd person enclitics (cf. Pfalz 1918, Bayer 1984, Altmann 1984, Kollmer 1987, Wiesinger 1989, Abraham 1995, Weiß 1998, 2002).
- The enclitic 1pl *-ma* shows a similar behavior as the 2nd person forms: (i) it is obligatory in all contexts; (ii) it can be doubled by full forms:

(9) a. wem-**ma**   aaf Minga   fon
         when-1PL   to   Munich drive
     b. wem-**ma**   mia   aaf Minga   fon
         when-1PL   we   to   Munich   drive
     c. *wem   mia aaf Minga   fon
         when   we   to   Munich   drive
     'when we drive to Munich'
     (Weiß 2002:9)

(10) a. Mia   fom-**ma**   hoam.
         we   drive-1PL   home
     'We go home.'
     (Weiß 2002:9)
     b. *Mia fon   hoam
         we   drive   home
     'We go home.'
     (Helmut Weiß, p.c.)

- Therefore, it is plausible to assume that in these dialects, *-ma* developed into an additional instance of AGR-in-C (cf. Bayer 1984, Weiß 1998, 2002).

- This development is further advanced in a set of bisyllabic verbs such as *laffa* 'to run', *gengan* 'to go', *soucha(n)* 'to seek' etc., where the original agreement ending is replaced by *-ma* in inversion contexts (cf. Kollmer 1987, Weiß 2002)

(11) a. Mia laff-**ma**/*laff-**a**   hoam
          we   ran-1PL/ran-1PL   home
          'We are running home.'
      b. Mia gem-**ma**/*geng-**an**   hoam
          we   go-1PL/go-1PL   home
          'We are going home.'

- In most such varieties, this replacement is not possible with verbs in embedded contexts/sentence-final position:

(12) wa-**ma**   hoam laff-**a**/*laff-**ma**
      because-1PL home go-1PL
      'because we are going home'

- According to Bayer (1984:252), 1pl contexts license *pro*-drop in these dialects:

(13) Fahr-ma *pro* noch Minga?
      drive-1PL   to   Munich
      'Will we go to Munich?'

- In a subset of these Lower Bavarian dialects,[2] *-ma* has spread to auxiliaries such as 'have' and 'do' in clause-final position as well (Kollmer 1987: I, 357; Wiesinger 1989:38; Weiß 2002:9). Note that *-ma* must be analyzed as an agreement marker in the following examples, since enclitics cannot attach to clause-final verbs in Bavarian.

(14) a. dass-**ma** (mia) koã   geid   ned   hã-**ma**   [instead of 1pl *hã-n*]
          that-1PL   we   no   money not   have-1PL
          'that we have no money'
          (Kollmer 1987: I, 362)
      b. we-**ma** (mia) des   ned   dou-**ma**...   [instead of 1pl *dou-n*]
          if-1PL   we   that not   do-1PL
          'if we don't do that...'
          (Kollmer 1987: I, 358)

- These data clearly supports the hypothesis that the grammaticlaization of new agreement markers proceeded along the lines suggested in (7) above.
- <u>Note</u>: The change in question did not take place in a wholesale fashion, enlarging/replacing all existing agreement endings and giving rise to full-fledged pro-drop. Rather, it is confined to the following contexts:

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[2] These dialects are spoken in the Bavarian Forest, in an area the boundaries of which are (roughly) marked by Cham in the west, Lam in the east, Furth i. W. in the north and Kötzting in the south, cf. Kollmer 1987, I.

(15) a. 2sg *-s* >>> *-st* (early OHG; *-st* in all mod. varieties of German)
      b. 2pl *-t* >>> *-ts* (13th century Bavarian; attested in all mod. varieties)
      c. 1pl *-an* >>> *-ma* (18th century; extension to verbs in clause-final position
                  in e.g. some Lower Bavarian dialects, cf. Pfalz 1918,
                  Bayer 1984, Wiesinger 1989, Weiß 1998, 2002)

- Why?

Morphological aspects

- <u>Observation</u>: The development of the new endings 2pl *-ts*, 1pl *-ma* resolved existing homophony in the verbal agreement paradigm.
- The development of 2pl *-ts* (< clit. *-(ē)s*) began in the 13th century (in Northern and Middle Bavarian, cf. Wiesinger 1989:72f.), resolving homophony of 3sg, 2pl forms:

	Old paradigm	New paradigm
1sg	-∅	-∅
2sg	-st	-st
3sg	-t	-t
1pl	-an	-an
2pl	-t	-ts
3pl	-ant	-ant

Table 2: Verbal agreement paradigms (pres. indic.), 13th century Bavarian

- In the 18th century, final *-t* was lost in the 3pl, leading to homophony of 3pl and 1pl forms in most Bavarian dialects. In some dialects, this was resolved by the development of 1pl *-ma* as a new agreement ending:

	Old paradigm	New paradigm
1sg	-∅	-∅
2sg	-st	-st
3sg	-t	-t
1pl	-an	-ma
2pl	-ts	-ts
3pl	-an	-an

Table 3: Verbal agreement paradigms (pres. indic.), late 18th century Bavarian

- It appears that the reanalysis of clitics as agreement markers is triggered if the change leads to the elimination of syncretism in the agreement paradigm.
- <u>Analysis</u>: the acquisition (and grammaticalization) of inflectional morphology is governed by a blocking effect which operates during language acquisition and scans the input for the most specific realization of a given agreement morpheme (cf. Fuß 2005 for details):

(16)   *Blocking Principle (BP)*
        If several appropriate PF-realizations of a given morpheme are attested in

the Primary Linguistic Data, the form matching the greatest subset of the morphosyntactic features included in the morpheme must be chosen for storage in the lexicon.

- The BP ensures that the development of new inflectional formatives can affect only weak/underspecified slots of the paradigm, replacing vocabulary items that are not distinctive.
- The new agreement suffixes 2pl *-ts*, 1pl *-ma* satisfy the Blocking Principle due to the fact that they are more specified than their respective predecessors:

(17) a. *-ts* is specified for both person ([–speaker, +hearer]) and number ([pl]), while the former ending *-t* is the completely underspecified elsewhere form.
     b. *-ma* signals person ([+speaker, –hearer]) and number ([pl]), while *-an* is merely specified for number ([pl]).

- The BP makes available an explanation of why the rise of new agreement formatives (and pro-drop) took place in some contexts, but not in others.[3]

Summing up
- In Bavarian, the link between pro-drop and complementizer agreement is diachronic in nature:
    (i)   Referential pro-drop developed as a by-product of the development of new (verbal) agreement formatives from former subject clitics.
    (ii) The reanalysis of subject clitics could only take place in inversion contexts and led to the presence of agreement features in C^0, giving rise to the phenomenon of complementizer agreement.
    (iii) The restriction to 2nd person (plus 1pl in some varieties) can be explained on the assumption that new inflectional formatives can only be coined if they are more specified than the existing markers (the Blocking Principle).

Further conclusions:
- The changes affecting Bavarian suggest that pro-drop does not necessarily develop in an across-the-board fashion for all persons and numbers (if the richness of verbal inflection crosses a certain threshold); instead, it appears that the development of null subjects is confined to contexts in which pronouns are reanalyzed as agreement markers.
- The rise of pro-drop is related to properties of agreement (and agreement paradigms), but only in an indirect way, namely via the morphological mechanisms that govern the historical development of agreement markers (the Blocking Principle).
- Speculation: The often-noted correlation between rich verbal inflection and pro-drop can perhaps be restated in diachronic terms:[4] if the reanalysis of

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[3] Cf. appendix II for the (earlier) development of 2sg *-st*.
[4] Cf. Alexiadou & Fanselow (2002) for a related proposal concerning the relation between verbal inflection and verb movement

pronouns affects larger parts of the agreement paradigm (either in one fell swoop or one item after the other), this may result in a typological change from –pro-drop to +pro-drop. A possible case in point are recent/current developments that have affected the grammar of colloquial French.

3. Colloquial French

- Authors such as Roberge (1990), Friedemann (1997), or Fonseca-Greber (2000) (among others) argue that Colloquial French exhibits an ongoing transition from a grammar without null subjects to a +pro-drop grammar.[5]

- Similar to Bavarian, this development involves a change in which subject clitics turn into (prefixal) agreement markers. This transition is manifested by a set of properties that set the subject clitics of Colloquial French apart from those of the standard language (Wartburg 1970, Ashby 1977, Harris 1978, Lambrecht 1981, Roberge 1990, Auger 1993, 1994a, Fonseca-Greber 2000, Fonseca-Greber & Waugh 2003, Gerlach 2002; however see de Cat 2002 for an opposing view):[6]

  (i)   subject clitics are obligatory and cannot be replaced by full tonic pronouns (historically an oblique form).[7] Furthermore, sentences with apparent clitic doubling generally favor a basic, non-dislocated interpretation:

  Colloquial French
  (18) a. (Moi) je   porte la   table.
          me   CLIT.1SG   carry the table
          'I carry the table.'

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[5] Apparently, a similar development has taken place in a number of North Italian dialects, cf. Vanelli (1987), Renzi (1992).

[6] In the history of French, we can observe a cluster of changes involving pronouns, verbal agreement and the pro-drop property, which is cyclic in nature (Bally 1965, Guiraud 1968, Wartburg 1970, Ashby 1977, Harris 1978, Lambrecht 1981, Roberge 1990):
(i)   distinctive verbal Agr/pro-drop (OFr.)
(ii)   loss of Agr/loss of pro-drop (Middle Fr., 14th-16th century)
(iii) subject pronouns lose emphatic force and become clitics (15th-18th century)
(iv)   clitics are reanalyzed as verbal agreement/rise of pro-drop (ongoing change)
Note that according to Wartburg (1970: 72) and Harris (1978: 113), the rise of overt pronouns (in Middle French) is not directly related to the loss of agreement morphology, but rather is linked to word order properties and prosodic factors (in fact, Harris claims that subject pronouns became obligatory prior to the erosion of the agreement system). In this paper, I will not go into the syntactic details of this historical development. Givón (1976) claims that colloquial French represents another instance where verbal agreement markers developed via a reanalysis of a former topic left dislocation structure. However, there are at least some indications that the relevant syntactic environment was *not* topic left dislocation, but rather a structure where a reinforcing full form (e.g. the oblique 1sg form *moi*) has been added to the non-stressable clitic for reasons of emphasis/focus (cf. Guiraud 1968, Wartburg 1970, Ashby 1977 for details).

[7] Friedemann (1997) claims that doubling is merely optional in all non-standard varieties of French. However, Fonseca-Greber & Waugh (2003), examining a corpus of contemporary spoken French, observe that there are no cases where a tonic 1st or 2nd pronoun occurs without a clitic (i.e, doubling seems to obligatory). With 3rd person forms, doubling is slightly less frequent (3sg clitics are present in 91.5% of the relevant cases, 3pl forms in 93.6%). A similar finding is reached by Gerlach (2002).

b. Moi *(je)   porte   la   table.
    me   CLIT.1SG   carry   the   table
    'I carry the table.'
    (Gerlach 2002:224)

(ii)   in conjoined clauses, subject clitics must be repeated before each finite verb (cf. Lambrecht 1981, Fonseca-Greber & Waugh 2003):

Standard French
(19) Il   mange   et   boit   comme   un   cochon.
     he   eats   and   drinks   like   a   pig

Colloquial French
(20) I   mange   et   *(i)   boit   comme   un   cochon.
     he   eats   and   he   drinks   like   a   pig

(iii)   the preverbal "clitics" occur in a fixed position relative to the verb stem. For example, they fail to undergo subject-verb inversion in matrix interrogatives, as shown in (15) (Friedemann 1997: 3f.):

Standard French
(21) Où   est-il   parti?
     where   is=he   gone
     'Where did he go to?'

Colloquial French
(22) Où   il-est   parti?
     where   he-is   gone
     'Where did he go to?'

- <u>Indications that the reanalysis is not yet fully completed</u>: quantified expressions, indefinite NPs and wh-phrases cannot be doubled in Colloquial French (Roberge 1990: 95, Friedemann 1997: 125):[8]

(23) *Personne   il   a   parlé.
     nobody   he   has   spoken
     'Nobody spoke.'

(24) *Un   ami   il   est   toujours   là.
     a   friend   he   is   always   there

(25) *Qui   il   aime   la   tarte?
     who   he   likes   the   pie
     'Who likes the pie?'

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[8] However, corpus studies carried out by Fonseca-Greber (2000) and Fonseca-Greber & Waugh (2003) show that doubling is extending to contexts with quantified NPs in colloquial French.

- However, examples similar to (17) and (18) are well-formed in other non-standard varieties of French (Picard, Pied-Noir), which suggests that in the latter, the grammaticalization of prefixal agreement is even more advanced (cf. Roberge 1990, Friedemann 1997, Auger 1994b, 2003):

(26) Personne i(l) sait qui c'est   leur mère.
    nobody   he   knows who that-is their mother
    'Nobody knows who is their mother.'
    (Pied-Noir, Friedemann 1997: 125)

(27) Un homme il   vient.
    a   man   he comes
    (Pied-Noir, Roberge 1990: 97)

(28) Chacun   il a   sa   chimère.
    everybody he has his   spleen
    'Everybody has a spleen.'
    (Picard, Friedemann 1997: 125)

- While doubling of wh-phrases is ruled in Pied-Noir (Roberge 1990: 120), a default 3sg.masc clitic is present in wh-questions in Picard; furthermore, subject-relatives exhibit resumptive subject clitics (Auger 1994b, 2003):

(29) tchèche qu' il   a   dit   qu' i folloait nin   finir?
    who   that he has said that it had-to of-it to-finish
    'Who said we had to put an end to it?'
    (Picard, Auger 2003: 5)

(30) inne grosse féme   éd   Tours qu' al   étoait rouge...
    a   fat   woman from Tours that she was   red
    'a fat woman from Tours who was red...'
    (Picard, Auger 2003: 5)

- Summing up, it appears that different non-standard varieties exhibit different stages of a development in which clitics turn into prefixal agreement markers, eventually giving rise to a grammar with null subjects.
- Again, the changes affecting the status of the subject clitics can be related to properties of the existing agreement paradigm. As shown by Gerlach (2002), not all subject clitcs are obligatorily present:

1sg	obligatory
2sg	obligatory
3sg	optional
1pl	obligatory (*on*)
2pl	optional
3pl	optional

Table 4: Presence of subject clitics in Colloquial French

- Doubling of tonic forms is obligatory in 1sg, 2sg, and 1pl (where *on* has replaced *nous* in the spoken language), while it is merely optional in other contexts. Thus, the grammaticalization process is apparently lagging behind for 3rd person forms and 2pl.
- Apparently, the clitics are obligatory when the verbal inflection is underspecified for subject agreement features (Gerlach 2002: 225f.):

	Written language	Phonetic form
1sg	porte	[pɔrt]
2sg	portes	[pɔrt]
3sg	porte	[pɔrt]
1pl	(on) porte (nous) portons	[pɔrt] not used in colloquial Fr.
2pl	portez	[pɔrˈteː]
3pl	portent	[pɔrt]

Table 5: Subject agreement in written/spoken French

- Only the 2pl ending /-eː/ signals person and number of the subject; in all other contexts we find the zero ending which is underspecified for person and number (representing the elsewhere case). This can be linked to the distribution of clitics in the following way:

(31) *Verbal agreement and the distribution of subject clitics*
      In Colloquial French, subject clitics are obligatory only
      (a) in non-third person contexts and
      (b) if they serve to express φ-features not marked by the existing suffixal agreement morphology.

- This can be attributed to the workings of the Blocking Principle: The grammaticalization of new agreement markers (and the rise of the null subjects) is triggered only in contexts where the new inflections are clearly more specified than the existing zero markers:

(32) a. [+speaker, –hearer, –pl]   ↔ /ʒə/   (1sg)
      b. [–speaker, +hearer, –pl]   ↔ /tʏ/   (2sg)
      c. [+speaker, –hearer, +pl]   ↔ /ɔ̃/   (1pl)

- The optionality of the 2pl clitic is due to the fact that the existing agreement morphology is still distinctive.
- <u>Problem</u>: Why are 3rd person forms lagging behind? At first sight they seem to be specified for person, number and gender, so they should qualify as being more distinctive than the existing zero marker.
- <u>Person</u>: 3rd person forms are actually underspecified for person features (cf. Benveniste 1966, Halle 1997, Noyer 1997, Harley and Ritter 2002, Cysouw

2003, among many others). Thus, the potential new markers are in fact not more specified than the existing zero marker with respect to person features.

- Number: the apparent contrast between 3sg *il/elle* and 3pl *ils/elles* should suffice to mark the clitics as more specified than the existing zero marker. Note, however, that the number marking of the plural forms is only perceivable if the verb following the clitic begins with a vowel. Hence, the number marking of the 3rd person forms is actually less salient than it appears at first sight. The visibility of number marking is further weakened by the tendency to use a reduced form *i(l)* for all 3rd person contexts (sometimes accompanied by 3pl *eux*, cf. Ashby 1977, Fonseca-Greber & Waugh 2003: 102):[9]

(33) Mes   petites cousines   eux   i-savaient...
      my   little   cousins.FEM 3PL.MASC 3-knew
      'My little cousins knew...'
      (Fonseca-Greber & Waugh 2003: 102)

- Gender: in colloquial French, the tendency to use *i(l)* as a general marker of 3rd person can also be observed in the singular (cf. the following examples taken from Wartburg 1970: 74 and Ashby 1977: 68). This can be taken to blur the gender distinctions originally signaled by the subject clitics.[10]

(34) a. Ma femme il   est   venu.
         my wife   he   is   come
         'My wife came.'
      b. Ma soeur i'chante.
         my sister 3-sing
         'My sister is singing.'

- Thus, the 3rd person clitics are actually less distinctive than it appears at first sight. This impedes their being reanalyzed as agreement markers (due to the workings of the Blocking Principle).[11]

Summing up
- Colloquial French (and other non-standard varieties of French) exhibits an ongoing change in which preverbal subject clitics turn into prefixal agreement markers, giving rise to pro-drop properties formerly absent in the grammar.

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[9] Similarly, the forms for 3sg and 3pl clitics have merged in Picard and Pied-Noir French (e.g. Pied-Noir 3sg.masc.sg, 3sg.masc.pl. /i/, 3sg.fem.sg, 3sg.fem.pl /ɛl/), cf. Roberge (1990: 191) on Pied Noir and Auger (2003: 5) on Picard.

[10] Cf. Fuß (2005: 255f.) for an alternative explanation (making use of a feature geometry) which is based on the assumption that the grammaticalization of gender agreement requires the presence of number marking for all persons.

[11] The fact that 3rd person forms have not yet fully grammaticalized into agreement markers in Colloquial French (due to their reduced visibility to the workings of the Blocking Principle) is presumably also the reason why doubling of quantified expressions (which are usually 3rd person NPs) is generally ruled out – in contrast to other non-standard varieties such as Pied-Noir or Picard.

- Again, we witness a development in which pro-drop does not evolve at once for all persons and numbers. Rather, the rise of null subjects is intimately related to the reanalysis of individual subject clitics as agreement markers.
- The transition of clitics into agreement markers is linked to properties of the existing agreement paradigm (new markers are more specified).
- When the change is eventually completed in all persons and numbers, this may give the impression that full pro-drop is linked to rich agreement (moreover, once full pro-drop has developed, future generations will presumably continue to acquire a +pro-drop grammar due to the absence of overt subjects in the input).

4. Alternative paths toward pro-drop in creole languages

- It is often claimed that creoles generally lack null-pronouns (cf. e.g. Muysken 1981, Roberts 1999 among many others). However, there are at least some apparent exceptions noted in the literature. For example, Kouwwenberg & Muysken (1995: 215f.) show that Papiamento exhibits empty expletives (in impersonal constructions and with weather verbs); DeGraff (1993) and Veenstra (1994) argue for the existence of referential pro-drop in Haitian Creole and Saramaccan, respectively.
- In the following, I will take a look at Mauritian Creole and Philippine Creole Spanish, where we can observe the development of a form of discourse-oriented pro-drop under contact with Austronesian languages (see also Lipski 2001).

4.1 Mauritian Creole

- French-based Mauritian Creole (MC) exhibits a variety of pro-drop phenomena (Adone 1994a, 1994b).
- Null subjects in impersonal/indefinite constructions:

(35) Ti   fer   fre yer.
       TNS make cold yesterday
      '[It] was cold yesterday.'
      (Adone 1994a: 114)

(36) Lôtâ,   ti   degrad karo kan   ar pios.
       long ago TNS cleared canefields with a pickaxe.
      'Long ago, [people] cleared cane fields with a pickaxe.'
      (Baker and Corne 1982: 89f.)

- Referential null subjects:

(37) Pu   return dañ peis   bieñto.
       MOD return in   country soon
      '[I] will go back to the country soon.'
      (Adone 1994b: 33)

(38) Ti   boykot en   paket kreol dañ travay.
      TNS   boycot QUA many creole in   work
      '[He] boycotted many creoles in his work.'
      (Adone 1994b: 33)

(39) Pu   repar   sa   sime la   dimeñ.
      MOD   repair DET road DET tomorrow
      '[We] will repair this road tomorrow.'
      (Adone 1994a: 114)

- Restrictions (Adone 1994a,b):
(i) It seems that null subjects are licensed by the presence of a preverbal
     Tense/Mood/Aspect (TMA) particle, which presumably realizes an inflectional
     head (*pu* and *ti* in the above examples).[12] If there is no TMA marker present
     (as for example in the present tense), null subjects are disallowed:

(40) *Al   lekol.
       goes   to-school
       '[He] goes to school.'
       (Adone 1994a: 116)

(ii) An embedded null subject cannot be coreferential with the subject of the
     matrix clause:

(41) *Zañ$_i$ dir   *pro*$_i$ fin   al lakaz.
       John   say   *pro*   ASP go home
       'John$_i$ says [he$_i$] has gone home.'
       (Adone 1994a: 114)

- According to Adone (1994a,b), null subjects in MC are (i) formally licensed by
  the TMA particles and (ii) identified by being coindexed with a discourse topic
  (presumably mediated by an abstract operator that occupies a left-peripheral
  A'-position – that is, the empty arguments in MC are analyzed as variables
  and not as *pro*).[13]

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[12] Mauritian Creole has an elaborate system of TMA markers, which is made up of six basic
markers (*ti* [+anterior/past], *pe* [progressive], *pu* [definite future], *ava* [indefinite future], *fin*
[completive], and *fek* [immediate completive]) that can be used to express at least twelve fine-
grained temporal and aspectual differences, see Adone (1994a: ch. 6) for details.

[13] The hypothesis that null subjects are licensed by the TMA markers is supported by facts from
language acquisition. Adone (1994a) identifies three stages in the acquisition of null subjects in
Mauritian Creole. At the first stage, children use a lot of empty subjects (>60%), often in contexts
where they are not allowed in the target grammar. The second stage shows a sharp decline in the
frequency of null subjects (between 10% and 30%). This change is accompanied by the rise of
various TMA markers. The third stage is characterized by a slight increase of null subjects and a
more systematic use of TMA markers. Interestingly, from this stage on, null subjects and TMA
markers systematically cooccur, that is, the children have correctly acquired the licensing
conditions on null subjects of the target grammar.

The rise of null subjects in Mauritian Creole

- Early stages of Mauritian Creole (the creolization of MC took place between 1730 and 1770, cf. Baker and Corne 1986) exhibited empty expletives, but lacked the kind of referential null subjects found in the present-day language (cf. Adone 1994b).

- This suggests that the rise of pro-drop is a rather recent development. In other words, it appears that the pro-drop properties in question did not develop during the original genesis of MC, but rather are the result of a later change.

- Pro-drop in Mauritian Creole cannot be attributed to its lexifier language (17th and 18th century French). Furthermore, Lipski (2001) states that pro-drop cannot be the result of substrate influence, since the relevant languages (several Bantu languages and Malagasy) do not exhibit null subjects.

- However, it what follows, I will argue that the presence of null subjects in MC can be attributed to Malagasy influence, contra Lipski (2001).

- Malagasy: (i) basic VOS word order; (ii) voice system typical of many Austronesian languages (cf. e.g. Keenan 1976 on Malagasy, Schachter 1976, 1990, Kroeger 1993 on Tagalog): distinctive verb morphology triggers the promotion of one of the verb's arguments to clause-final position. The relevant affixes on the verb indicate the thematic role of the promoted argument. The promoted argument is usually interpreted as a familiarity topic (in this way, the voice system serves to implement topic continuity in a discourse, cf. e.g. Hopper 1979, Cooreman, Fox & Givón 1988). In the following examples, the promoted argument and the relevant parts of voice morphology are marked by underlining (AT=actor topic; TT=theme topic; CT=circumstantial topic):

(42) a. <u>Man</u>-asa ny lamba amin' ny savony <u>ny reny</u>.
         AT-wash the clothes with the soap the mother
      b. Sasa-<u>n'</u> ny reny amin' ny savony <u>ny lamba</u>.
         wash-TT the mother with the soap the clothes
      c. <u>An</u>-asa-<u>n'</u> ny reny ny lamba <u>ny savony</u>.
         CT-wash-CT the mother the clothes the soap
         'The mother washes the clothes with the soap.'
         (Sabel 2003: 229f.)

- Pearson (2005) and Hyams et al. (2006: 21) note that the promoted argument (but no other argument) can be dropped in Malagasy:

(43) a. Mamangy an'i Tenda (izy).
         AT.visit OBJ-DET Tenda he
         (He) is visiting Tenda.
      b. Mamangy *(azy) i Naivo.
         AT.visit him DET Naivo
         Naivo is visiting (him).
      c. Vangian'i Naivo (izy).
         TT.visit DET Naivo he
         (Him), Naivo is visiting.

d. Vangian- *(-ny)   i   Tenda.
   TT.visit   he   DET Tenda
   Tenda, (he) is visiting.

- In other words, it appears that the null subjects of Malagasy (i) are licensed by a special morphology (the voice morphology on the verb which indicates the thematic role of the promoted argument) and (ii) are identified in relation to an element which figures prominently in the discourse.

- <u>Parallels with the kind of pro-drop found in MC</u>: (i) in MC, pro-drop is licensed by special inflectional morphology (TMA markers); (ii) identification of null subjects via relation with a discourse topic.

- <u>Speculation</u>: historical development of pro-drop in MC is due to (substrate) influence from Malagasy:[14]

(i) The discourse-oriented nature of pro-drop directly carries over from Malagasy to MC.

(ii) In the absence of an elaborate voice system, the licensing mechanism (via distinctive verbal morphology) was adapted to the impoverished inflectional system of a creole language. As a result, the TMA markers became associated with the formal licensing of pro-drop.

4.2 Philippine Creole Spanish

- Philippine Creole Spanish (PCS, sometimes also called Chabacano) is spoken in southwestern Mindanao (it is also wide-spread in the Manila Bay enclaves Cavite and Ternate). The following description is based on Lipski (2001).

- As many other creoles, PCS lacks verbal inflection. However, it exhibits two remarkable traits which are very rare among creoles: (i) basic VSO order; (ii) null subjects.

(44) *Null expletive and indefinite subjects*
      a. Ya   tiene hente   na mundo.
         TNS be   people in world
         '[There] were already people in the world.'
      b. Ta   siña   kanila   "English".
         TNS/ASP teach   them   English
         '[One] teaches them English.'
      c. Ya   tira   konele.
         TNS shoot him
         'He was shot.' (lit., '[One] shot him.')

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[14] See Lipski (2001) for an alternative explanation based on the assumption that null subjects initially developed in embedded contexts via the reanalysis of a variable bound by a left-dislocated element (e in (i)):

(i) [sa madam la]$_i$ mo rapel e_i ti   vini.
    this lady   DET I   remember   TNS come
    'This lady, I remember she came.'
    (Adone 1994a: 115)

(45)   *Null referential subjects*
    a. Ya   man-engkwentro__ konele na tyangge.
       TNS meet   her   in   market
       '[I] met her in the market.'
    b. Ya   abla __ kon el   muher...
       TNS say   to   the   woman
       '[He] said to the woman...'
    c. Despues ay   anda __ na eskwela.
       then   MOD go   to school
       'Then [we] would go to school.'
    d. Tiene __ mas di   nobenta años, pero __ fuerte pa.
       be   more than ninety years but   strong   still
       '[They] are more than ninety years old, but [they] are still strong.'

- <u>Discourse-oriented pro-drop</u>: the content of the null subjects is identified in relation to an element in the immediate discourse context:

  "In each case, the referent of the null subject is recoverable from the preceding context, usually being the same as the last-occurring overt pronoun. The usage of null subjects is most common in response to a question, with appropriate shift of pronominal reference." (Lipski 2001: 3)

- An embedded null subject may not be coreferential with an overt subject of the matrix clause that occurs in immediate postverbal position (recall that in MC as well, matrix subjects cannot be the antecedent of embedded subjects).[15]
- It seems that TMA-markers are not instrumental in the licensing of null subjects (cf. (38d)), in contrast to Mauritian Creole.

The rise of null subjects in PCS
- Lipski (2001) suggests that the kind of discourse-oriented pro-drop exhibited by PCS is due to influence from Tagalog and Cebuano, the neighboring Austronesian languages spoken in the Philippines (presumably also the source of basic VSO order in PCS).
- Both Tagalog and Cebuano exhibit the typical Austronesian voice system (cf. Schachter 1976, 1990, Kroeger 1993), that is, the promoted argument's thematic role is indicated by voice morphology on the verb. In contrast to Malagasy, however, the promoted argument does not occupy a designated position, but is marked by (case) particles (*ang* for common nouns and *si* for personal names):[16]

(46) a. B-<u>um</u>-ili <u>ang   lalake</u> ng   isda sa   tindahan
      buy.AT SUBJ man   OBJ fish OBL shop
      'The man bought fish in a/the shop.'

---

[15] According to Lipski (2001), coreference is possible in PCS when the matrix subject is fronted to clause-initial position. Similar to Tagalog, fronting is used to emphasize or (re-)introduce a discourse referent.

[16] For expository reasons I labeled the relevant case particles SUBJ=subject, OBJ=object, and OBL=oblique. Note that this slightly misleading, since the *ang*-marked NP arguably does not represent the grammatical subject of the clause (cf. e.g. Schachter 1990).

b. B-in-ili ng lalake <u>ang isda</u> sa tindahan
   buy.TT OBJ man SUBJ fish OBL shop
   'A/the man bought the fish in a/the shop.'
  c. B-in-ili-an ng lalake ng isda <u>ang tindahan</u>
   buy.LOCT OBJ man OBJ fish SUBJ shop
   'A/the man bought fish in the shop.'

- The *ang/si* marked phrase is normally interpreted as definite and familiar (and as the continuing topic of the discourse, cf. e.g. Hopper 1979, McGinn 1988, and Cooreman, Fox & Givón 1988).[17]
- Similar to Malagasy, the promoted argument (marked by *ang/si*) can be dropped, giving rise to discourse-oriented pro-drop (McGinn 1988: 278):

(47) B-um-ili __ ng isda sa tindahan
   buy.AT OBJ fish OBL shop
   '[He] bought fish in a/the shop.'

- It is likely that the null subjects found in PCS developed on the model of the kind of discourse-oriented pro-drop that we can observe in Tagalog (and Cebuano), where the argument gap is presumably licensed by the voice morphology indicating the argument's thematic role.
- The parallels between MC and PCS suggest that the kind of "topic-drop" characteristic of Malagasy and Tagalog, where the topic/null argument is marked by structural means (via verbal voice morphology), represents a very salient feature which is more easily adopted under language contact than other forms of pro-drop.

Open questions:
- <u>Structural licensing of null subjects in PCS.</u> Speculation: licensing of null subjects is related to the presence of (case) particles which identify (i) the grammatical function and (ii) the thematic role of the relevant argument (according to Lipski 2001, PCS has no grammatical function changing devices such as passive).
- <u>Distribution of embedded null-subjects in both MC and PCS</u>. In both languages, null subjects may not be coreferential with the subject of the higher clause. It is not clear whether (and how) this restriction can be related to the behavior of null subjects in Malagasy and Tagalog. In Tagalog, for example, an embedded null argument must be coreferential with the *ang/si* marked phrase of the higher clause (Kroeger 1993):

(48) a. Tinanong ni Derek <u>si Marvin</u>, bago umalis (siya).
    ask.TT OBJ Derek SUBJ Marvin, before leave.AT he
    'Derek asked Marvin$_i$, before [he$_i$] left.'
   b. Nagtanong <u>si Derek</u> kay Marvin, bago umalis (siya).
    ask.AT SUBJ Derek OBJ Marvin, before leave.AT he
    'Derek$_i$ asked Marvin, before [he$_i$] left.'

---

[17] Non-topic themes are interpreted as indefinite, while other non-topic arguments may be interpreted as definite or indefinite, cf. Schachter (1990: 940f.).

5. Conclusions

- New pro-drop properties may develop as a side-effect of the transition from pronouns to agreement markers (to preserve the argument structure of the verb).

- Agreement-related pro-drop does not develop in an across-the-board fashion, but is restricted to those contexts where pronouns turned into agreement markers.

- The grammaticalization process is governed by a blocking effect which requires new agreement markers to be more distinctive/specified than existing markers.

- When the development of new inflections is completed for all persons and numbers, this may give the impression that full pro-drop is linked to rich verbal agreement. Moreover, once full pro-drop has developed, future generations will continue to acquire a +pro-drop grammar due to the absence of overt subjects in the input.

- An alternative path toward pro-drop can be observed in Mauritian and Philippine Spanish Creole, which developed a form of discourse-oriented pro-drop due to intense language contact with Malagasy and Tagalog, respectively.

- Discourse-oriented pro-drop develops for all persons and numbers, in contrast to null subjects which arise due to the grammaticalization of agreement morphology.

References

Altmann, Hans (1984). "Das System der enklitischen Personalpronomina in einer mittelbairischen Mundart." *Zeitschrift für Dialektologie und Linguistik* 51.2, 191-211.

Alexiadou, Artemis & Gisbert Fanselow (2002). "On the correlation between morphology and syntax: The case of V-to-I." In J.-W. Zwart & W. Abraham (eds.), *Studies in Comparative Germanic Syntax*, 219-242. Amsterdam: John Benjamins.

Anderson, Stephen (1986). "Disjunctive ordering in inflectional morphology." *Natural Language and Linguistic Theory* 4, 1-31.

Anderson, Stephen (1992). *A-morphous morphology*. Cambridge: Cambridge University Press.

Ashby, William (1977). *Clitic Inflection in French: An Historical Perspective*. Amsterdam: Rodopi.

Auger, Julie (1993). "More evidence for verbal agreement marking in Colloquial French." In William J. Ashby, Marianne Mithun, Giorgio Perissinotto, and Eduardo Raposo (eds.) *Linguistic perspectives on the Romance languages*. Amsterdam: John Benjamins, 177-98.

Auger, Julie (1994a). *Pronominal clitics in Quebec Colloquial French: A morphological analysis.* PhD dissertation, University of Pennsylvania (IRCS report 94-29).

Auger, Julie (1994b). "On the nature of subject clitics in Picard." In M. L. Mazzola (ed.), *Issues and Theory in Romance Linguistics*, 159-179. Washington, DC: Georgetown University Press.

Auger, Julie (2003). "Pronominal clitics in Picard revisited." In R. Núñez-Cedeño, L. López, and R. Cameron (eds.), *A Romance Perspective on Language Knowledge and Use*, 3-20. Amsterdam: Benjamins.

Baker, Philip & Chris Corne (1986). "Universals, substrata and the Indian Ocean Creoles." In P. Muysken & N. Smith (eds.), *Substrata versus Universals in Creole Genesis*, 163-183. Amsterdam: Benjamins.

Bally, Charles (1965). *Linguistique générale et linguistique française* (4th edition). Bern.

Bayer, Josef (1984), "COMP in Bavarian syntax." *The Linguistic Review* 3, 209-274.

Benveniste, Emile (1971). *Problems in general linguistics*. Translated by Mary Elizabeth Meek. Coral Gables, Fa: University of Miami Press.

Braune, Wilhelm and Ingo Reiffenstein (2004). *Althochdeutsche Grammatik I*. (15th edition). Tübingen: Niemeyer.

Brinkmann, Henning (1931). *Sprachwandel und Sprachbewegung in althochdeutscher Zeit*. Jena.

Chomsky, Noam (1995). *The minimalist program*. Cambridge, Mass.: The MIT Press.

Cooreman, Ann, Barbara Fox, and Talmy Givón (1988). "The discourse definition of ergativity: A study in Chamorro and Tagalog texts." In R. McGinn (ed.), *Studies in Austronesian Linguistics*, 387-425. Athens, Ohio: Center for Southeast Asia Studies.

Cysouw, Michael (2003). *The Paradigmatic Structure of Person Marking*. Oxford: Oxford University Press.

DeGraff, Michel (1993). "Is Haitian Creole a pro-drop language?". In F. Byrne and J. Holm (eds.), *Atlantic Meets Pacific*, 71-90. Amsterdam: Benjamins.

Fonseca-Greber, Bonnie (2000). *The Change from Pronoun to Clitic to Prefix and the Rise of Null Subjects in Spoken Swiss French*. Doctoral dissertation, University of Arizona, Tucson.

Fonseca-Greber, Bonnie and Linda R. Waugh (2003). "The subject clitics of Conversational European French: Morphologization, grammatical change, semantic change, and change in progress. In R. Núñez-Cedeño, L. López, and R. Cameron (eds.), *A Romance Perspective on Language Knowledge and Use*, 99-117. Amsterdam: Benjamins.

Friedemann, Marc-Ariel (1997). *Sujets Syntaxiques: Positions, Inversions et* pro. Frankfurt: Peter Lang.

Fuß, Eric (2005). *The Rise of Agreement*. Amsterdam: Benjamins.

Gerlach, Birgit (2002). *Clitics between syntax and lexicon*. Amsterdam: John Benjamins.

Guiraud, Pierre (1968). *L'ancien français* (3rd edition). Paris.

Halle, Morris (1997). "Distributed Morphology: Impoverishment and Fission." In MITWPL, *PF: Papers at the interface*. Camridge, MA, 425-450.

Harley, Heidi & Elizabeth Ritter (2002). "Structuring the bundle: A universal morphosyntactic feature geometry." In: Horst J. Simon & Heike Wiese (eds.). *Pronouns – grammar and representation*. Amsterdam: John Benjamins, 23-39.

Harris, Martin (1978). *The Evolution of French Syntax. A Comparative Approach*. London: Longman.

Hopper, Paul (1979). "Aspect and foregrounding is discourse." In T. Givón (ed.), *Syntax and Semantics 12: Discourse and Syntax*, 213-241. New York: Academic Press.

Hyams, Nina, Dimitris Ntelitheos, and Cecile Manorohanta (2006). "Acquisition of the Malagasy Voicing System: Implications for the adult grammar". Ms., UCLA.

Jaeggli, O. & K. Safir. 1989. "The null subject parameter and parametric theory." In Jaeggli, O. & K. Safir (eds.), *The Null Subject Parameter*. Dordrecht: Kluwer, 1-44.

Kiparsky, Paul (1973). "'Elsewhere' in phonology." In Stephen Anderson & Paul Kiparsky (eds.). *A festschrift for Morris Halle*. New York: Holt, Rinehart and Winston, 93-106.

Kiparsky, Paul (1982). "Word-formation and the lexicon." In: F. Ingemann (ed.). *Proceedings of the 1982 Mid-America Linguistics Conference*. University of Kansas.

Kouwwenberg, Silvia and Pieter Muysken (1995). "Papiamento." In J. Arends, P. Muysken, and N. Smith (eds.), *Pidgeons and Creoles. An Introduction*, 205-218. Amsterdam: Benjamins.

Kroeger, Paul (1993). *Phrase Structure and Grammatical Relations in Tagalog*. Stanford: CSLI Publications.

Lambrecht, Knud (1981). *Topic, antitopic and verb-agreement in non-standard French*. Pragmatics and beyond vol. II: 8. Amsterdam: John Benjamins.

Lipski, John (2001). "Null subjects in (Romance-derived) creoles: Routes of evolution." Ms., University of New Mexico.

Lühr, Rosemarie (1984). "Reste der athematischen Konjugation in den germanischen Sprachen." In: Jürgen Untermann & Bela Brogyanyi (eds.), *Das Germanische und die Rekonstruktion der Indogermanischen Ursprache*. pp. 25-90.

McGinn, Richard (1988). "Government and case in Tagalog." In R. McGinn (ed.), *Studies in Austronesian Linguistics*, 275-293. Athens, Ohio: Center for Southeast Asia Studies.

Moulton, William (1944). "Scribe γ of the Old High German Tatian translation." *PMLA* 59:2, 307-334.

Muysken, Pieter (1981). "Creole tense/mood/aspect systems: The unmarked case." In P. Muysken (ed.), *Generative Studies on Creole Languages*, 181-199. Dordrecht: Foris.

Paul, Hermann (1879). "Beitraege zur Geschichte der Lautentwickelung und Formenassociation." *Beiträge zur Geschichte der deutschen Sprache und Literatur* 6, 538-560.

Pearson, Matthew (2005). "The Malagasy subject/topic as an A'-element." *Natural Language and Linguistic Theory* 23, 381-457.

Pfalz, Anton (1918) "Suffigierung der Personalpronomina im Donaubairischen." Republished in: Peter Wiesinger (1983), *Die Wiener dialektologische Schule. Grundsätzliche Studien aus 70 Jahren Forschung. Wiener Arbeiten zur germanischen Altertumskunde und Philologie* 23. 217-235.

Renzi, L. (1992). "I pronomi soggetto in due varietà substandard: fiorentino e français avancé." *Zeitschrift für Romanische Philologie* 108, 72-98.

Roberge, Yves (1990). *The Syntactic Recoverability of Null Arguments*. Kingston & Montreal: McGill-Queen's University Press.

Roberts, Ian (1993). *Verbs and Diachronic Syntax. A Comparative History of English and French*. Dordrecht: Kluwer.

Roberts, Ian (1999). "Verb movement and markedness." In M. DeGraff (ed.), *Language Creation and Language Change*: *Creolization, Diachrony and Development*, 287-329. Cambridge, Mass.: MIT Press.

Rohrbacher, Bernhard. 1999. *Morphology-driven Syntax: A theory of V-to-I Raising and Pro-drop*." Amsterdam: Benjamins.

Schachter, Paul (1976). "The Subject in the Philippine Languages: Topic, Actor, Actor-Topic or None of the Above." In C. Li (ed.), *Subject and Topic*, Academic Press, New York, 491-518.

Schachter, Paul (1990). "Tagalog." In B. Comrie (ed.), *The World's Major Languages*. Oxford: OUP, 936-958.

Sievers, Eduard (1961) (ed.). *Tatian*. Darmstadt: Wissenschaftliche Buchgesellschaft.

Sommer, Thomas (1994). *Flexionsmorphologie des Verbs im althochdeutschen Tatian*. München: Tuduv.

Vanelli, L. (1987). "I pronomi soggetto nei dialetti italiani settentrionali dal Medio Evo a oggi." *Medioevo Romanzo XII*.

Veenstra, Tonjes (1994). "The acquisition of functional categories: The creole way." In D. Adone and I. Plag (eds.), *Creolization and Language Change*, 99-117. Tübingen: Niemeyer.

Vikner, Sten (1997). "V-to-I movement and inflection for person in all tenses." In L. Haegeman (ed.), *The New Comparative Syntax*, 189-213. London: Longman.

Wartburg, Walther von (1970). *Einführung in die Problematik und Methodik der Sprachwissenschaft* (3rd edition). Tübingen: Niemeyer.

Weiß, Helmut (1998). *Die Syntax des Bairischen. Studien zur Grammatik einer natürlichen Sprache*. Tübingen: Niemeyer.

Weiß, Helmut (2002). "Agr-in Comp and partial pro-drop." Ms., Universität Regensburg.

Wiesinger, Peter (1989). *Die Flexionsmorphologie des Verbums im Bairischen*. Wien, Verlag der Österreichischen Akademie der Wissenschaften.

Zwart, Jan-Wouter (1993). "Clues from dialect syntax: Complementizer agreement." In: Werner Abraham & Josef Bayer (eds.). *Dialektsyntax. Linguistische Berichte Sonderheft* 5, 246-270.

Appendix I

- *-st*, *-ts* are inflections (and not clitics):
  - (i) *-st* / *-ts* are obligatorily present: they cannot be replaced by a tonic 2nd person subject pronoun; full pronouns are only acceptable if they co-occur with *-st* / *-ts*, cf. (42). This contrasts with the behavior of subject clitics, cf. (43).[18]

(49) a. *ob   du   noch Minga   kumm-st
          whether you.SG to   Munich   come.2SG
          'whether you come to Munich'
      b. *ob   εs/ihr   noch Minga   kumm-ts
          whether you.PL   to   Munich   come.2PL
          'whether you come to Munich'

(50) a. ob'e   (*I) noch Minga   kumm
          whether-CLIT.1SG   I   to   Munich   come.1SG
      b. ob   i noch Minga   kumm
          whether   I to   Munich   come.1SG
          'whether I come to Munich'

  - (ii) In inversion contexts, it is not possible to attach the alleged "clitics" *-st* / *-ts* to the inflected verb, that is, forms such as 2sg **kummst-st* or 2pl *kummts-ts* are not well-formed.

  - (iii) In contrast to the clitic pronouns, *-st* / *-ts* cannot be derived from the relevant full pronouns via phonological reduction processes; rather, they are identical with the verbal agreement suffixes:

	Full pronoun	Agreement on C	Verbal agreement
2sg	du	-st	-st
2pl	εs/ihr	-ts	-ts

Table 6: 2nd person tonic pronouns and agreement formatives in Bavarian

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[18] In a number of Lower Bavarian dialects, the 1pl clitic *-ma* has developed similar properties as the 2nd person forms.

Appendix II: The development of 2sg -*st*

- The first instances of 2sg -*st* appear in Franconian and spread later to other OHG varieties. The early OHG manuscripts written in the monastery of Fulda show this change in the process of its development, cf. the *Hildebrandslied* (preserved in an early 9th century copy of the original text dating from the late 8th century), the *Basel Recipes* (around 800), or the *Tatian* (translated around 830-840. This translation was then copied in the second half of the 9th century). Furthermore, it can be shown that the change affected first the present indicative: in the OHG texts of Otfrid von Weißenburg, for example, 2sg -*st* appears frequently with present indicative verb forms, while past tense and optative forms still exhibit the non-enlarged ending 2sg -*s*. See Brinkmann (1931), Moulton (1944), Sievers (1961), Sommer (1994) for details.
- Apparently, the development of 2sg /-st/ presents a problem for an account in terms of the BP. Consider the forms listed in Table 7:[19]

	Old paradigm	New paradigm
1sg	nim-u	nim-u
2sg	nim-is	nim-ist
3sg	nim-it	nim-it
1pl	nëm-emês (-êm, -ên)	nëm-emês (-êm, -ên)
2pl	nëm-êt	nëm-êt
3pl	nëm-ant	nëm-ant

Table 7: Agreement paradigms (pres. indic.) for *nëmen* 'take', early OHG

- Apparently, the change from 2sg /-s/ to /-st/ did not involve the creation of an inflectional formative that is more specific than its predecessor. Both items seem to realize the same set of morphosyntactic features, cf.

(51) a. [2, sg, pres.] ↔ /-s/
      b. [2, sg, pres.] ↔ /-st/

- Thus, it appears that the creation of the new ending /-st/ conflicts with the BP, since it apparently does not lead to a more specified form.
- Let's now consider the following tables:

	Present indicative	Present subjunctive
1sg	salbôm	salbo
2sg	salbôs	salbôs
3sg	salbôt	salbo
1pl	salbômês	salbôm
2pl	salbôt	salbôt
3pl	salbônt	salbôn

Table 8: Conjugation of *salbôn* 'anoint' (class 2, present tense), early OHG

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[19] Note that the initial vowel in formatives such as -*emês* is actually not part of the agreement suffix, but rather a so-called 'theme vowel' that originally served to derive verb stems from roots.

	Present indicative	Present subjunctive
1sg	habêm	habe
2sg	habês	habês
3sg	habêt	habe
1pl	habêmês	habêm
2pl	habêt	habêt
3pl	habênt	habên

Table 9: Conjugation of *habên* 'have' (class 3, present tense), early OHG

- In early OHG, the 2sg endings of many verbs were identical in the pres. indic. and the pres. subjunc., i.e., the 2sg forms were underspecified for verbal mood. In contrast, verbal mood was clearly distinguished in other person/number combinations (apart from 2pl). This is illustrated in Table 8 and Table 9 for the weak verbs *salbôn* 'anoint' (conjugation class 2) and the very frequent *habên* 'have' (conjugation class 3), which exhibit the characteristic inflections of their respective verb classes.[20]

- The development of the new formative /-st/ began in the present indicative (cf. Brinkmann 1931). This suggests that the development in question was licensed by the fact that the new ending was unambiguously specified for verbal mood (i.e., indicative) in contrast to the earlier formative /-s/:

(52) a. [2, sg, pres.] $\leftrightarrow$ /-s/
      b. [2, sg, pres., **indic.**] $\leftrightarrow$ /-st/

- Accordingly, the change leading to 2sg /-st/ does not represent a counterexample to the BP. Rather, it proceeded in accordance with the requirement that new inflectional formatives realize a greater subset of morphosyntactic features than their predecessors.

- In a later development, the new ending spread via analogical extension to all verb classes, tenses and verbal moods including the pres. subjunc. This subsequent development blurred the original motivation for the change in question and eliminated the mood distinction in the 2sg.

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[20] Strong verbs and the weak verbs of conjugation class 1 exhibit *-is* and *-ês* for 2sg present indicative and 2sg present subjunctive, respectively. Here, the difference in vowel quality was perhaps not salient enough to differentiate the forms. Furthermore, the difference was presumably further weakened by phonological erosion that affected non-stressed final syllables. Alternatively, one might assume that the change first affected the weak verbs of the conjugation classes 2 and 3 and spread later to other verb classes by analogy.