Complementizer agreement in Bavarian: feature inheritance or feature insertion?

Eric Fuß, IDS Mannheim
Frankfurt, 29.06.2012

1. Introduction

- <u>Well-known fact</u>: in many non-standard varieties of Germanic, we can observe instances of multiple agreement where the subject's ɸ-features ([person], [number] etc.) are reflected not only on the verb, but also on C^0 (or some head of a split-C structure):[1]

(1) a. da-n=k   ik werk-en   *West Flemish*
       that-1SG=CLIT.1SG   I   work-1SG
       'that I work'
   b. da-t=ze   zie   werk-t
       that-3SG=CLIT.3SG.FEM she work-3SG
       'that she works'

(2) dat-st   do jûn   kom-st   *Frisian*
    that-2SG you tonight come-2SG
    'that you come tonight'

(3) a. ob-st   du noch Minga   kumm-st   *Bavarian*
       whether-2SG you to   Munich come-2SG
       '...whether you come to Munich'
   b. ob-ts   ihr noch Minga   kumm-ts
       whether-2PL you to   Munich come-2PL
       '...whether you (pl) come to Munich'
   c. wem-ma mia noch Minga   kumm-an
       when-1PL we   to   Munich come-1PL
       '...when we come to Munich'

- Questions:
  - (i) How are the relevant inflectional features structurally represented?
  - (ii) How are these features licensed/evaluated?

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[1] Cf. e.g. Bayer (1984), Altmann (1984), Weiß (1998, 2005) on Bavarian; Bennis & Haegeman (1984), Haegeman (1990), (1992), Shlonsky (1994), de Vogelaer et al. (2002), Haegeman & van Koppen (2011) on (West) Flemish; de Haan & Weerman (1986), Hoekstra & Marácz (1989) on Frisian; Zwart (1993), (1997) on dialects of the eastern and southern Netherlands; van Koppen (2005) for an in-depth study of C-AGR in various dialects of Dutch; Hoekstra & Smits (1999) for an overview. Note that only some dialects such as West Flemish exhibit a full paradigm; in other varieties complementizer agreement is usually restricted to certain contexts (Bavarian: 2nd person (+ 1pl in some varieties), eastern dialects of Dutch: 1pl, southern dialects: 1pl and 3pl, Frisian: 2sg (+ 2pl in some varieties).

- Traditional syntactic anaylsis: C-AGR is a reflex of T(INFL/AGR)-to-C movement (Hoekstra & Marácz 1989, Zwart 1993, 1997).[2]

- Recent minimalist reinterpretation of the C-T dependency: T does not enter the derivation with an own set of inflectional features; rather, T *inherits* its feature content (ϕ- and Tense-features) from the phase head C before agreement with the subject is established (Chomsky 2004, 2008 and subsequent work).

- Chomsky (2008) considers the overt expression of inflectional features on C (i.e., C-AGR) as further support for his proposal that the host of ϕ-features is actually C.[3]

- Problem: Richards (2007) argues convincingly that feature inheritance is triggered by the need to eliminate uninterpretable features (uF) from the syntactic computation (via Transfer/Spell-out) as soon as they have been valued:

    "By the PIC [Phase Impenetrability Condition], phase heads are not spelled out at the same time as their complements, and therefore uF on the phase head is not transferred until the phase following the phase in which it is valued, denying Value-Transfer simultaneity [...]. Consequently, the derivation is doomed if valued uF remains on the phase head. The only way to overcome this fatal flaw and ensure that uF on C/v* is indeed valued as part of Transfer is for C/v*'s uF to be transmitted onto the category that *is* transferred, namely, the complement (T/V)." (Richards 2007: 569)

- If we accept Richards' argument that C must pass all its uFs down to T, then the question arises of how we can account for C-AGR, i.e., the apparent overt Spell-out of ϕ-features on C.

- Basic claims:
  (i) complementizer agreement is established in the post-syntactic components of grammar/the mapping to PF (see Ackema & Neeleman 2004, Fuß 2005, 2008).
  (ii) complementizer agreement does not involve a dependency between C and the subject, but rather between C and the finite verb.
  (iii) complementizer agreement results from the post-syntactic insertion of valued agreement features; this operation is parasitic on the presence of another set of valued agreement features (in T) valued in the syntax.
  (iv) Richards' (2007) proposal concerning the motivation for feature inheritance can be maintained.

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[2] Alternative (syntactic) analyses assume the presence of a separate AgrP in the C-domain, the content of which is licensed via spec-head agreement (Roberts 1994, Shlonsky 1994), or the presence of a separate/additional phi-set on C^0 which initiates an AGREE operation accessing the subject in SpecTP (Carstens 2003, van Koppen 2005, Haegeman & van Koppen 2011).

[3] To account for the presence multiple inflection (on C and the finite verb), Chomsky (2012), adopting proposals by Ouali (2006, 2008), assumes that C may keep a copy of the phi-set transferred to T.

2. In favor of a post-syntactic analysis

2.1 Adjacency effects

- <u>Observation</u>: in dialects where the shape of complementizer agreement differs from the shape of verbal agreement, the former replaces the latter in inversion contexts, cf. the following examples from the Dutch dialect Hellendoorn (Ackema & Neeleman 2003, 2004):

(4)   datt-e   wiej noar't   park loop-t
      that-1PL we   to-the   park walk-1PL
      'that we are walking to the park'

(5)   a. Wiej   loop-t   noar't park.
         we   walk-1PL to-the park
         'We are walking to the park.'
      b. Volgens   miej lop-e   wiej noar't park.
         according-to me   walk-1PL we   to-the park
         'According to me we are walking to the park.'

- The presence of an (scrambled) adjunct which intervenes between C^0 and the subject blocks the availability of complementizer agreement. This restriction holds for both main and embedded clauses:

(6)   a. dat/*datt-e [op den wärmsten   dag van't joar]
         that/that-1PL on the warmest   day of-the year
         wiej tegen   oonze wil   ewärkt   hebt.
         we   against our   will worked   have
         'that on the warmest day of the year we have worked against our will'
      b. Volgens   miej loop-t/*lop-e   [op den wärmsten   dag
         according-to me   walk-1PL/walk-1PL on the warmest   day
         van't joar] ook wiej noar't park.
         of-the year also we   to-the park
         'According to me we are also walking to the park on the warmest day of the year.'

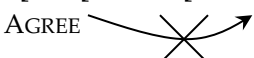- Similar adjacency effects can be observed in Bavarian:[4]

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[4] West Flemish and Frisian always require strict adjacency between the (inflected) complementizer and the subject. That is, violations of the adjacency requirement lead to ungrammaticality and not to non-inflected complementizers (Liliane Haegeman, Germen de Haan, p.c.).

(7) a. ??obwoi-st   [woartscheints/heit]   du   ins   Kino   ganga   bist
         although-2SG   probably/today   you   to-the   movies   gone   are
         'although you probably to the movies'
    b.   obwoi   [woartscheints/heit]   du   ins   Kino   ganga   bist
         although   probably/today   you   to-the   movies   gone   are
         'although you probably went to the movies'
         (Bavarian; Günther Grewendorf, p.c.)

- <u>AGREE-based syntactic analysis of C-AGR</u>: C hosts its own set of uninterpretable φ-features which is valued under closest c-command by the interpretable φ-features of the subject in SpecTP (Carstens 2003, van Koppen 2005, 2006).

- <u>Carstens' analysis of adjacency effects</u>: intervention effect in the sense of Chomsky (2000, 2001). By assumption, the intervening adverbial bears a Case feature that identifies the adverbial as a possible goal for the φ-set in C^0, thereby blocking the valuation and realization of complementizer agreement:[5]

(8)   [$_{C'}$ C[$_{TP}$ PP [$_{TP}$ subject   ...]]]
      AGREE

- <u>Problems</u>: (i) non-standard assumptions ((PP) adverbials carry a Case feature); (ii) false predictions: adverbials that intervene between T^0 and the base position of the subject are expected to block the realization of subject-verb agreement as well:

(9)   [$_{T'}$ T [$_{vP}$ adv [$_{vP}$ subject   ...]]]
      AGREE

2.2 Backward gapping

- <u>Observation</u>: Complementizer agreement becomes less acceptable if the finite verb is subject to (backward) gapping; relevant examples are fine when the complementizer does not carry inflection:[6]

(10) a. ??dass-sd   du   noch   Minga   und   dass   da   Hans
         that-2SG   you   to   Munich   and   that   the   Hans
         noch   Truchtlaching   geht
         to   Truchtlaching   go-3SG
    b.   dass-∅ du noch Minga und dass da Hans noch Truchtlaching geht

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[5] Note that the adjacency effect is completely unexpected in an approach based on T-to-C movement (Hoekstra & Marácz 1989, Zwart 1993a,b, 1997): (i) the presence of an intervening XP should not block X^0-movement; (ii) C-AGR is not available in cases such as (6b) where T-to-C has taken place.

[6] It appears that these facts are subject to a considerable amount of speaker variation. Generally, it seems however, that the absence of the finite verb renders C-AGR less acceptable.

- Under the common assumption that gapping is to be analyzed in terms of PF-deletion (Ross 1970), the data in (10) show that

  (i). the realization of C-AGR can be affected by post-syntactic operations (ellipsis/gapping)

  (ii). the availability of C-AGR seems to depend on the presence of an overt finite verb.

- These facts are difficult to account for if it is assumed that complementizer agreement is established by a syntactic AGREE mechanism that accesses the subject's ϕ set.

2.3 Comparative deletion

- These preliminary generalizations are corrborated by data from comparatives.

- In comparatives, overt agreement on C leads to ungrammaticality if the finite verb is absent from the structure, cf. (11b). The sentence becomes acceptable when the complementizer bears no inflection, cf. (11c).

- Again, it appears that it is the presence/absence of the inflected verb which is crucial for the availability of complementizer agreement (Bayer 1984: 269):

(11)   a. D'Resl   is gresser [als   wia-st du   bist]
            the-Resl is taller   than as-2SG you are
            'Resl is taller than you are.'

       b.*D'Resl   is gresser [als   wia-st du]
             the-Resl is taller   than as-2SG you

       c. D'Resl   is gresser [als   wia du]
            the-Resl is taller   than as   you

Conclusions:

(i)   Agreement between the complementizer and the subject cannot be implemented in terms of a checking/AGREE relation between C^0 and the subject – neither in the syntax nor at PF.[7] Otherwise one would expect examples such as (11b) to be grammatical.

(ii)   In some way, the inflection found in the C-domain is mediated by/parasitic on the presence of the finite verb.

(iii)   The facts in (10) and (11) suggest that C-AGR is established post-syntactically: Gapping and comparative deletion are standardly analyzed as the result of post-syntactic operations that delete material in the second clause:[8]

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[7] Cf. Ackema & Neeleman for an analysis of complementizer agreement in terms of a PF feature checking rule which applies if C and the subject are part of the same prosodic phrase.

[8] See e.g. Bresnan (1973), Lechner (2001) on comparative deletion.
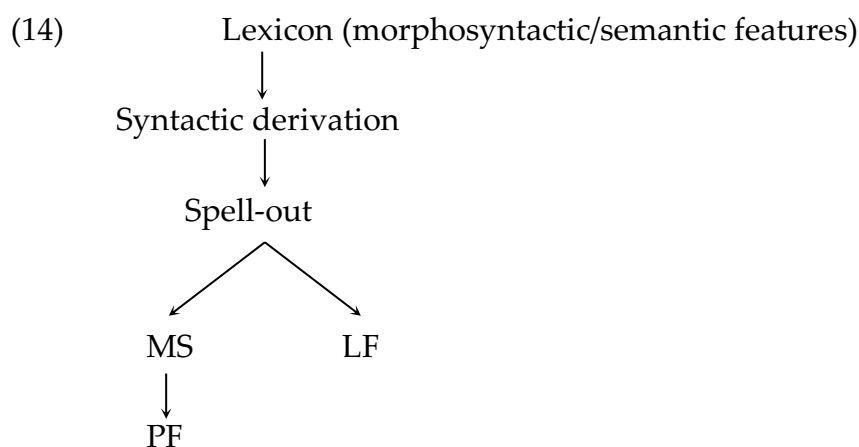
(12) dass (??-sd) du noch Minga ~~gehst~~ und dass da Hans
     that 2SG you to Munich go-2SG and that the Hans
     noch Truchtlaching geht
     to Truchtlaching go-3SG

(13) D'Resl is gresser [als wia (*-st) du ~~bist~~]
     the-Resl is taller than as-2SG you (are)
     'Resl is taller than you are.'

- If licensing of complementizer agreement were to take place in the syntax, no interaction with PF-deletion of the finite verb would be expected: the finite verb would be present throughout the whole syntactic derivation, being subject to deletion only after the structure has been transmitted to the post-syntactic components of grammar.

3. Towards a post-syntactic account of C-AGR

- <u>Background</u>: realizational model of grammar (Distributed Morphology (DM), Halle & Marantz 1993) – the morphological component (called *Morphological Structure*, henceforth MS) operates post-syntactically; syntactic terminal nodes (called *morphemes*) are supplied with phonological content after syntax:
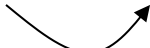
(14)   Lexicon (morphosyntactic/semantic features)
                   |
       Syntactic derivation
               |
         Spell-out
           /   \
       MS   LF
       |
       PF

- **Post-syntactic insertion of phonological exponents** (*Vocabulary Insertion*) is subject to the following conditions (the *Subset Principle,* Halle 1997: 428):
  (i) the feature specification of the phonological exponent must be compatible with the insertion context (i.e., it must be specified for a *subset* of the relevant features);
  (ii) the existence of a more specified potential exponent blocks the use of less specified exponents (⇒ Elsewhere Condition effects).
- The structure derived in the syntax can be modified by the post-syntactic insertion of inflectional heads/features. In DM, this mechanism is often used to account for case and agreement phenomena (cf. e.g. Marantz 1992, Halle & Marantz 1993, Embick 1997, Halle 1997, Noyer 1997, Harbour 2003, Bobaljik 2008).

3.1 A hybrid model of agreement

Verbal agreement

- 'Canonical' subject-verb agreement: T's set of uninterpretable/unvalued φ-features (passed down from C via feature inheritance) is valued by an AGREE operation accessing the subject's set of interpretable φ features (Chomsky 2004, 2008):

(15) [$_{CP}$ ... [$_{TP}$ T+Agr ... [$_{vP}$ subject ...]]]
      AGREE

Complementizer agreement

(i)   C-AGR is established by post-syntactic mechanisms.
(ii) C-AGR does not involve a checking relation with the subject.
(iii) C-AGR depends on the presence of the inflected verb.

- Implementation:
    (i)   C-AGR results from a post-syntactic operation which inserts a valued φ-set at the level of MS (*feature insertion*).
    (ii) Feature matching between C and the subject does not take place directly, but is *mediated* by another set of φ-features that has been valued by a syntactic AGREE relation:

(16)   *C-AGR as feature insertion*[9]
       C-agr is established during the post-syntactic computation by:
       (i)   a *copy* operation that targets (a subset of) T's φ-set (valued in the syntax);
       (ii) an operation of *feature insertion* that adds φ[T] to C's feature content.

- This mechanism ensures feature identity between the φ-sets in T and C (which both reflect the φ-feature content of the same argument; but see section 4 below for exceptions).

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[9] This generalization is in line with the observation that across Germanic, there are no languages with C-AGR but without verbal agreement, while there are many languages that exhibit verbal agreement in the absence of C-AGR (Hoekstra and Smits 1999). Thus, it seems that cross-linguistically, the availability of C-AGR is dependent on the overt realization of verbal agreement morphology. The intuition that C-AGR results from a dependency between C and the φ-features of the finite verb also lies behind the syntactic analysis proposed in Sternefeld (2007: 208f.). According to Sternefeld, C-AGR is established via a checking relation between a φ-set in C and the inflectional features of the finite verb which project to the VP level (Sternefeld assumes that German lacks a separate IP projection and that VP is the complement of C). However, note that this cannot account for the observation that the availability of C-AGR appears to depend on post-syntactic operations such as gapping or comparative deletion.

3.2 Adjacency effects and sensitivity to ellipsis

- <u>Lack of C-AGR in comparatives/gapping</u>: Elided elements are marked for deletion in the course of the syntactic derivation (cf. e.g. den Dikken 2012); they are therefore invisible for operations that apply at MS (including Vocabulary Insertion and the licensing of post-syntactically inserted ϕ-sets).

- <u>Adjacency effects</u>:
(i) The copy/insertion procedure giving rise to the presence of ϕ-features on C operates in a strictly local fashion, requiring *structural adjacency* between C^0 and T^0 (as is typical of post-syntactic rules in DM, cf. e.g Halle & Marantz 1993):

(17) *Locality of feature insertion*
The post-syntactic insertion of ϕ-features can target a functional head X only if X is *structurally adjacent* to a functional head Y hosting a (valued) ϕ-set.

(18) *Structural adjacency*
A head X is structurally adjacent to a head Y iff
   (i) X c-commands Y
   (ii) There is no head Z that
       (a) is c-commanded by X and
       (b) c-commands Y.

- According to (18), a head X is structurally adjacent to the head Y of its complement. Hence, C-AGR can only be inserted as a copy of T's ϕ-set if T is locally c-commanded by C^0.

(ii) Scrambled XPs do not adjoin to IP/TP but occupy the specifier of a functional projection above TP that is only projected if it serves to implement certain information-structural distinctions (cf. Frey 2004, Grewendorf 2005; see Jayaseelan 2001, Belletti 2002, and Haeberli 2002 for related proposals).[10]

- <u>Illustration</u>: in (19) (Hellendoorn), the PP *op den wärmsten dag van't joar* is located in the specifier of a projection (simply labeled FP), the head of which disrupts structural adjacency between C^0 and T^0. As a result, the insertion of C-AGR is blocked:

(19) *[$_{CP}$ C^0+AGR [$_{FP}$ [ADV] [$_{F'}$ F^0 [$_{TP}$ subj. [$_{T'}$ T^0+AGR]]]]]

- <u>Observation</u>: Not all elements that intervene between C^0 and an additional subject (or rather, the TP) block the realization of complementizer agreement.

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[10] See Rizzi (1997) and Branigan (2005) for similar proposals concerning the presence of TopP/FocP in the left periphery.

- In Bavarian, modal particles such as *aber*, *halt*, *ja* and clitic object pronouns may intervene between inflected C[0] and TP/the subject (cf. Altmann 1984):[11]

(20) dass-st <u>oaba</u> du ibaroi dabei bis-st
that-2SG PRT you everywhere with-it are
'that you really are involved everywhere'
(Altmann 1984: 205)

(21) wia-sd=<u>n</u> du gseng hoasd
when-2SG=CLIT.3SG you seen have
'when you saw him'
(Pfalz 1918: 231)

- <u>Assumption</u>: The structural positions of clitics and modal particles differ from the position of scrambled XPs (only the latter occupy the specifier of separate projection intervening between C[0] and TP).

- <u>Modal particles</u>: are base-generated as adjuncts (here: TP-adjuncts) (cf. e.g. Abraham 1995). Accordingly, they do not require the projection of a separate TopP or FocP and do not disrupt the structural adjacency between C[0] and TP.

- <u>(Object) clitics</u>: ultimate surface position is determined by late MS-processes such as prosodic inversion/local dislocation (cf. Bonet 1991, Halpern 1992, Schütze 1994, Embick & Noyer 2001). Therefore, they reach their surface position after the insertion of late-inserted φ-sets has been completed.

4. Residual problems: Double agreement and First Conjunct Agreement

- <u>Cases where C-AGR differs from verbal agreement</u>: general problem for all approaches that analyze C-AGR in terms of a dependency between C and T (cf. e.g. Haegeman & van Koppen 2011).

- <u>"Double agreement" in the context of 1PL in certain Bavarian varieties</u>:[12]
  (i) Embedded clauses: Different agreement formatives on the verb and the complementizer;
  (ii) Main clauses/V2: C-AGR replaces "regular" verbal agreement:[13]

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[11] Similarly, object clitics may intervene between the subject and the inflected complementizer in West Flemish, which otherwise requires strict adjacency between C and the subject (Liliane Haegeman, p.c.):
 (i) da-<u>n</u> ze Valère en Marie nie gezien een
 that-3PL her Valère and Marie niet seen have-3PL
 'that Valerie and Marie have not seen her'

[12] C-AGR with 1PL (and double agreement) seems to be most wide-spread in Lower Bavarian dialects (cf. e.g. Bayer 1984, Kollmer 1987, Wiesinger 1989, Weiß 1998, 2005).

[13] With bisyllabic verbs such as *laffa* 'to run', *gengan* 'to go', *soucha(n)* 'to seek' etc., cf. Bayer 1984, Weiß (1998, 2005).

(22) a. wem-**ma** mia noch Minga kumm-**an**
   when-1PL we to Munich come-1PL
   '...when we come to Munich'
  b. Gem-**ma** mia noch Minga?
   go-1PL we to Munich
   'Are we going to Munich?'

- <u>First Conjunct Agreement (FCA)</u>: Some C-AGR-varieties exhibit another instance of "double agreement" where the complementizer agrees with the first conjunct of a complex coordinated subject, while the verb agrees with the coordinated subject as a whole (cf. van Koppen 2005, 2006; Haegeman & van Koppen 2011).

- <u>FCA in Bavarian</u>:[14] The complementizer agrees with the first (2SG) conjunct of a coordinated subject, while the verb exhibits 2PL agreement (the result of **resolution**, i.e., an operation combining the φ-sets of the two conjuncts).[15]

(23) dass-**sd** [du und da Hans] noch Minga geh-**ts**
  that-2SG you.SG and the Hans to Munich go-2PL
  'that you and Hans are going to Munich'

- However, while all speakers I consulted accept (23), judgements seem to vary (fully grammatical/??/*) concerning the possibility of agreement with the whole coordinated subject (resolution):

(24) %dass-**ts** [du und da Hans] noch Minga geh-**ts**
   that-2PL you.SG and the Hans to Munich go-2PL
   'that you and Hans are going to Munich'

- <u>Adjacency requirement</u>: If the 2nd person pronoun is the second conjunct of a complex subject, the complementizer must appear in its uninflected form:[16]

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[14] I am indebted to Josef Bayer, Günther Grewendorf, Helmut Weiß for sharing their intuitions on FCA in Bavarian.

[15] In many cases, agreement with coordinated subjects is subject to language-specific rules: (i) agreement with one of the two conjuncts; (ii) a combination of the respective phi-sets (so-called "resolution", cf. Corbett 1983, 2000). Resolution typically leads to plural agreement and favors agreement with 1st/2nd person (although there are some exceptions; for example, some speakers prefer 3pl agreement in examples like *dass-sd du und da Hans noch Minga geh-ts/geng-an*).

[16] According to van Koppen (2005: 47), there are at least some speakers who consider C-AGR (2pl) to be marginally acceptable here. The adjacency effect also shows up in matrix/inversion contexts: While FCA is generally impossible in subject-initial clauses, the verb preferably agrees with the first conjunct of an inverted subject:
(i) [Du und da Hans] hoab-ts/*hoa-st an Hauptpreis gwunna.
  you and the Hans have-2PL/have-2SG the first.prize won
(ii) Gesdan hoa-st/??hoab-ts [du und da Hans] an Hauptpreis gwunna.
  yesterday have-2SG/have-2PL you and the Hans the first.prize won

(25) dass (***-st**) [da Hans und du] noch Minga kumm-**ts**
      that 2SG the Hans and you.SG to Munich come-2PL
      'that Hans and you are coming to Munich'

- Ineffability effects: For certain combinations of subjects, there do not seem to exist fully well-formed candidates. E.g., coordination of 2pl+1sg subjects generally leads to more 'mixed' results (although FCA should in principle be possible):

(26) a. % dass-**ts** [ihr/ees und I] noch Minga miaß-**n**
            that-2PL you.PL and I to Munich must-PL
      b. */?? dass-**ts** [ihr/ees und I] noch Minga miaß-**ts**
            that-2PL you.PL and I to Munich must-PL

- The realization of FCA/C-AGR is subject to cross-linguistic variation:
  (i).   FCA is obligatory (Tegelen Dutch, Bavarian A)
  (ii). FCA is impossible (i.e., C-AGR = T-AGR/resolution; Lapscheure Dutch, van Koppen 2005)
  (iii). Both FCA and T-AGR/resolution are possible (Bavarian B).

- Apparent paradox:
  (i). C-AGR is sensitive to the presence/absence of the finite verb, which suggests that there is a C-T dependency (at MS/PF), see section 2.
  (ii). The phenomena of double agreement and FCA seem to suggest that C-AGR does not involve a relation between C and T, but rather results from a separate AGREE operation initiated by C (cf. Haegeman & van Koppen 2011).

- "Direct" solution (Fuß 2008): Synthesis of the two approaches -
  (i). T's ɸ-set is copied onto C;
  (ii). C's ɸ-set is then valued by a post-syntactic version of AGREE which accesses the subject's ɸ-set under adjacency (e.g., in cases where both elements are part of the same prosodic phrase, cf. Ackema & Neeleman 2004).

- Problems:
  (i). Motivation for re-valuation of the ɸ-set remains unclear (it must be assumed that the values of the copied ɸ-set can/must be overwritten by the post-syntactic AGREE operation);
  (ii). Assumption of an additional, post-syntactic feature-valuation mechanism is conceptually problematic.

- In what follows, I will sketch an alternative post-syntactic account of C-AGR that does not make use of feature re-valuation at PF.

- Proposal/double agreeement: The insertion of different agreement formatives can be treated as an instance of **contextual allomorphy**:

  (i) The insertion procedure may be sensitive to the insertion context e.g., other features present at the insertion site (cf. strong/weak adjectival inflection in German);

  (ii) Double agreement can be captured by assuming that the relevant phonological exponents are specified for additional features that relate to the insertion context (e.g., T and C's categorial features):[17]

(27) a. [+T, +1, +PL] ↔ /-an/   verbal agreement
      b. [+C, +1, +PL] ↔ /-ma/   C-AGR

- Diachronic extension to V-AGR (cf. Fuß 2005): C-AGR cannot be used to realize regular verbal agreement as long as it carries an additional specification related to C (again, this follows from the Subset Principle); extension to V-AGR contexts can be attributed to the loss of the C-specification.

- First Conjunct Agreement (FCA):

  (i). In the case of coordinated subjects, [&⁰], the head of the whole coordinated subject, contains an ordered pair of φ-sets corresponding to the feature content of the two conjuncts DP1, DP2. This combined φ-set is accessed by an Agree operation initiated by T:

(28)

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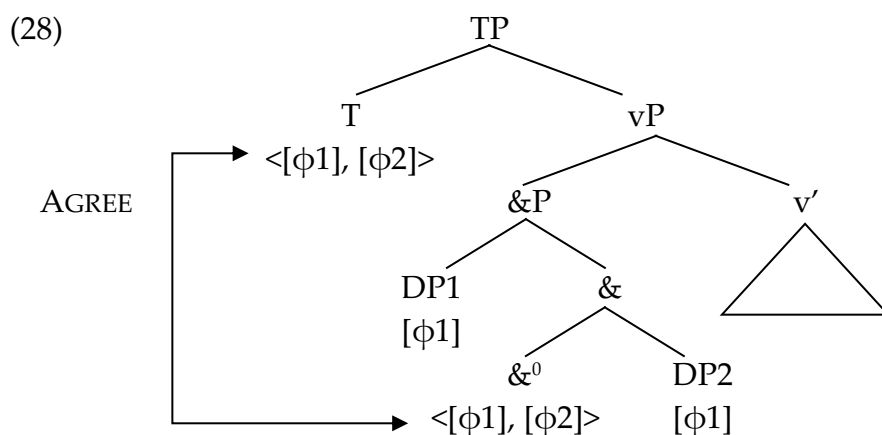
[17] C-AGR-dialects without double agreement (e.g., most varieties of Bavarian): Either there is only a single set of agreement exponents which can be used to realize both C-AGR and V-AGR, or the exponents realizing C-AGR and V-AGR happen to be completely homophonous.

(29) Result of AGREE in the case of coordinated subjects: ordered pairs of φ-sets in T, e.g.,[18]
   a. <[+2, -pl],[-pl]> (2sg + 3sg subject)
   b. <[+2, +pl], [+pl]> (2pl + 3pl subject)
   c. <[+1, -pl], [+2, -pl]> (1sg + 2sg subject)
   etc.

   (ii). Resolution does not take place in the syntax, but at MS as part of the insertion procedure (resolution is subject to language-specific rules, which is typical of *morphological* differences between languages, see also fn. 15):

(30) *Resolution rules (Bavarian)*:
   a. Unification of feature sets, i.e., <[A], [B]> → [A, B]
   b. <[+1], [+2]> → [+1]
   c. <[αPL], [α/-αPL]> → [+PL]

(31) a. ... *du und da Hans ... geh-ts*   ⇒   <[+2, -PL], [-PL]> → [+2, +PL]
    b. ... *I und du ... geng-an*   ⇒   <[+1, -PL], [+2, -PL]> → [+1, +PL]
    c. ... *I und ihr/ees ... geng-an*   ⇒   <[+1, -PL], [+2, +PL]> → [+1, +PL]
    d. ... *da Hans und da Peter... geng-an* ⇒   <[-PL], [-PL]> → [+PL]
    etc.

   (iii). The copy operation establishing C-AGR may target[19]
      a) the complete φ-content of T (C-AGR = T-AGR/resolution, Lapscheure Dutch (van Koppen 2005))
      b) the first φ-set of the ordered pair (FCA, Tegelen Dutch, Bavarian).

- Option b) is confined to cases where C is adjacent to the first conjunct.
- The fact that some speakers of Bavarian accept both FCA and resolution with C-AGR (Josef Bayer, p.c.) suggests that both (iiia) and (iiib) may be optionally available in a single grammar.

5. Conclusions

- The sensitivity of complementizer agreement to post-syntactic processes suggests that complementizer agreement is established in the post-syntactic components of grammar.
- Complementizer agreement does not involve a (checking) relation between C and the subject. Rather, it seems to depend on the presence of the finite verb at MS/PF.

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[18] <u>Background assumption</u>: "3rd person" = absence of person features (Benveniste 1966, and many others)

[19] Cf. Bhatt & Walkow (2011) for the claim (Hindi) that agreement with only a single conjunct (i.e., absence of resolution) is a characteristic of post-syntactic/"phonological" agreement.

- C-agr is a **morphological ornament**, resulting from the post-syntactic insertion of ф-features (a copy of T's ф-set) under structural adjacency with T.
- Richards (2007) theory of obligatory feature inheritance can be maintained. However, C can regain its ф-feature content via feature insertion (a copy of T's ф-set) at MS/PF...

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