Defective Feature Copy and Anti-Agreement in Language Production[*]

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1. Introduction

Historically, errors in spontaneous speech, i.e., slips of the tongue, have been collected and studied for various reasons. One motivation for collecting such errors - and probably the most familiar one outside of linguistic circles - was to gain insight into psychological repressions. Sigmund Freud (1901/1954), for instance, was convinced that slips of the tongue reveal our suppressed emotions and desires.

On the other hand, however, spontaneous errors also played an increasingly important role in psycholinguistic attempts to construct linguistic performance models (e.g., Fromkin 1971, Garrett 1980, Dell 1986, Levelt 1989). For the psycholinguist, the crucial questions are: What kinds of (possibly ordered) processes mediate between a communicative intention and the articulation of an utterance? And, closely related: What role do grammatical units and rules play in the generation of an utterance?

In this article, I will focus on what grammar theory can tell us about the nature of speech errors and - vice versa - what speech errors can tell us about the nature of grammar. Slips of the tongue (as well as other behavioral data, e.g., acquisition data and data from impaired speakers) are of interest to linguists because of the implicit or explicit acceptance of the assumption that the rules of grammar enter into the processing mechanism such that "evidence concerning production, recognition, [...] and language use in general can [...] have bearing on the investigation of rules of grammar" (Chomsky 1980: 200f). This, in turn, implies that meaningful psycholinguistic analyses of error data can only be made against the background of significant hypotheses concerning the structure, i.e. the grammar, of the language in question.

In the following, I will supply an analysis of spontaneous subject-verb agreement (SVA) errors in the light of the Distributed Morphology framework. I am going to demonstrate that Distributed Morphology (DM) makes for a psychologically real theory of grammar in the sense that it is accurate for the data under investigation. That is, this theory allows for an explanation of

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the available evidence and moreover, it makes correct predictions about possible and impossible errors ("weak mentalism"; cf., Katz 1964).

Two types of SVA-errors shall be subject to discussion: local agreement and long-distance agreement errors. I will consider local agreement errors first. In that context, errors from my corpus shall be compared to spontaneous as well as to experimentally elicited English data. I am going to show that – due to differences in word order – the German error patterns are more diverse. Furthermore, the observed prominence of the plural feature will be discussed and the interaction of movement operations with feature copy processes will be investigated. It will turn out that the error data support the DM idea of a late insertion of agreement nodes. Secondly, I will consider the properties of long-distance agreement errors. I am going to show that only long-distance agreement errors are constrained by the case specification of the error-triggering element.

2. Taking the Short Way: Local Agreement

2.1 Experimental Studies on Proximity Concord

Regarding subject-verb agreement in English, a series of experiments was carried out (Bock and Miller 1991, Bock and Cutting 1992, Bock and Eberhard 1993, Nicol 1995, Bock, Nicol and Cutting 1999, Eberhard 1997). In all of these experiments, an attempt was made to provoke agreement errors in an experimental setting. Above all, the researchers were focusing their attention on structural differences, which might have an influence on the probability of errors. In (1), you will find three exemplary sentence preambles used in the experiment by Bock and Miller. Participants were asked to complete the sentences with a given verb. The interesting examples are the mismatch conditions in (1bc) in which the nominal head of the complex subject DP (*key*) has a number specification different from the one of the DP contained in the modifying PP (*cabinet*).

(1)   a.   The **key** to the (ornate Victorian) **cabinet**
                   possible error: ***The key** to the (ornate Victorian) cabinet **were** lost
         b.   The **key** to the (ornate Victorian) **cabinets**
                   possible error: ***The key** to the (ornate Victorian) cabinets **were** lost
         c.   The **keys** to the (ornate Victorian) **cabinet**
                   possible error: ***The keys** to the (ornate Victorian) cabinet **was** lost

It turned out that the large part of agreement errors (more than 90%) occurred in the mismatch condition. The length of the constituent, which contained the mismatching local noun, however, did not have any influence on the error rate, a fact which contradicts the assumption that the limited capacity of the memory can be held responsible for the errors. A particularly interesting error pattern emerged when singular subject DPs were compared to plural subject DPs in the mismatch condition: agreement errors almost exclusively occurred in the experimental condition with a singular nominal head and a local plural DP, that is, after sentence beginnings like (1b). This pattern indicates that the errors are not due to a problem in correctly identifying the subject because if that had been the case, errors in the condition with a local singular noun should have occurred as often.

In some of the publications dealing with erroneous subject-verb agreement in English, one may also find some scattered spontaneous errors like, for instance, the two slips given in (2). Interestingly, the spontaneous errors show the same pattern as the elicited ones, that is, the verb

tends to agree with a local plural DP. In (2a), this DP is part of a modifying PP, in (2b) it is part of a reduced relative clause.[1]

(2)   a.   [**the cause** of <u>layoffs</u> such as <u>these</u>] **are** not the taxes
                    the cause of layoffs such as these is not the taxes
              (Francis 1986: 315)
        b.   [the only **generalization** I would dare to make about our <u>customers</u>] **are** that
              they're pierced   the only generalization ... is that they're pierced
               (Bock and Cutting 1992: 99)

In the following sections, German slips shall be compared to the experimental and spontaneous English data. On the one hand, it is worthwhile investigating to what extent the German errors exhibit similar characteristics. On the other hand, we also need to check whether other influences possibly trigger agreement errors in German.

2.2 Local Agreement in German Speech Errors

At the moment, there are 70 instances of local agreement errors in my corpus. However, only 32 of these are comparable to the English slips presented before, in that the verb agrees with a local DP, which is part of a complex subject DP. As in the English data, in almost all of these slips (in 28 out of 32), the local DP is plural. This is illustrated by the errors in (3).

(3)   a.   [**ein   Ende**   der <u>Unruhe-n</u>]   **sind**   nicht   abzusehen
              an end of.the   disturbance-PL   are not in.sight
                    ein Ende   der Unruhe-n   ist nicht   abzusehen
                    an end of.the   disturbance-PL   is   not in.sight
        b.   [**eine beträchtliche Anzahl** von <u>Gebärde-n</u>] **sind** lexikalisch markiert
              a   considerable number of   sign-PL   are lexicallymarked
              _   einebeträchtliche Anzahl ...   ist lexikalisch   markiert
   _   a   considerable number ...   is   lexicallymarked

The structure in (4) illustrates defective feature copy for the slip (3a). Please note that I adopt the basic assumptions of Distributed Morphology (Halle and Marantz 1993, Harley and Noyer 1999). According to Distributed Morphology (DM), only acategorial roots and morphosyntactic features are manipulated in the syntax. Agreement projections, however, are not present in the syntax. Agreement morphemes are only implemented at the postsyntactic level of Morphological Structure. At Phonological Form, the Vocabulary items that best match the roots and features contained in terminal nodes are drawn from the Vocabulary for insertion. Moreover, phonological readjustment rules may apply.

In (4), the verb has raised to the light verb head, then to Tns, and finally to C. Moreover, the subject DP has raised from within vP to Spec CP. At Morphological Structure, the AgrS node is

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[1] Note that I give the erroneous utterance first followed by the intended utterance on the right hand side of the arrow. Whenever there is no arrow in an example, the slip was self-corrected by the speaker. The nonagreeing elements are in bold type while the agreement triggering elements are underlined. Also note that all German examples are from my corpus.

implemented as sister of the Tns node and features from the subject DP are copied onto AgrS. It is this copy process which is defective in the present examples, in that a more local DP is chosen for feature copy and transmits its [+plural] feature, as is indicated by the arrow in the structure. Please note that in (4) as well as in the structure to follow, the light verb phrase is neglected.
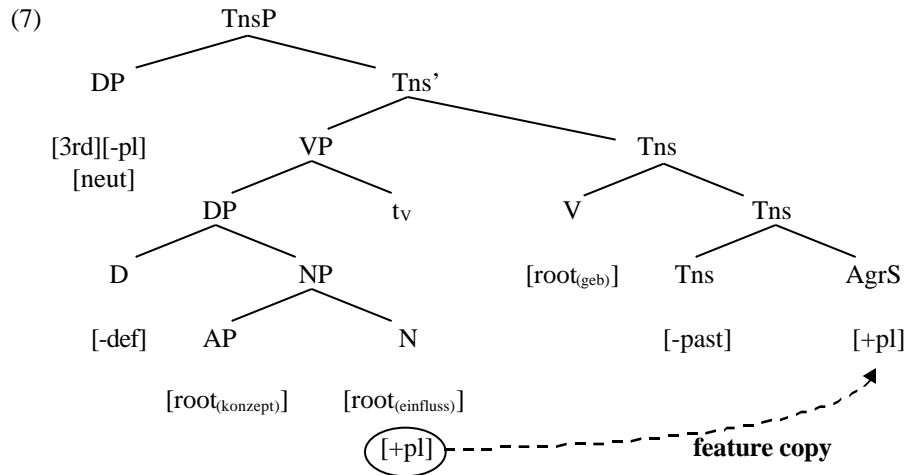
(4)
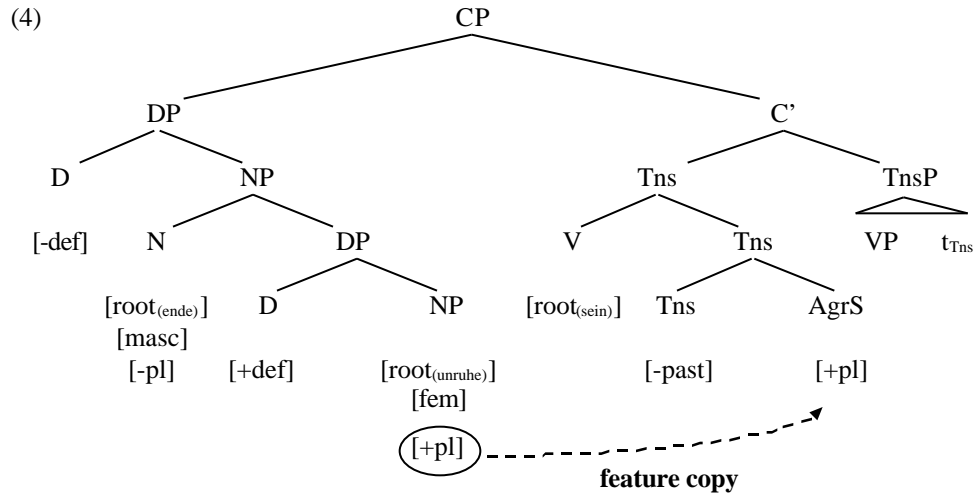
As is well known, in English, the possibilities for a non-subject to precede the verb are highly restricted in matrix as well as in embedded clauses. It is, of course, possible to topicalize constituents, as e.g. in *The colour of the cars, Peter likes*. But in contrast to German, in these constructions the subject DP always intervenes between the topicalized phrase and the verb. It is only in wh-questions that objects can directly precede the verb. In fact, I came across one instance of a spontaneous English slip in which the verb erroneously agrees with a preceding object wh-phrase. This is the one given in (5).

(5)   What <u>things</u> **are this kid**, is this kid going to say correctly?
         (Levelt and Cutler 1983: 206)

However, things are different in German. Due to the underlying SOV word order, object DPs always precede the verb in embedded clauses. Moreover, in matrix clauses, object DPs may directly precede the verb in topicalizations. That is, in contrast to English, it is often the case that an object DP is more local to the verb than the subject DP. We therefore expect error instances in which the verb erroneously agrees with an object DP. And indeed: In 38 out of the 70 local SVA-errors from my corpus, the verb agrees with an object DP. In (6a), the error occurs in an embedded clause while in (6b), an error is observed in a matrix clause with a topicalized object DP.

(6)   a.   dass **es**   konzeptuelle <u>Einflüss-e</u>   **geb-en**   dasses ...   gib-t
              that it   conceptual   influence-PL   give-PL   that it ...   give-3.SG
         b.   die   unschönen <u>Sache-n</u> **vergess-en ich**, vergess-e ich meist schnell
              the   not.nice thing-PL forget-3.PL   I   forget-1.SG   I mostlyquickly
              "Mostly, I forget the unpleasant things quickly."

In (7) you will find a syntactic structure for the error in (6a).

(7)

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                        TnsP
              ┌──────────┴──────────┐
             DP                    Tns'
          [3rd][-pl]        ┌────────┴────────┐
           [neut]          VP               Tns
                      ┌─────┴─────┐     ┌─────┴─────┐
                     DP          t_V   V          Tns
                 ┌────┴────┐        [root_(geb)] ┌──┴──┐
                 D        NP                    Tns   AgrS
              [-def]   ┌───┴───┐              [-past] [+pl]
                      AP       N
               [root_(konzept)] [root_(einfluss)]
                                    (  [+pl]  ) - - - - - - - - →  feature copy
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To sum up this section: On the one hand, we have seen that the German SVA-errors are similar to the elicited and spontaneous English data in that for the most part, the verb agrees with a linearly closer plural DP. On the other hand, however, the pattern is more diverse for the German data with respect to the grammatical role of the agreement triggering DP which may either be part of a complex subject DP or an object DP.

2.3 The Prominence of the Plural Feature

In this subsection, I want to briefly consider the question why, for the most part, it is the plural feature of a local noun, which triggers erroneous agreement. Spontaneous slips in which the verb agrees with a local singular DP are only rarely observed. Two of the very few slips in which a local singular DP happens to trigger erroneous agreement are given in (8). In (8a), the agreement source *problem* is part of a reduced relative clause within the subject DP, while in (8b), the singular DP *seiner Mutter* "of his mother" is a genitive complement.

(8)   a.   [**the educational systems** needed to correct the <u>problem</u>] **is** lacking
                   the educational systems ... are lacking
              (Bock and Cutting 1992: 102)
        b.   [**dieKlöße** seiner <u>Mutter</u>] **liegt** ihmschwer im Magen
               the dumplings of.his mother lies himheavily on.the stomach
                   die Klöße seiner Mutter lieg-en …
                   the dumplings of.his mother lie-PL   …

The observed bias receives a straightforward explanation when we assume that there is an asymmetry in the grammatical representation underlying singular and plural count nouns. This asymmetry is due to the fact that plural nouns possess a grammatical feature for number that singular nouns lack (cf., Nicol 1995, Eberhard 1997). In DM terms, this means that singular nouns are not specified for number, i.e. there is no morphosyntactic feature [-plural]. Consequently, there is no such feature to be copied onto AgrS. In case AgrS is void of features when Vocabulary insertion takes place at PF, the default item /-t/ (representing 3rd person singular) will be chosen from the Vocabulary. The Vocabulary items, which compete for insertion under the AgrS node in German are listed in (9).

(9)   a.   /-t/
       b.   [1st]   /-´/
       c.   [2nd]   /-st/
       d.   [+pl]   /-´n/
       e.   [2nd][+pl]   /-t/

For the SVA-errors, the line of reasoning is as follows: An intervening plural DP makes available a number feature which may be copied onto AgrS by mistake while an intervening singular DP has no such feature to offer. In the rare instances in which a verb happens to erroneously agree with a singular noun, we must assume that we are dealing with the unlikely case of a copy failure, that is, no number feature whatsoever is transmitted to the AgrS node and consequently, the default value will be selected for insertion.[2]

2.4 Transformations and Feature Copy

Next, I will be concerned with the interaction of syntactic transformations and agreement feature copy. In particular, I will be considering the question if the DM idea of post-syntactic implementation of agreement nodes is supported by the error data.

Within many syntactic and psycholinguistic theories (Chomsky 1995, Kempen and Hoenkamp 1987, Levelt 1989), it is assumed that agreement is computed during (or even before) the construction of the hierarchical structure. But this is not true within the DM framework. Remember that in DM, late insertion of agreement nodes is assumed. Agreement nodes are adjoined to functional nodes at the level of Morphological Structure, that is, after syntactic operations have taken place but before Vocabulary insertion is executed.

This assumption has important consequences for the interpretation of speech error data. In particular, a DP which is local to a verb at deep structure may be separated from the verb by a syntactic movement operation, i.e. it is no longer local to the verb when agreement feature copy takes place at Morphological Structure. Linear proximity of a verb and a DP is, of course, not a prerequisite for agreement processes to take place. For SVA-errors, however, my prediction is that

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[2] Interestingly, defective agreement patterns in Arabic VSO sentences can be accounted for along similar lines. Note that in (i), singular marking of the verb is obligatory despite the presence of a plural subject; sentence (ii) with plural marking on the verb is ungrammatical. If the insertion of singular verbs required the presence of a feature [-plural], sentence (i) could not be explained. Obviously, in this instance, it is possible not to copy agreement features onto AgrS. Whenever this happens, the default singular form of the verb will be inserted.

(i)   qara/a   al-/awlaad-u   kitaab-an
       read.3.SG.m   ART-boy.PL-NOM   book-ACC
       "The boys read a book."
(ii)   *qara/uu   al-/awlaad-u   kitaab-an
       read.3.PL.m   ART-boy.PL-NOM   book-ACC
       "The boys read a book."
       (Mohammad 1990: 96)

whenever the verb happens to agree with a wrong DP, the agreement error is due to the fact that the wrong DP is linearly closer to the verb at surface structure than the 'true' subject DP.

Unfortunately, there are not too many errors in my corpus, which are informative in this respect. First of all, 40 out of the 70 local SVA-errors occur in embedded clauses in which no XP-movement has applied (except for movement of the subject DP from Spec vP to Spec TnsP). As is well known, word order in German embedded clauses (SOV) is the underlying word order. Therefore, in example (10a), the plural DP *Vergebärdler* "slips of the hand" which is a genitive complement within the subject DP is local to the verb at deep and at surface structure, i.e. at both levels, there is no other DP that is (linearly) closer to the verb. The same is true for the agreement error in (10b) in which the verb agrees with the plural DP *seine Kumpels* "his buddies" which is an object DP (also cf., (6a)).

(10) a. dass[**ein Teil** der <u>Vergebärdler</u>]entstanden **sind**, äh, ist
          that a   part of.the   slip.of.the.hand.PL   resulted are, er, is
      b. dass **sein Vater** seine <u>Kumpel-s</u> rausgeschmissen **haben**
          that his father   his buddy-PL thrown.out   have-PL
          dassseinVater   seine   Kumpel-s   rausgeschmissen hat
          that his father   his buddy-PL thrown.out   has

Moreover, there are nine instances of matrix clause errors in my collection in which the error-triggering DP is local to the verb before and after XP movement has taken place. In both examples in (11), the verb agrees with a plural DP from inside the subject DP.

(11) a. [**das Alter** der <u>Ureinwohner</u>] **werden** meist zu hoch eingeschätzt
          the age of.the   native.PL   are.FUT mostly too high   estimated
          das Alter   … wirdmeist
          the age … is.FUT   mostly
      b. [**jeder Artikel** in diesen <u>Katalog-en</u>] **sind**   total   überteuert
          every   article in these   catalogue-PL are totally overexpensive
          jeder   Artikel … ist total   überteuert
          every   article … is totally   overexpensive

One particularly interesting property of the errors in (11) is that the DP, which passes on its plural feature to the verb is *more* local, i.e. adjacent, to the verb at surface structure, while at deep structure, other phrasal material intervenes between the agreement-triggering DP and the verb.[3] The deep structure representations for (11a) and (11b) are given in (11a') and (11b'), respectively, with the intervening material in bold face. In the syntax, both verbs move to Tns and then to C, while the subject DPs raise from SpecTnsP to SpecCP. It is only after these movement operations have taken place that agreement nodes are implemented and features are copied onto AgrS.

(11) a'. [Tns' [vP [DP das Alter [DP der Ureinwohner]] [VP [Adv **meist**] [AP **zu hoch**]
           [V **eingeschätzt**]]] [Tns werden]]
      b'. [vP [DP jeder Artikel [PP in diesen Katalogen]] [VP [AP **total überteuert**] [V sind]]]

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[3] The same is true for the errors given in (3ab) as well as for the one in (6b). Remember that (6b) is a special case in that the verb agrees with a topicalized object DP. Still, the topicalized phrase is adjacent to the verb at surface structure only while underlyingly other elements intervene.

Even more illuminating are, of course, those cases in which the erroneous agreement source is local to the verb only at surface structure, that is errors in which another DP with different number specification intervenes between the agreement source and the verb at deep structure. In my corpus, there are seventeen such cases, two of which are given in (12).

Consider, for instance, the slip given in (12a). In this error, the verb agrees with the adjacent plural DP *Soldaten* "soldiers". At deep structure, however, the PP *in dem Film* "in the movie" intervenes between the complex subject DP and the verb (cf. (12a')). The slip in (12b) has somewhat different characteristics. Note that we are dealing with an embedded clause here in which XP-movement (extraposition) has applied. Due to the extraposed relative clause, the plural DP *Bücher* "books" which is part of the direct object DP is proximal to the verb at surface structure. At deep structure, the relative clause separates the DP and the verb and therefore, the singular DP *Regal* "bookshelf" is closest to the verb at that level (cf. (12b')).

(12)   a.   [**eine   Gruppe** von <u>Soldat-en</u>]   **sind**   in   demFilm,   äh,
              a   group   of   soldier-PL   have   in   this movie,   er,
              ist   in   demFilm   draufgegangen
              has   in   this movie   bitten.the.dust
        b.   weil**er**   den Inhalt   aller<u>Büch-er</u>   **kenn-en**,   die in   seinem
              because   he   the contents   of.all   book-PL   know-PL which   in   his
              Regal   stehen   _   weiler   den Inhalt   …   kenn-t
              bookshelf   stand-PL _   because   he   the   contents …   know-3.SG

(12)   a'.   [$_{Tns'}$ [$_{vP}$ [$_{DP}$ eine Gruppe [$_{PP}$ von Soldaten]] **[$_{VP}$ [$_{PP}$ in diesem Film]**
              [$_{V}$ draufgegangen]]] [$_{Tns}$ sind]]
        b'.   [$_{vP}$ [$_{DP}$ er] [$_{vP}$ [$_{DP}$ den Inhalt [$_{DP}$ aller Bücher **[$_{CP}$ die in seinem Regal**
              stehen]]] [$_{V}$ kennen]]]

Interestingly, there is not a single slip in my corpus, which points to the opposite direction, that is, a slip in which the DP transmitting its agreement feature is local to the verb only at deep structure. I therefore conclude that the local SVA-errors from my corpus are compatible with DM assumptions. That is, the verb tends to erroneously agree with a DP, which is local to it either at deep and at surface structure or at surface structure only. We may therefore assume that the implementation of agreement nodes is in fact executed only after syntactic movement operations have taken place, i.e. at the level of Morphological Structure.

3.   Taking the Long Way: Long-Distance Agreement

While defective agreement of a verb with a local noun is probably the more expected case, there is also a number of errors in my collection in which the verb happens to agree with a noun that is more distant to it than the actual subject of the sentence.

However, in all the errors discussed in section 2, the verb erroneously agrees with a DP, which is not assigned nominative case. The slips, which I shall consider next are different in that the agreement feature is copied onto AgrS from a nominative DP; that is, a wrong subject is selected for copy of the agreement feature. In my corpus, there are 26 such cases. In 22 of these,

the verb agrees with a non-local subject, i.e., either with the subject of a matrix clause, the subject of an embedded clause, or with the subject of the second conjunct in a coordination structure.[4]

The first cases of long-distance agreement I wish to discuss are those, in which either a matrix verb agrees with the subject of an embedded clause or the verb of an embedded clause agrees with a matrix subject. This kind of long-distance agreement is exemplified by the two slips in (13). In (13a), the verb in the embedded clause agrees with the matrix subject, while in (13b), the matrix verb shows agreement with the subject of the embedded clause (remember that the non-agreeing elements are in bold type while the error-triggering element is underlined).

(13) a. <u>sie</u> seh-en, dass **ich** selbst   eherflachbrüstig **sind**
          they see-PL that I   myself more   flat-chested be-PL
          dass ich selbst   eherflachbrüstig bin
          that I   myself more   flat-breasted be-1.SG

      b. **ich wiss-t**, dass <u>ihr</u> nicht   Recht   hab-t
          I   know-2.PL   that you.PL not right   have-2.PL
          ich weiß,   dass
          I   know.1.SG   that

Since in both examples in (13), the matrix as well as the embedded verb happen to agree with the same DP – be it the matrix or the embedded subject - we must assume that the agreement features of one DP have been copied twice.

It is worth pointing out that long-distance agreement phenomena, as unusual as they may seem, are not unattested in spoken languages. Below, I will present some informative data from Godoberi, a Daghestanian language spoken in the north-eastern part of the Caucasus, and from Hindi.

In Godoberi, matrix verbs may agree in gender and number with the absolute (direct object) argument of a complement clause. In (14a), for instance, the matrix verb *e/uc* ←to forget" is gender/number-marked for the absolute neuter argument *gyazeti* "newspaper" of the embedded clause.[5] A similar phenomenon is observed in the Hindi example (14b), in which the matrix verb *caah* "want" agrees in number and gender with the absolute argument *rotii* "bread" of the embedded verb *khaa* "eat".

(14) a. /ali-c→'u [**gyazeta-be**   r-ax-i]   **r**-e/uc→-a
          Ali-CONT   paper-PL.ABS   PL.n-take-INF   PL.n-forget-AOR
          "Ali forgot to buy newspapers."
          (Haspelmath 1999: 131)

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[4] In the remaining four cases, the verb erroneously agrees with a local DP which, however, is assigned nominative case. Consider, for instance, the following slip: *dass **ich** [später als <u>du</u>] aufgestanden **bist**
     dass ich ... aufgestanden bin* 'that I later than you.SG got.up be.2.SG   that I … got.up be.1.SG' ("that I got up later than you did"). In the error, the verb *sein* "to be" is inflected for 2nd person singular. Obviously, these features have been transmitted from the pronoun *du* "you" which is part of a comparative construction within an adverbial phrase (in brackets). In that construction, the pronoun receives nominative case.
[5] Cf., Polinsky and Comrie (1999) for similar long-distance agreement phenomena in Tsez, another Daghestanian language.

    b. Raam   ne [**rotii** khaa-nii]caah-**ii** thii
        Ram   ERG bread.f.SG.ABS eat-INF.f.SG want-PAST.f.SG   be.PAST.f.SG
        "Ram had wanted to eat bread."
        (Wunderlich 1994 : 21)

By citing the examples in (14), I do not wish to claim that the erroneous copy process in the German speech errors and regular long-distance agreement in Godoberin and Hindi are the same thing. For instance, regular long-distance agreement is always agreement of a matrix verb with an embedded DP. This, however, is not true for the slips of the tongue, as is exemplified by the example in (13a) in which the embedded verb agrees with the matrix subject.

Still, I take the examples in (14) to be illuminating in that they illustrate that verbal agreement in natural languages is not necessarily confined to a single clause. Rather, agreement features may be transferred across clause boundaries, and it is exactly this kind of transfer, which also manifests in the speech error data.

The same restriction holds for the second type of erroneous long-distance agreement I wish to discuss. In these errors, two clauses are conjoined in a coordination structure and the verb of the first conjunct mistakenly agrees with the subject of the second conjunct. That is, we are not dealing with a relation between a matrix and an embedded clause here; rather, the two clauses involved in the error are of the same kind. I am referring to this special case of long-distance agreement as "anticipatory agreement". There are only six such errors in my collection, two of which are given in (15).

(15)   a. weil**er** wütend **bin** und <u>ich</u> keine   Lust   hab'
          because he angry   be-1.SG and I   no inclination have-1.SG
              weiler   wütend ist
              because he angry   be-3.SG
    b. **wirschuft-est** und <u>du</u> vergnüg-st dich   wir schuft-en
          we graft-2.SG   and you enjoy-2.SG yourself   we graft-1.PL

In (15a), two embedded clauses (TnsPs) are conjoined while in (15b), two matrix clauses (CPs) are involved in the coordination. Obviously, in both errors, the agreement features of the second conjunct subjects are copied onto both verbs (that is, on the AgrS nodes implemented in the first and the second conjunct at Morphological Structure).

Interestingly, anticipatory agreement, too, is attested as a regular mechanism in some spoken languages, e.g., in the two Papuan Highland languages Tairora and Fore. In Tairora, for instance, first conjunct verbs in a coordination structure require not only a suffix which indicates person and number of their own actor, they also require an anticipatory actor suffix, i.e., a suffix which specifies person and number of the actor of the following verb. In (16a), the suffix *-manta* indicates that the actor of the second conjunct is first person singular. The Fore example in (16b) is somewhat more complex in that the verb of the first conjunct requires the presence of the conjoiner morpheme *-ki* which is followed by the anticipatory agreement suffix *-nisí* which indicates that the subject to follow is second person dual.

(16) a. t-i-**manta**   ir-una-ra
          say-3.SG.PAST-1.SG   hear-1.SG.PAST-FOC
          "He spoke and I heard."
          (Vincent 1973: 572)
      b. kana-isí-ki-**nisí** a-ka-'kubu-a:s-e
          come-3.DL.FUT.SWREF–CONJ-2.DL   3.SG.OBJ-see-FUT-2.DL-IND
          "They(dual) will come and you(dual) will see it."
          (Scott 1978: 121)

Actually, the Papuan examples more closely resemble the speech error data than did the examples in (14). That is, the structural conditions for anticipatory agreement are the same for the regular and the erroneous process. Moreover, agreement features are always anticipated but never perseverated in coordination constructions. Still, it is noteworthy that in the speech errors, anticipatory agreement overrides regular subject agreement while in the Papuan examples, anticipatory agreement supplements regular subject agreement. That is, in Tairora and Fore, the first conjunct verbs are inflected for their own subject as well as for the subject of the second conjunct. Such double marking, however, is not attested in the errors.

4. Summary

In this paper, I have considered processes of feature copy in spontaneous German subject-verb agreement errors. I have shown that the patterns of anti-agreement that we observe in the German data are more diverse than what has been reported for the English data (spontaneous SVA-errors as well as SVA-errors induced in experimental settings). First of all, in German, verbs may not only exhibit defective agreement with a local DP that is part of a complex subject DP but also with a local DP that is part of an object phrase. In most of these agreement errors (as well as in the English data), the error triggering DP is plural and in all of them it is local to the verb at least at surface structure. The former fact can be explained when we assume that only plural nouns possess a grammatical feature for number while singular nouns lack a number feature. The latter fact suggests that agreement nodes are implemented only after movement operations have taken place, as is assumed by Distributed Morphology.

Moreover, in some of the spontaneous errors from my corpus, we observe long-distance agreement, i.e., agreement of a verb with the subject of another clause. Interestingly, long-distance agreement is also attested as a regular phenomenon in various natural languages. In contrast to local agreement, erroneous as well as regular long-distance agreement phenomena are constrained by the case specification of the agreement-triggering DP.

5. Appendix: Distribution of Subject-Verb Agreement Errors

Table 1 shows the distribution of the 111 SVA-errors from my corpus.   Note that the high number of error-triggering singular DPs in ③ is somewhat misleading, since for the most part, in the long-distance agreement errors, it is only the person feature that is responsible for the error, i.e. the "real" as well as the "wrong" subject are singular. Also note that the error types ④ and ⑤ have not been discussed in this paper (cf., Pfau 2000) for discussion of these errors as well as for extensive discussion of other slips that involve the manipulation of morphosyntactic features).

AGREEMENT OF THE VERB WITH	TRIGGERING DP IS	
	plural	singular
① **wrong DP within subject DP**	**28**	**4**
- genitive complement	18	1
- PP complement	10	1
- other	0	2
② **an object DP**	**33**	**5**
- direct object	16	0
- PP complement	17	5
③ **wrong subject**	**5**	**21**
- subject of matrix clause	1	8
- subject of embedded clause	1	6
- anticipatory agreement	1	5
- other	2	2
④ **wrong DP in relative clause construction**	**2**	**2**
⑤ **competing DP in blend**	**5**	**6**

TABLE 1. Distribution of SVA-errors (N=111).

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