Clitics, V2, and the rise of agreement

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1. Introduction

It is a well-known observation that subject-verb agreement morphology develops from former (clitic) subject pronouns (Bopp 1816, Brugmann & Delbrück 1911, Meillet 1912, Givón 1971, 1976, Comrie 1980, Lehmann 1988, Hopper & Traugott 1993, Corbett 1995, Simpson & Wu 2002). Often the diachronic relation between agreement morphemes and (subject) pronouns can be easily detected from a superficial inspection of the shape of pronouns and agreement morphemes in the present day languages. This is illustrated with the following examples from Basque and Buryat (Mongolian):

	Pronouns		absolutive agreement 'go'	ergative agreement 'have'
	absolutive	ergative		
1sg	ni	ni-k	n-u	d-itu-t 'I have them'
2sg	su	su-k	s-us	d-itu-su 'you have them'
1pl	gu	gu-k	g-us	d-itu-gu 'we have them'
2pl	súe-k	súe-k	s-us-e	d-itu-sue 'you have them'

Table 1: Pronouns and absolutive/ergative agreement in Basque (Arregi 2001)

	nominative pronouns	verb ending
1sg	bi	-b
2sg	ši	-š
1pl	bide	-bdi
2pl	ta	-t

Table 2: Pronouns and subject agreement in Buryat (Comrie 1980)

- Current thinking about the diachronic process that leads to the reanalysis of pronouns as verbal agreement morphology is substantially influenced by the work of Talmy Givón, most notably Givón (1976), who claims that

  The reanalysis of resumptive pronouns in topic left dislocation structures provides the ***only*** diachronic path to subject-verb agreement.

- Due to an over-use, the formerly marked construction loses its stylistic force and is reanalyzed as the "neutral" syntax. As a result, the resumptive pronoun becomes a (prefixal) subject agreement marker on the verb, while the former topic is reinterpreted as the new subject:

(1) The wizard$_i$, he$_i$ lived in Africa $\rightarrow$ The wizard, he-lived in Africa
      TOPIC   PRON.   SUBJECT   AGR

- Well-known example: Colloquial French. Resumptive pronouns are obligatory for 1sg, 2sg, and 1pl (*on*):

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

- Note that sentences with apparent clitic doubling favor a basic, non-dislocated interpretation such as (3a) instead of (3b). Therefore, the "clitics" are probably better analyzed as prefixal agreement markers that developed from resumptive pronouns in topic left dislocation structures (for further arguments cf. Lambrecht 1981; Auger 1993, 1994; Gerlach 2002).

(3) a. 'I carry the table.'
   b. *'As for me, I carry the table.'

This paper sets out to challenge Givón's claim as it is not compatible with the following observations:

     (i)   the cross-linguistic prominence of suffixal verbal agreement morphology (the so-called "suffixing preference") (cf. Bybee et al. 1990)
     (ii)   the pioneering role of 1st and 2nd person in the development of person/number marking on verbs (cf. Mithun 1991, Ariel 2000)

We will then discuss a set of examples from Bavarian and Rhaeto-Romance dialects where the development of new verbal agreement markers crucially does not involve any form of topic left dislocation.

Basic claims:

     (i)   <u>Syntax</u>: the reanalysis of second position clitics as AGR-morphemes provides an alternative path to 'new' verbal agreement morphology in V2 languages.
     (ii)   <u>Morphology</u>: the categorial reanalysis in question is triggered by blocking effects (Kiparsky 1973, 1982; Anderson 1992; Halle 1997) that favor the use of more specified forms over less specified forms.

2. Problems for Givón's analysis

2.1 The suffixing preference

- Givón's account does not provide an explanation for the well-known observation (cf. e.g. Bybee, Pagliuca, & Perkins 1990) that there is a tendency across the world's languages to realize verbal agreement morphology as

suffixes (the so-called "suffixing preference"). In particular, there are many SVO languages (e.g. the Romance languages) that show <u>suffixal</u> instead of <u>prefixal</u> verbal agreement markers.

- On the basis of a database including 71 languages, Bybee et al. show that cross-linguistically, suffixal person/number markers outnumber relevant prefixes in languages that display preverbal subjects:

	Nonbound	Bound	All
Preverbal	13% (10)	87% (80)	35% (90)
Postverbal	0	100% (171)	65% (171)

Table 3: Person/number markers in SOV languages

	Nonbound	Bound	All
Preverbal	21% (27)	79% (103)	47% (130)
Postverbal	6% (10)	94% (137)	53% (146)

Table 4: Person/number markers in SVO languages

- This is somewhat surprising, since Givón's claim predicts that all languages with (pronominal) subjects preceding the verb should develop prefixal agreement morphology, see above.

2.2 The pioneering role of first and second person

- <u>Observation</u>: Across the world's languages, verbal agreement markers for 1st and 2nd person subjects are much more common than for 3rd person subjects (cf. Bybee 1985, Cysouw 2001)
- Bybee (1985): 54% of the languages (in her sample) which manifest agreement do not mark third person on the verb. Examples: Basque (Arregi 2001), Buryat (Comrie 1980), Turkish (no verbal agreement for 3sg, Kornfilt 1990), and many native languages of North America (Mithun 1991).
- Similar person restrictions can be observed in Colloquial French (Gerlach 2002), Northern Italian and Rhaeto-Romance dialects (cf. Haiman & Benincà 1992), and in the Bavarian data discussed in section 4.
- For those languages that exhibit a full paradigm of person markers, it can often be shown that 1st and 2nd person forms become verbal affixes before 3rd person forms are bound to the verb (cf. Mithun 1991 on Algonquian, Gerlach 2002 on Colloquial French):

(4)   *Sequence of the development of verbal person marking*
       1st and 2nd person markers become bound before third person markers.

- Importantly, these observations are hardly compatible with the claim that topic left dislocation provides the only context for the rise of verbal agreement morphology, given the fact that in most languages left dislocation of 1st and 2nd persons is extremely awkward, if grammatical at all, cf.

(5)   ??I, I will read the book on clitics.

- Moreover, Givón's account predicts that new agreement markers should develop initially for 3rd person, given that the vast majority of left-dislocated elements are 3rd persons. This prediction is not borne out by the facts, cf. (4).

2.3 Summary

- Topic left dislocation may provide a syntactic context for the development of agreement morphology in some languages such as colloquial French, see above.
- However, the strong claim that topic left dislocation provides the *only* syntactic context for the development of subject-verb agreement raises serious problems.
- Nevertheless, it seems to be fairly clear that (clitic) pronouns are a major (and perhaps ultimately the only) lexical source for verbal agreement morphology (see Chafe 1977, Haas 1977 for possible exceptions).

3. From second position clitics to AGR, part I: Rhaeto-Romance

3.1 The data

- In many Rhaeto-Romance dialects, we can observe subject clitic doubling, the properties of which can be taken to indicate that the clitic elements in these contexts represent an early stage of a grammaticalization process leading to new (verbal) agreement markers.
- Similar facts have been reported for Colloquial French (see above), and quite a number of Northern Italian dialects, where subject clitic doubling is often obligatory and therefore perhaps better analyzed as some form of agreement (cf. Rizzi 1986, Suñer 1992, Poletto 1999, Gerlach 2002).
- Interestingly, it seems that the grammaticalization process in question exclusively affects subject enclitics in inverted position, similar to the Bavarian data discussed below. This suggests that the V2 property plays an important role in the reanalysis of second position clitics (cf. Haiman 1991 for a similar claim).
- Various Swiss Rhaeto-Romance dialects (Surmeiran, Sutselvan, Puter, and Vallader) spoken in Graubünden exhibit two series of pronouns, one set of full pronouns that may bear stress and a set of atonic reduced pronouns (cf. Linder 1987).
- With the exception of Surselvan,[1] these dialects show subject clitic doubling in inverted contexts i.e., both enclitic C-oriented pronoun and full pronoun/DP subject follow the verb/C-position. This construction is optional in Puter and Vallader, occurs very frequently in Surmeiran and seems to be obligatory in Sutselvan (cf. Linder 1987:146). The following discussion focuses on Sutselvan.

(6) *1st person singular*
     Egn da quels lev-**i**   ear **jou**.
     one of those wanted-CLIT.1SG also I
     'I also wanted one of those.'
     (Sutselvan; Linder 1987:148)

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[1] Due to the fact that Surselvan shows no series of atonic enclitics, cf. Linder (1987:146).

(7) *1st person plural*
Ascheia vain-**sa**   **nus** arviart   igl   mulegn ad [...]
so   have-CLIT.1PL   we   unlocked the   mill   and
'So we have unlocked the mill and [...]'
(Sutselvan, Linder 1987:149)

- Examples with 2nd person subjects are not attested, since there are no enclitic pronouns for 2nd person.

(8) *3rd person singular masculine*
Igl fetschi preaschas, â-**l**   **el** getg.
it is urgent   has-CLIT.3SG   he   said
'He said it's urgent.'
(Sutselvan; Linder 1987:153)

(9) *3rd person singular feminine*
Cunquegl c'igl eara november, vev-**la**   **la scola**   antschiat.
since   it   was November had-CLIT.3SG the school   begun
'Since it was November, the school had begun.'
(Sutselvan; Linder 1987:155)

(10) *3rd person plural*
Natiral   vev-**in**   **las matàns** radetg   sei mailenders.
of course had-CLIT.3PL the girls   brought up Milans
'Of course, the girls had brought up some Milans [pastries].'
(Sutselvan; Linder 1987:161)

- A closer look at (9) and (10) reveals that agreement is solely marked by the clitic that attaches to the finite auxiliary (3sg.fem *vev-la* vs. 3pl *vev-in*).
- In all dialects but Sutselvan, subject clitic doubling is possible only with definite nominals. In Sutselvan, it has spread to non-definite nominals as well:

(11) Mo igl lungatg da la   dunnetta   san-**i**   **nigns**.
but the language of the little-woman knows-CLIT.3SG.NEUT.   nobody
'But nobody knows the language of the little woman.'
(Sutselvan; Linder 1987:162)

- <u>Further argument in favor of affixal status</u>: the "clitics" are part of a morpho-phonological rule that ensures that the penultimate syllable bears stress ("penultimate stress target", Haiman 1971, Linder 1987, Haiman & Benincà 1992). In the following example, attachment of the "clitic" forces elision of the original verb ending (3sg):

(12) ella chanta   →   chant'la
she sing.3SG   sing-3SG

- The obligatory status of clitic doubling, the fact that it is not restricted to cases with specific/definite full subjects, and the fact that the "clitics" are subject to morpho-phonological rules that determine the shape of inflected verbs show
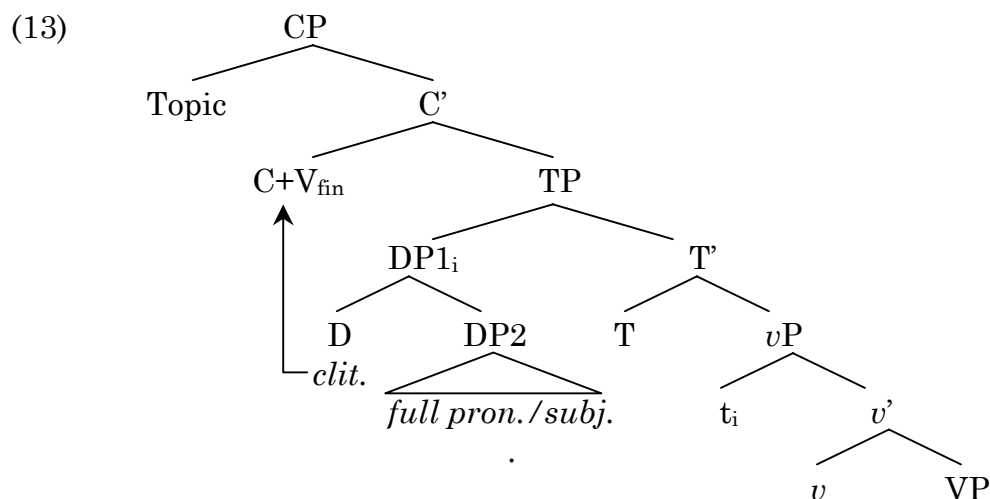
rather conclusively that the clitic has developed into a form of agreement in Sutselvan.

3.2 The analysis

<u>Basic Idea</u>: new forms of agreement may arise as a result of a (stylistic) strategy where a full DP/tonic pronoun is added to reinforce the phonologically defective clitic, leading to clitic doubling. In the course of time, the originally reinforcing element is reanalyzed as the "real" argument, whereas the former clitic is reinterpreted as an agreement marker.
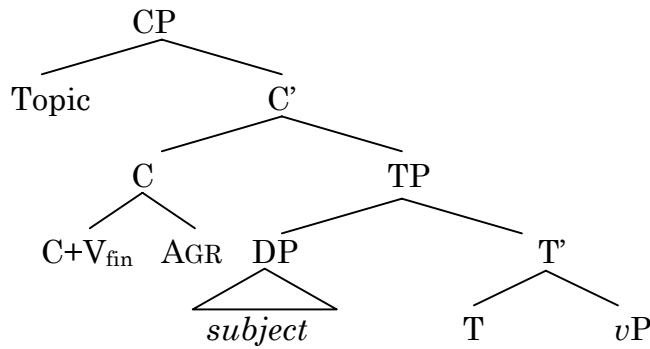
Assumptions
- <u>(subject) clitic</u>: head of a DP, which is base-generated in Spec$v$P and subsequently moves to SpecTP (EPP); from there, the clitic adjoins to the C-head (either at PF or in the syntax).
- <u>Clitic doubling</u>: In the RR dialects with optional clitic doubling, full subjects are added for reasons of emphasis, as a reinforcement for the clitic which cannot bear stress. This can be modeled by a structure where the clitic D-head selects a full DP which receives focal stress. In its base position Spec$v$P, this 'big DP' receives the subject theta-role which can be assumed to percolate to both DPs contained in the big DP. Subsequently, the big DP moves to SpecTP for case/EPP, from where the clitic right-adjoins to C^0 (for the 'big DP' proposal cf. Uriagereka 1995; Belletti 1999; Kayne 2000, 2001; Grewendorf 2002)
- Historical stage of Sutselvan (optional clitic doubling, still the case in the other Swiss RR dialects):

(13)

```
                        CP
                   ┌─────┴─────┐
                Topic          C'
                          ┌─────┴─────┐
                       C+V_fin        TP
                          ↑      ┌─────┴─────┐
                          |    DP1_i         T'
                          |  ┌───┴───┐    ┌───┴───┐
                          | D      DP2   T       vP
                          └ clit.  ┌─┴─┐       ┌──┴──┐
                             full pron./subj.  t_i    v'
                                    .                ┌─┴─┐
                                                     v    VP
```
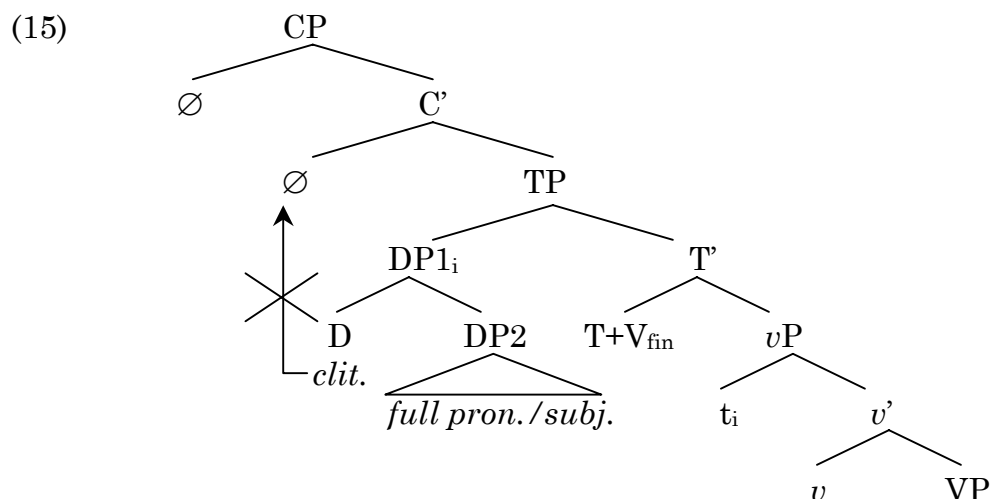
- Due to an over-use, this strategy might lose its stylistic force, which at some point might lead the learners to reanalyze the clitic as an Agr-morpheme on C, resulting in <u>obligatory</u> "clitic doubling":
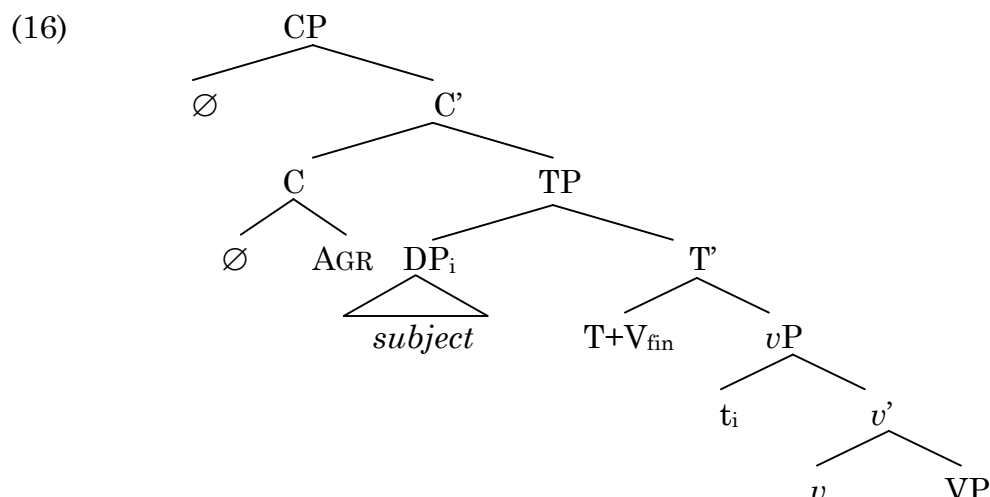
(14)

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                    CP
            ┌────────┴────────┐
         Topic               C'
                        ┌─────┴─────┐
                        C           TP
                   ┌────┴───┐   ┌────┴────┐
               C+Vfin  AGR  DP           T'
                        ┌───┴───┐    ┌────┴────┐
                         subject      T        vP
```

The tree (14) shows: CP branching into Topic and C'; C' branching into C and TP; C branching into C+V_{fin} and AGR DP; DP dominating *subject*; TP branching into DP and T'; T' branching into T and *v*P.

- This process leads to the presence of an agreement morpheme attached to C^0 (**AGR-on-C**). Following Halle & Marantz (1993), Mitchell (1994), Chomsky (1995), and Julien (2002), we assume that AGR does not head its own functional projection, but rather parasitically attaches to other functional heads.
- AGR-on-C is a cross-linguistically marked configuration the historical development of which depends on another syntactic property, V2.
- Let's assume that the presence of the finite verb is a necessary precondition for a reanalysis that leads to the existence of (verbal) agreement features in a given functional head. Intuitively, the presence of the finite verb can be said to signal that a certain functional head is capable of hosting an AGR-morpheme.

- Restrictions on doubling in Sutselvan (Linder 1987, Haiman & Benincà 1992):
  - (i) confined to main clauses
  - (ii) confined to inversion contexts, i.e. the full subject may not occur in clause-initial position, *Full subject DP – V – subject clitic* (i.e. full subjects and clitic pronouns are in complementary distribution in subject-initial clauses).[2]

- ad (ii): asymmetry analysis of the RR V2-dialects in question (Travis 1984, Zwart 1993a). If subject-initial main clauses are merely TPs, (i) historically, AGR-on-C could not develop in subject-initial clauses, since there was no clitic doubling in these contexts (there is no lexical material in C where the enclitic could attach to).
- Structure of subject-initial clauses in historical stage of Sutselvan/present stage of the other dialects:

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[2] Note that this restriction also holds for the dialects where doubling is merely optional.

(15)

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                        CP
              ┌──────────┴──────────┐
              ∅                    C'
                          ┌─────────┴─────────┐
                          ∅                  TP
                                    ┌─────────┴─────────┐
                                  DP1ᵢ                 T'
                          ┌─────────┴─────────┐   ┌─────┴─────┐
                          D                 DP2  T+V_fin     vP
                        clit.           full pron./subj.  ┌────┴────┐
                                                         tᵢ        v'
                                                              ┌─────┴─────┐
                                                              v          VP
```

- Furthermore, even after the general development of AGR-on-C in Sutselvan, "clitic doubling" is not possible in subject-initial clauses, since there is no lexical host for the AGR-suffix in C:

(16)

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                    CP
          ┌──────────┴──────────┐
          ∅                    C'
                      ┌─────────┴─────────┐
                      C                  TP
                ┌─────┴─────┐   ┌─────────┴─────────┐
                ∅   AGR    DPᵢ                     T'
                          subject            ┌─────┴─────┐
                                          T+V_fin        vP
                                                   ┌──────┴──────┐
                                                   tᵢ           v'
                                                         ┌──────┴──────┐
                                                         v            VP
```

3.3 Summary

- In Sutselvan, formerly optional clitic doubling gave rise to the development of AGR-on-C. Crucially, it did not involve topic left dislocation, contra Givón (1976).
- The grammaticalization of enclitics as AGR-on-C depends on the V2 property. This analysis is further supported by the observation that this process did not take place in subject-initial clauses, where the finite verb is located in T^0.
- Nevertheless, the question arises why Sutelvan does not show obligatory clitic doubling in embedded clauses (Linder does not discuss this possibility; Haiman & Benincà 1992:192 state explicitly that clitic doubling is restricted to inversion contexts in the Swiss Rhaeto-Romance varieties). Apparently, Sutselvan represents an early stage of the grammaticalization process in question, where AGR-on-C is still confined to V2 contexts.

4. From second position clitics to AGR, part II: Bavarian

- In all varieties of Bavarian, former "Wackernagel" enclitics were reanalyzed as agreement markers, giving rise to new verbal agreement suffixes for 2nd person and the well-known property of complementizer agreement (cf. Bayer 1984):

	'Old' inherited ending	'New' enlarged ending
2sg	-s	-s+t
2pl	-t	-t+s

Table 5: Old and new agreement suffixes for 2nd person in Bavarian

- <u>Complementizer agreement in Bavarian</u>: special role of 2nd person subject "enclitics": (i) obligatory in all contexts; (ii) can be doubled by full pronouns for emphatic reasons; (iii) identical with the verbal agreement suffixes (for further discussion cf. Bayer 1984, Altmann 1984, Weiß 1996, among others).[3]

(17) a. *ob   du   noch Minga   kumm-st
          whether you.SG to   Munich come.2SG
          'whether you come to Munich'
      b. ob'**st**   (DU)   noch Minga   kumm-**st**
          whether-CLIT.2SG you.SG to   Munich come.2SG
          'whether you come to Munich'

(18) a. *ob   ees/ihr noch Minga   kumm-ts
          whether you.PL   to   Munich come.2PL
          'whether you come to Munich'
      b. ob'**ts**   EES/IHR noch Minga   kumm-**ts**
          whether-CLIT.2PL you.PL   to   Munich come.2PL
          'whether you come to Munich'

- Following Bayer (1984), we analyze the 2nd person "enclitics" as agreement morphemes that are attached to C^0: **AGR-on-C** (cf. Haegeman 1992 for West Flemish; Zwart 1993b; Shlonsky 1994; Weiß 1996, 2002; Poletto 1999 for Northern Italian dialects).
- The following data suggest that the historical development of the new 2nd person agreement morphemes affected first elements in C and spread later to other verbal positions:
- The ending 2sg *-st* already began to develop in early OHG (9th century) and is found in most modern German varieties.

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[3] The other subject enclitics behave differently – (i) they are not obligatory; (ii) doubling leads to strong ungrammaticality (exemplified here only for 1sg; 3sg, 3pl behave similarly. 1pl has a special status which is discussed in the next section):
(i) a. ob'e   (*I) noch Minga   kumm
         whether-CLIT.1SG I   to   Munich come.1SG
         'whether I come to Munich'
     b. ob   i   noch Minga   kumm
         whether I   to   Munich come.1SG
         'whether you come to Munich'

- It was initially limited to verbs in V2/V1 contexts, cf. the following example from the OHG Tatian:

(19) Ih forahta, uuanta thu grim man bist[4], nimi**st**
    I feared since you grim man are take-2SG
    thaz thu ni sázto**s** inti arno**st** thaz thu ni sáto**s**.
    that you NEG plant-2SG and earn-2SG that you not sow-2SG
    'Since you are a grim man, I feared that you take what you haven't planted and earn what you haven't sowed.'
    (Tatian ζ 151,7; Sievers 1961:228)

- 2pl *-ts* (*-t+-s* < *ees*, originally a dual which became the form for 2pl) is a later (13th century) development confined to Bavarian.
- Again, it can be shown that the new ending first appeared on elements in C.
- Pfalz (1918:232) notes that in some northern Bavarian dialects (spoken in Lauterbach and Sangerberg), the new ending for 2pl *-ts* still attaches only to conjunctions and verbs in C, but not to verbs in clause-final position:

(20) wei-**ts** iwə t'pruk khumt-Ø sea-**ts** s'wiətshaus
    when-2PL over the-bridge come see-2PL the-tavern
    'When you cross the bridge, you see the tavern.'

- These facts suggest that the new verbal agreement morphology developed via a transitional stage where the new ending was confined to the C-position. This claim is supported by data from Lower Bavarian.

4.1 Lower Bavarian

- 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 1996, 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 for emphatic reasons:

(21) 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)

(22) a. MIA fom-**ma** hoam.
          we drive-1PL home
      'We go home.'
      (Weiß 2002:9)

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[4] The form *bist* 'be-2sg' resulted from an independent and earlier development, cf. Lühr (1984).

    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 1996, 2002).
- <u>Further argument in favor of the inflectional status of *-ma*</u>: in bisyllabic verbs such as *laffa* 'to run', *gengan* 'to go', *soucha(n)* 'to seek' etc., one can see that the original agreement ending is replaced by *-ma* in V2 contexts.

(23)   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.'

- No such replacement is possible in sentence-final position:

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

- In other words, the dialects in question show a complementary distribution of the new suffix *-ma* and the old ending for 1pl, *-an* (cf. Kollmer 1987: I, 357):

   (i) *-ma* appears on verbs in V2 clauses (main & embedded), cf. (23)
   (ii) verbs in sentence-final position maintain the old ending *-an*, cf. (24)

- However, in a subset of these Lower Bavarian dialects,[5] *-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.

(25)   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)

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[5] 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.
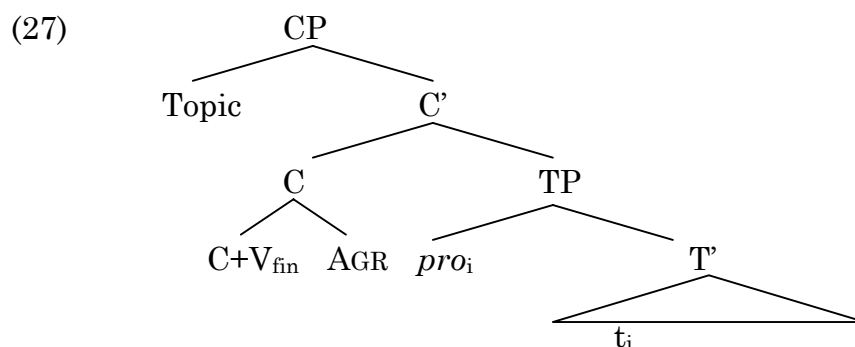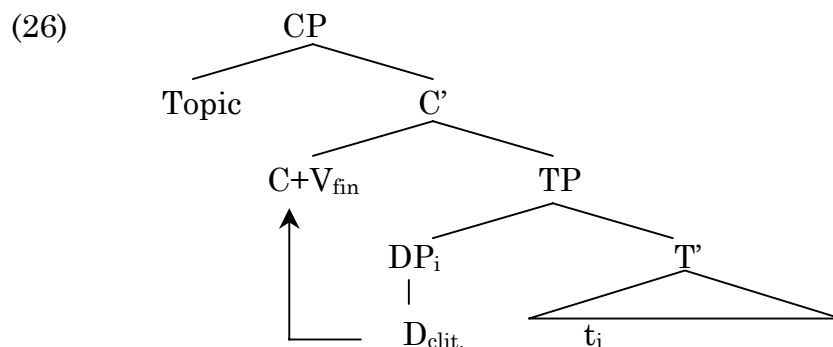
4.2 Conclusions so far

- In (23) and (25), *-ma* replaces the original agreement ending; this shows that it is already part of the verbal morphology.
- The fact that *-ma* is obligatory on C (verbs and complementizers) but still impossible on most clause-final verbs suggests that the new agreement morpheme developed first in C and may spread to other verbal positions in a subsequent development.
- Crucially, this development did not depend in any form on topic left dislocation. Rather, it seems that subject enclitics were "directly" reanalyzed as AGR-on-C in V2 contexts.

4.3 Analysis

4.3.1 Syntactic aspects

- Observation: If a language exhibits subject clitic doubling, it is generally possible for all instances where a clitic form is available (restrictions concern only the optional vs. obligatory status of clitic doubling, cf. Gerlach 2002).
- Bavarian: "doubling" is restricted to 2nd person (1pl), although a full paradigm of enclitics is available. This implies that AGR-on-C could not develop from (general) clitic doubling, in contrast to Sutselvan.
- Claim: structures such as (26) were reanalyzed as (27), where the reanalysis of the former clitic as an agreement morpheme forced the learner to assume the presence of *pro* in the subject position, giving rise to limited *pro*-drop (cf. Bayer 1984 for *pro*-drop in Bavarian; Weiß 2002 for a related proposal):

(26)

$$
\begin{array}{c}
\text{CP} \\
\swarrow \qquad \searrow \\
\text{Topic} \qquad \text{C'} \\
\swarrow \quad \searrow \\
\text{C+V}_{\text{fin}} \qquad \text{TP} \\
\swarrow \quad \searrow \\
\text{DP}_i \qquad \text{T'} \\
| \qquad \triangle \\
\text{D}_{\text{clit.}} \qquad t_i
\end{array}
$$

(27)

$$
\begin{array}{c}
\text{CP} \\
\swarrow \qquad \searrow \\
\text{Topic} \qquad \text{C'} \\
\swarrow \quad \searrow \\
\text{C} \qquad \text{TP} \\
\swarrow \searrow \qquad \swarrow \searrow \\
\text{C+V}_{\text{fin}} \ \text{AGR} \quad pro_i \qquad \text{T'} \\
\triangle \\
t_i
\end{array}
$$

- Again, we assume that the reanalysis of the enclitic as AGR-on-C depended on the presence of the finite verb in C.
- The reanalysis is 'completed' when the learner reinterprets the AGR-morpheme on C as an integrated part of the verbal morphology (say, 'AGR-on-V/T' instead of 'AGR-on-C'). After that, the new inflection can occur in other verbal positions as well.
- The reanalysis as AGR-on-C is determined by a set of morphological factors which are discussed in the following section.

4.3.2 Morphological aspects

In this section, we concentrate on the developments that are confined to Bavarian, i.e. 2pl *-ts* and 1pl *-ma* (see appendix I for the diachronic development of 2sg *-st*).

2pl -ts, 1pl -ma
- Observation: The development of the new endings 2pl *-ts*, 1pl *-ma* resolved existing homophony in the verbal agreement paradigm.
- The development of 2pl *-ts* (< clit. *-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 6: 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 (initially confined to C, see above):

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

Table 7: Verbal agreement paradigms (pres. indic.), late 18th century Bavarian

- Basic idea: the reanalysis of clitics as agreement markers is triggered if the change leads to the elimination of syncretism in a defective agreement

paradigm. This can be seen as the outcome of blocking effects that operate during language acquisition and block the acquisition of a less specified form if a more specific form is attested in the Primary Language Data (for discussion of blocking effects cf. Kiparsky 1973, 1982; Aronoff 1976; Anderson 1986, 1992; Kroch 1994; Sauerland 1996; Halle 1997).

- In a Late Insertion model such as Distributed Morphology, this idea can be formalized as in (28):

(28)   *Blocking Principle*
       If several appropriate PF-realizations of a given terminal morpheme are attested in the Primary Language Data, the form matching the greatest number of the morpho-syntactic features included in the terminal morpheme must be chosen for storage in the lexicon.

- It can be shown that the new agreement suffixes 2pl *-ts*, 1pl *-ma* are more specified than their respective predecessors (see appendix II for the complete sets of insertion rules):
- 13th century Bavarian: /-t/ occurs in 3sg and 2pl, i.e. it is underspecified for [person] and [number]. In other words, it is the elsewhere case that is inserted as the default agreement ending:

(29)   elsewhere   →   /-t/

- The introduction of 2pl /-ts/ was licensed by the Blocking Principle since the new form is specified for [person] and [number], resolving the existing homophony between 3sg and 2pl:

(30)   [2, pl]   →   /-ts/

- 18th century Bavarian: among the plural forms, /-an/ is simply the 'elsewhere' case, which is underspecified for [person], cf. the following insertion rules:

(31)   [2, pl]   →   /-ts/
       [pl]   →   /-an/

- The potential 'new' form for 1pl (*-ma*) is more specified than the existing agreement ending, since it is in addition specified for [person].This state of affairs facilitates the grammaticalization process in question, cf.

(32)   [1, pl]   →   /-ma/
       [2, pl]   →   /-ts/
       [pl]   →   /-an/

The pioneering role of 1st and 2nd person

- Gerlach (2002) shows that similar facts can be observed in Piattino (dialect of Lombardy) and Colloquial French where subject clitic doubling is obligatory only for the verb forms that lack a distinctive agreement ending, cf.

	CLITIC+VERB	PHONETIC FORM
1sg	**je** porte	[pɔrt]
2sg	**tu** portes	[pɔrt]
3sg	(il/elle) porte	[pɔrt]
1pl	**on** porte	[pɔrt]
2pl	(vous) port**ez**	[pɔr'te:]
3pl	(ils/elles) portent	[pɔrt]

Table 8: Subject agreement and clitics in Colloquial French

- Note that subject clitics are obligatory only for underspecified 1st/2nd person verb forms, whereas the clitics for 3rd person are still merely optional.
- <u>Claim:</u> The pioneering role of 1st and 2nd person in the development of agreement morphology (cf. table 8, and section 2.2) can be attributed to the workings of the Blocking Principle as well.
- The special role of 1st and 2nd person in grammaticalization processes inspired numerous functionalist explanations, which mostly rely on the fact that speaker and hearer are the most salient participants in a speech event (cf. Mithun 1991, Ariel 2000), i.e. they exhibit a high degree of 'givenness', 'discourse accessibility/prominence' etc.
- In contrast, a purely formal explanation is available if we assume that 3rd person is in fact no person at all, but should rather be analyzed as the absence of (positive values for) 1st and 2nd person (cf. Benveniste 1971, Bayer 1984, Halle 1997, Grimshaw 1997, Poletto 1999, Ariel 2000, Cysouw 2001, Harley & Ritter 2002).
- It is therefore conceivable that the Blocking Principle is responsible for the fact that cross-linguistically, 3rd person agreement forms arise later (if at all) than forms for 1st and 2nd person: due to the inherent underspecification of "3rd person" w.r.t. [person], the grammaticalization of new 3rd person forms is less likely to be triggered if UG favors new forms that are more specified than already existing ones.

5. Conclusions

- Reanalysis of resumptive pronouns in topic left dislocation structures may be a diachronic path leading to verbal agreement, but crucially, contra Givón (1976), it's not the only path.
- Another possible source are enclitic pronouns that attach to C^0 in V2 languages and are reanalyzed as agreement morphemes (AGR-on-C) which are first confined to C and eventually spread to other verbal positions.
- It was argued that this reanalysis is licensed in at least two different syntactic environments: In Rhaeto-Romance (Sutselvan), new agreement markers developed from subject enclitics in clitic doubling configurations, where the formerly optionally added full DP is reanalyzed as the 'real' subject of the sentence.
- In contrast, in Bavarian, the reanalysis of subject enclitics led to the development of limited *pro*-drop. After this change, new doubling structures

could emerge where a (stressed) full pronoun is inserted instead of *pro*. In other words, doubling structures were not the source, but rather the outcome of the development of AGR-on-C in Bavarian. Note that this analysis makes available a new explanation for the otherwise mysterious restriction of complementizer agreement to 2nd person/1pl (cf. Bayer 1984, Weiß 1996 for discussion).

- Significantly, the grammaticalization process in question affected only defective/underspecified slots of the verbal agreement paradigm. This observation is accounted for by the assumption that the acquisition of inflectional morphology is guided by blocking effects which prefer 'new' verbal agreement morphology to be more specific than existing morphology.
- Moreover, the Blocking Principle can account for the pioneering role of 1st and 2nd person in the development of subject-verb agreement if we assume that 3rd person forms are underspecified for [person].

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Appendix I: The diachrony of 2sg *-st*

- <u>Observation</u>: prior to the reanalysis as AGR-on-C, the 2sg enclitic *-st* was homophonous with the relevant verbal agreement suffix.
- Altmann (1984), Nübling (1992): in Bavarian, the fusion of the existing verbal agreement ending with the enclitic 2sg *-t(u)* affected not only the shape of the agreement ending, but also the enclitic itself, which was mis-construed as *-st*:

(33)   OHG gilaubist(u) 'believe-2SG-clit.2SG'

Agr: *-st*   clitic: *-st*
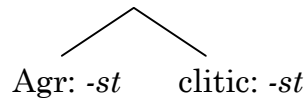
- This development led to a situation where the learner had not enough evidence that the enclitic was a pronominal element since (i) it was not synchronically derivable from the full pronoun form *thu/dhu*, and (ii) it was homophonous to the relevant verbal agreement ending.
- This gave rise to a general reanalysis of the former 2sg enclitic as an agreement morpheme which is attached to the functional C node.

Appendix II: Insertion rules for Bavarian

Insertion rules for the verbal agreement **paradigm***: 13th century Bavarian*

- Prior to the development of 2pl *-ts*:

(34) [1, +pl]   →   /-an/
      [1, -pl]   →   ∅
      [2, -pl]   →   /-st/
      [pl]   →   /-ant/
      elsewhere   →   /-t/

- After the development of 2pl *-ts*:

(35) [1, +pl]   →   /-an/
      [2, +pl]   →   /-ts/
      [1, -pl]   →   ∅
      [2, -pl]   →   /-st/
      [pl]   →   /-ant/
      elsewhere   →   /-t/

Insertion rules for the verbal agreement **paradigm***: 18th century Bavarian*

- Prior to the development of 1pl *-ma*:

(36) [2, +pl]   →   /-ts/
      [1, -pl]   →   ∅
      [2, -pl]   →   /-st/
      [pl]   →   /-an/
      elsewhere   →   /-t/

- After the development of 1pl *-ma*:

(37) [1, +pl]   →   /-ma/
      [2, +pl]   →   /-ts/
      [1, -pl]   →   ∅
      [2, -pl]   →   /-st/
      [pl]   →   /-an/
      elsewhere   →   /-t/