How dost thou and thy master agree?: (Un)resolved agreement with conjoined subjects in German

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1 Introduction

In many languages, conjoined subjects with conflicting features for person and number lead to agreement problems and a large amount of inter- and intraspeaker variation, even to the point where speakers do not seem to be able to provide consistent judgments (cf. Morgan and Green 2005 on English, Fuß 2018 on German, Himmelreich and Hartmann 2023 on disjunctive coordination in German). There are two basic strategies to determine verbal inflection in these cases: The verb may agree with only one of the conjoined DPs as in (1-a), or a single combined value may be composed of the conflicting values (by so-called resolution rules, Corbett 1983, 2000) as shown in (1-b).¹

(1) a. How **dost** [thou and thy master] agree? how do.2sG you and your master agree (Shakespeare, *The Merchant of Venice*)

¹Katharina and I met for the first time more than 30 years ago when we both started our respective new positions at the University of Frankfurt – she as *Wissenschaftliche Mitarbeiterin* and I as a student assistant. Since then, many things have changed (as is to be expected from the perspective of a historical linguist), but there is one lasting impact of this early and formative part of our respective careers for which I will always be grateful – Katharina introduced me to 60s/70s linguistics and the notion that the study of language is not only about data and formal theories, but can be a lot of fun, too. So I gladly contribute this paper to this collection with the small provision that in my mind, at least, it will always be a festschrift presented to Katharina on her 33rd or 34th birthday. I would also like to thank Patrick Brandt, Fabian Heck, Anke Himmelreich, Benjamin L. Sluckin, and audiences at the Universities of Frankfurt and Mannheim for helpful remarks and discussion of the material presented here. As always, all remaining errors are entirely mine.

b. How **do** [thou and thy friends] manage respecting a pulpit? how do.PL you and your friends manage respecting a pulpit (*The British Friend* 8: 254, 1850)

Resolution rules typically lead to plural agreement, while person agreement is determined by the hierarchy 1 > 2 > 3 (i.e., 1 + 2/3 = 1; 2 + 3 = 2). The choice between resolution and single conjunct agreement (SCA) is often sensitive to linear order. In many languages, SCA becomes available or is even the preferred choice when the verb precedes the conjoined subject (giving rise to first conjunct agreement, FCA; cf. e.g. Aoun et al. 1994 on Arabic, Munn 1999 on English, van Koppen 2005 on varieties of Dutch, Nevins and Weisser 2019 for an overview). More generally, it has been noted that SCA/FCA is subject to adjacency effects, i.e., there is a tendency for the verb to agree with the closest conjunct (closest conjunct agreement (CCA), Corbett 2000, Morgan and Green 2005, Nevins and Weisser 2019).

While relevant phenomena have attracted quite some attention in the typological and theoretical literature, nothing much is known about their historical development (see Behaghel 1928: 45f. for some brief remarks). In this paper, I would like to take a first step towards closing this gap by investigating the diachrony of conjoined subject agreement (CSA) in German, focusing on cases where a 2sg subject is conjoined with a 3rd person form. It is shown that the present-day system (variation between (i) 2pl (ii) 3pl, and (iii) FCA/2sg in inversion contexts) has developed quite recently (roughly between 1700 and 1900), while earlier stages exhibited a stronger preference for SCA, including cases of 'distant conjunct agreement' as in (2), which are quite marginal in the modern language.

(2) ...um viel geistliche Früchte zu tragen, an denen [du und dein for much spiritual fruit to bear in which you and your himmlischer Vatter] Lust haben mögest heavenly father delight have may.2sG 'to bear much spiritual fruit in which you and your heavenly Father may delight' (Samuel Lutz: Ein Wohlriechender Straus Von schönen und gesunden Himmels-Blumen, 1736)

The paper is structured as follows. Section 2 gives a brief overview of conjoined subject agreement (CSA) in Modern German (MG), including a set of marginal patterns that have not attracted much attention in the literature. Section 3 tracks the development of CSA in the history of German, based on a set of corpus studies in the DTA (*Deutsches Textarchiv*) and the reference corpora of historical German. Section 4 sketches a theoretical analysis of the findings based on the idea that synchronic and diachronic variation in connection with CSA is the result of competing repair strategies that patch up the output of the syntactic derivation before the relevant agreement features can be realized by late insertion of a matching inflection/vocabulary item. Section 5 wraps up and presents a brief summary.

2 Modern German

Fuß

2.1 Agreement variation with conjoined subjects: major patterns

In cases where a 2sg subject is conjoined with a 3rd person subject, MG exhibits variation between three basic agreement patterns (cf. Fuß 2018 for details; see Section 2.2 for additional but somewhat exceptional options): 2pl, 3pl, and 2sg/FCA:²

(3) [du und deine angeblichen linguisten] **äussert** euch a. auch you and your alleged linguists express.2PL yourself also so gut wie [nie] zu irgendwelchen fakten as good as never to any facts 'You and your alleged linguists hardly ever say anything about any facts.' (WDD13/F13.52375: Diskussion:Florina) b. Ich wundere mich immer wieder, dass [du und Jim] euch wonder myself always again that you and Jim yourself Ι nicht verstehen! not understand.3PL 'I'm always amazed that you and Jim don't get along!' (WDD13/I17.33247: Diskussion:Immer wieder Jim) [du und deine Mitstreiterinnen] Hast überhaupt gelesen C. Have.2sg you and your fellow-campaigners even read um was es geht? about what it goes 'Have you and your fellow campaigners even read what it's about?' (WDD13/H76.14109: Diskussion:Häusliche Gewalt/Archiv/2)

The option that is expected by the person hierarchy (2pl) is also favored by descriptive grammars of German (cf. e.g. Wöllstein 2022: 127-128). However, it has been noted that many speakers actually prefer 3pl over 2pl, in particular if the 3rd person conjunct is a plural form (cf. Corbett 1983).³ This observation

²The examples from present-day German are taken from Fuß (2018), a study based on Wikipedia discussions, a subcorpus of the German reference corpus (DeReKo 2023) where conjoined subjects are more frequent than in other text types (859 cases conjoined by 'and' or 'or' in the Wikipedia 2013 (WDD13) corpus).

³Corbett (1983) attributes this tendency to wide-spread syncretism of 2pl and 3sg verb forms (e.g. *sie/ihr lacht* 'she/you2PL laughs'), which leads speakers to choose an option that unambiguously signals plural.

| Conjunct type | 2pl | 3pl | 2sg | 3sg | Total |
|---------------|------------|-------------|------------|-----------|-------|
| 2sg 'and' 3sg | 95 (35.9%) | 114 (43%) | 43 (16.2%) | 13 (4.9%) | 265 |
| 2sg 'and' 3pl | 23 (11.6%) | 143 (72.2%) | 32 (16.2%) | 0 | 198 |
| 3sg 'and' 2sg | 21 (28.8%) | 51 (69.9%) | 0 | 1 (1.3%) | 73 |
| 3pl 'and' 2sg | 0 | 0 | 0 | 0 | 0 |

is corroborated by the quantitative findings of the corpus study conducted by Fuß (2018), see Table 1.⁴

Table 1: Agreement with conjoined subjects in the WDD13 subcorpus of DeReKo

In WDD2013, 2sg agreement is only attested when du 'you' is the first conjunct. The option is particularly common in inversion contexts, where it is even more frequent than other agreement patterns, accounting for more than half of all cases. Moreover, roughly 3/4 of all 2sg cases are found with postverbal subjects as shown in Table 2.

| Inversion | 2sg | Other Agr options |
|-----------|------------|-------------------|
| yes | 57 (52.3%) | 52 (47.7%) |
| no | 18 (4.2%) | 409 (95.8%) |

Table 2: The impact of word order (inversion) on agreement choices in WDD13

2.2 Exceptional patterns: 2sg without inversion and 3sg

In addition to the major patterns described in the previous section, there are two somewhat exceptional options that are rarely discussed in the literature and are sometimes dismissed as performance errors (cf. Fuß 2018), namely 2sg agreement without inversion as in (4a), and 3sg (only found in cases where 'you' is combined with a 3sg form) as illustrated in (4b).

| (4) | a. | Was [du und deinesgleichen] als "seriös" betrachtest, kann | | | | | |
|-----|----|------------------------------------------------------------------|--|--|--|--|--|
| | | what you and your-kind as reputable consider.2sg can | | | | | |
| | | ich mir lebhaft vorstellen. | | | | | |
| | | I me vividly imagine | | | | | |
| | | 'What you and your kind consider 'reputable' I can vividly imag- | | | | | |
| | | ine.' (WDD13/A28.65153: Diskussion:Antifa/Archiv/2006) | | | | | |

⁴While Tables 1 and 2 are based on the same dataset as Fuß (2018), the numbers slightly differ from the previous paper due to some small corrections.

b. Tun wir doch mal spaßeshalber so, als ob [du und das was do we after-all once for-fun so as if you and that what du schreibst] ernst zu nehmen wäre. you write serious to take were.3sG
'Just for fun, let's pretend that you and what you write should be taken seriously.' (WDD13/F69.75386: Diskussion:Friedrich August von Hayek/Archiv/3)

Note that distant conjunct agreement as in (4-a) seems to challenge most theoretical accounts of FCA, which usually assume some mechanism to ensure that FCA is confined to orders where the verb precedes the complex subject (cf. Aoun et al. 1994, Munn 1999, van Koppen 2005: ch.2). While examples like (4-a) are quite marginal in the modern language, it will be shown below in Section 3 that they were more wide-spread in earlier stages of German, suggesting that they cannot be simply ruled out as performance errors (see Section 4 for a relevant theoretical proposal).

At first sight, examples like (4-b) might be treated as some instance of closest conjunct agreement, where the verb agrees with the linearly nearest conjunct. This option seems to be subject to a set of interesting restrictions. Upon closer inspection, it turns out that roughly half of the cases in WDD13 involve non-animate conjuncts as in (4-b). Moreover, an additional search in the German reference corpus suggests that 3sg agreement is quite regularly triggered in cases where the second conjunct is a non-referring expression, in particular in connection with quantifying expressions such as *jede(r)* 'each', *manch* 'some', *kein* 'no' and *niemand* 'nobody':⁵

(5) Mach' klar, warum genau [du und kein anderer] für diese make clear why exactly you and no-one else for this Firma genau der richtige Mitarbeiter ist. company exactly the right employee be.3sg

As pointed out to me by Fabian Heck (p.c.), the preference for 3sg in cases like (5) can perhaps be accounted for if we assume that relevant examples actually do not involve conjoined subjects but rather result from clausal coordination plus ellipsis. As a consequence, the (non-elided) finite verb can only agree with the closest subject (i.e., its clause mate): *warum genau du der richtige Mitarbeiter bist und kein anderer genau der richtige Mitarbeiter ist*

⁵In these cases, plural agreement is generally ruled out (2sg seems to be another option, though). In inversion contexts, 3sg seems to be impossible, while 2sg appears to be the preferred choice:

Schon aus der Beschreibung kannst/*kann [du und jeder andere der lesen already from the description can.2sG/can.3sG you and every other that read kann] sehen, [...] can see 'Already from the description you and everyone else who can read can see [...]' (WDD11/A02.61818: Diskussion:Ananas)

'Make it clear why exactly you and no one else is exactly the right employee for this company.' (NUN06/APR.02612 Nürnberger Nachrichten, 26.04.2006; Hilfe, ich brauche auf der Stelle einen Job! Wie bewerbe ich mich richtig)

3 Agreement with conjoined subjects in historical German

This section presents the results of a set of corpus studies in the reference corpora of historical German (ranging from Old High German (OHG) to Early New High German (ENHG)) and the DTA subcorpus of the DWDS corpus (ranging from ENHG to MG), focusing on cases where a 2sg subject is conjoined with a 3rd person form (a pronoun, or a phrasal subject) by using the coordinating conjunction *und* 'and'.

3.1 Conjoined subject agreement: from OHG to ENHG

Given the limited size of the reference corpus of Old German (c. 650,000 words; Donhauser et al. 2018), it does not come as a surprise that a relatively rare phenomenon like CSA with a 2sg conjunct is not attested in the corpus.⁶ A subsequent search in the reference corpus of Middle High German (MHG, Klein et al. 2016), which is more than three times larger than the Old German corpus, yielded 9 relevant examples (out of 27 total hits), see Table 3.⁷

| Conjunct type | 2pl | 3pl | 2sg | 3sg | Total |
|---------------|-----|-----|-----|-----|-------|
| 2sg 'and' 3sg | 0 | 0 | 2 | 1 | 3 |
| 2sg 'and' 3pl | 0 | 3 | 1 | 0 | 4 |
| 3sg 'and' 2sg | 1 | 0 | 0 | 0 | 1 |
| 3pl 'and' 2sg | 0 | 1 | 0 | 0 | 1 |

Table 3: Agreement with conjoined subjects in the reference corpus of MHG

Of course, it is not possible to draw any firm conclusions on the basis of just a handful of examples. Still, our data provide some suggestive clues to the situation in MHG. On the one hand, it appears that the vast majority of

⁶To retrieve all cases where a 2sg pronoun is conjoined with another nominative element, the search strings "inflection="SG_NOM_2" & pos="KON" & inflection=/.*NOM.*/ & #1.#2 & #2.#3" and "inflection="SG_NOM_2" & pos="KON" & inflection=/.*NOM.*/ & #2.#1 & #3.#2" were used. The searches produced no relevant examples for the combination of 2sg with a 3rd person element.

⁷The following search strings were used: "inflection=/Nom.Sg.2/ & lemma="unte" & inflection=/.*Nom.*/ & #1.#2 & #2.#3" and "inflection=/Nom.Sg.2/ & lemma="unte" & inflection=/.*Nom.*/ & #2.#1 & #3.#2".

examples are amenable to an analysis where the verb agrees only with a single conjunct, giving rise to 2sg, 3sg or 3pl (8 of 9 cases, 88.9%).⁸ On the other, there is a tendency for the verb to show plural agreement when one of the conjuncts carries plural marking (4 of 5 cases). The examples in (6) show that the agreement controller is usually (but not always) the conjunct which is closest to the verb, including 3sg elements as in (6-c) (which bears some resemblance to the MG cases discussed in Section 2.2). In all three cases where a 2sg subject controls verbal agreement, the verb precedes the complex subject. The only clear case of resolution (giving rise to 2pl agreement) is shown in (7).

- (6) a. diz hvs bist [u vnde dine sela]. this house be.2sG you and your soul
 'This house are you and your soul.' (Salomons Haus, 2-rhfrhess-PV-G > M337-G1 (tok dipl 449 - 461))
 - b. daz ouge da mitte [diu unde si] mich uerwundet habent. the eye where with you and they me wounded have.PL 'the eye with which you and they wounded me' (St. Trudperter Hohelied (A), 13_1-alem-PV-X > M113y-N1 (tok_dipl 11196 - 11207))
 - c. die fridesame consciencie die [dv vnde ein ige=lich menshe] the peaceful conscience that you and one any human habin sal. have should.3sG 'the peaceful conscience that you and every human being should have' (Salomons Haus, 13_2-rhfrhess-PV-G > M337-G1 (tok_dipl 8027 - 8039))
- (7) ...da [din sun inde du] sulet eweliche leuen there your son and you should.2PL eternally live '[...] where your son and you should live eternally.' (Rheinisches Marienlob, 13_1-wmd-PV-G > M335-G1 (tok_dipl 30112 - 30124))
- 3.2 Conjoined subject agreement: from ENHG to MG

To track the development of conjoined subject agreement from ENHG to the present-day language, two corpus studies were conducted. A first study in the reference corpus of ENHG (Wegera et al. 2021) yielded 555 hits, which were manually narrowed down to 16 relevant examples ranging from the second half

⁸Due to the loss of person distinctions with plural forms in the Alemannic dialects (so-called *Einheitsplural*), examples like (6-b) are ambiguous. Moreover, even in dialects that maintained a distinction between 2pl and 3pl forms, examples with a 3pl subject may alternatively be analysed as cases of resolution giving rise to 3pl agreement.

| Conjunct type | 2pl | 3pl | 2sg | 3sg | Total |
|---------------|-----|-----|-----|-----|-------|
| 2sg 'and' 3sg | 2 | 1 | 6 | 0 | 9 |
| 2sg 'and' 3pl | 0 | 2 | 1 | 0 | 3 |
| 3sg 'and' 2sg | 0 | 2 | 0 | 0 | 2 |
| 3pl 'and' 2sg | 0 | 1 | 1 | 0 | 2 |

of the 14th century to the second half of the 16th century, see Table 4 and the examples in (8) and (9).^{9,10}

Table 4: Agreement with conjoined subjects in the reference corpus of ENHG

- (8) a. das [du vnd dein Maister] verfürt vnd verlait wirst that you and your master seduced and misled become.2sG 'that you and your master are seduced and misled' (Buch aller verbotenen Künste, 15_2-wobd_2 > F137 (tok_dipl 19947 - 19959))
 - Werent das [alle heligen vnd du]/ Weineten bluotige trene nu while that all saints and you wept.3PL bloody tears now 'while all saints and you cried bloody tears' (Berner Weltgerichtsspiel, 15_2-wobd_2 > F096 (tok_dipl 5064 5075))
- (9) a. das [du vnd der michel] frisch vnd gesunt seit that you and the Michel fresh and healthy are.2PL 'that you and Michel are fresh and healthy' (Reuchlin: Behaim, Paulus: Briefwechsel, 16_1-ofr > F317 (tok_dipl 22 - 33))
 - b. [din gelltt vnd du] sind ewig ferflucht your money and you are.3PL forever cursed 'your money and you are forever cursed' (Das Antichristdrama des Zacharias, 16_1-wobd > F102 (tok_dipl 25264 - 25276))

While the examples in (8) exhibit agreement with a single conjunct (though (8-b) could also involve resolution), (9-a) and (9-b) are unambiguous cases of resolution, in which conjoined singular subjects control 2pl (9-a) or 3pl (9-b) agreement on the verb. All in all, ENHG seems to differ from MHG in that resolution is more common (5 clear cases out of 16 examples, 31.2%, with all but one from the first half of the 16th century). But note that single conjunct agreement still seems to be the preferred option – 2sg alone accounts for half of

⁹Due to the fact that the annotations slightly differ from the MHG corpus and are less reliable, the search string had to be adjusted: "lemma="du" & inflection=/.*Nom/ & lemma="und" & #1_=_#2 & #1^#3".

¹⁰Note that all instances labeled "3pl" come from Western High German dialects, which have lost all person distinctions in the plural part of the verbal paradigm (*Einheitsplural*).

all cases, including 3 examples where a non-inverted verb agrees with a distant conjunct as in (8-a).

To investigate the subsequent development of this system, an additional study was conducted in the DTA (2016) subcorpus of the DWDS corpus, which covers the time period from the late 16th century to the early 20th century. The search yielded 109 relevant examples, see the breakdown in Table 5.¹¹

| Conjunct type | 2pl | 3pl | 2sg | 3sg | Total |
|---------------|-----|-----|-----|-----|-------|
| 2sg 'and' 3sg | 22 | 15 | 17 | 5 | 59 |
| 2sg 'and' 3pl | 11 | 19 | 6 | 0 | 36 |
| 3sg 'and' 2sg | 4 | 4 | 2 | 3 | 13 |
| 3pl 'and' 2sg | 1 | 0 | 0 | 0 | 1 |

Table 5: Agreement with conjoined subjects in the DTA corpus

Again, there is a significant increase in the share of agreement choices resulting from resolution (38 cases of 2pl and 19 cases of 3pl in connection with singular conjuncts, 52.3%), which develops into the majority pattern in New High German (NHG). Moreover, the presence of a 3pl conjunct regularly triggers plural marking on the verb (31 of 37 cases, 83.8%). In contrast, singular agreement is the preferred choice in inversion contexts (16 of 19 cases, 84.2%), including three examples where the verb carries 3sg marking as in (10).

(10) Das weiß [nur Allah und du]. that know.3sG only Allah and you 'Only Allah and you knows that.' (Karl May, Durchs Wilde Kurdistan, 1892)

A closer look at the distribution of the individual examples over time reveals that the present-day system developed between 1700 and 1900, see the plot in Figure 1, which distinguishes between inversion and non-inversion patterns and in which each dot represents a single example.

(Late) ENHG exhibits basically the same agreement options as MG, but their distribution and relative frequency differ from the present-day language. Singular agreement is robustly attested in the earlier texts (17th/18th c., 28

¹¹The following search strings were used: for cases where first conjunct is 3sg/3pl: "PPER und @du" and "NN und @du"; for cases where the first conjunct is 2sg (conducting a separate search for each part of speech): "@du und PPER/ART/NE/NN/PIAT/PIDAT/PDS/PDAT/PIS/PPOSAT/ADJA". Note that due to wide-spread syncretism of 3sg and 2pl verb forms, a number of cases are ambiguous. I chose to annotate these cases as 2pl, apart from very few examples where the 3sg conjunct is closer to the verb and non-animate as in: *Seufzer floh'n und Thränen flossen, was noch heischt die Welt und du?* 'Sighs fled and tears flowed, what else does the world and you want?' (August von Platen: Gedichte, 1828)

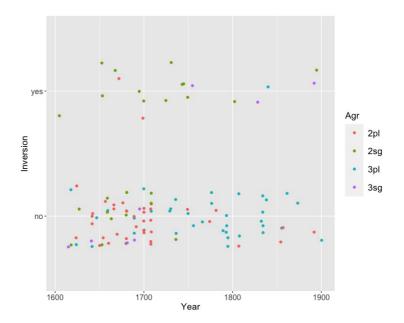


Figure 1: Agr. with conjoined subjects in the DTA corpus – distribution over time

of 87 cases (32.2%), including 10 examples with distant conjunct agreement). Later on, it is outnumbered by plural agreement (possibly due to prescriptive pressure, cf. e.g. Adelung 1782: §672, who demands that conjoined subjects trigger plural agreement on the verb, and criticizes that other grammarians accept FCA/SCA), with 3pl gaining the upper hand in the course of the 18th century. Since the 19th century, singular agreement is more or less confined to inversion contexts where the verb agrees with the closest conjunct (FCA). In other words, patterns like (2) above, where the verb agrees with a distant (2sg) conjunct, disappear from the corpus.

4 Towards a theoretical analysis – resolution as repair

The previous sections have demonstrated that conjoined subject agreement is characterized by a large amount of variation in historical stages of German, which at least in part carries over to the present-day language. While almost all logically possible patterns are attested,¹² we have also observed a number of changes affecting the distribution of the various agreement choices. More specifically, it appears that there is a general drift leading from single conjunct agreement, which was the preferred option in earlier stages, to resolution strategies giving rise to plural agreement on the verb (with 3pl overtaking at some point 2pl). The exception is 2sg, which continues to be robustly attested in inversion contexts when the first conjunct is a 2sg pronoun. In this section, I would like to add some brief remarks on the theoretical analysis of these facts.

Any theoretical analysis of the German facts must be flexible enough to capture the wide range of agreement patterns and the impact of linear order:

- resolution patterns: 2pl and 3pl (including the effect that the presence of a 3pl conjunct promotes 3pl marking on the verb)
- SCA: 2sg (preferably with the closest conjunct in MG, but also with a distant conjunct in earlier stages), 3sg (mostly confined to cases with a quantified 2nd conjunct in MG, but more wide-spread as CCA in earlier stages)

In addition, a descriptively adequate theory should rule out the possibility of 2nd conjunct agreement in cases where the verb precedes the complex subject: V_{2sg} [3sg/pl 'and' 2sg] (but note that the features of the second conjunct should be accessible to resolution rules). Moreover, a diachronic account should capture the drift from SCA to resolution (including the loss/marginalization of distant conjunct agreement).

I take it that it is quite unlikely that the data reflects variation and change in the underlying syntactic mechanisms that establish verbal agreement, at least as long as we accept the premise that the basic operations of narrow syntax (such as Agree) are stable over time. Instead, I would like to propose that the observed synchronic and diachronic variation is the result of competing (post-syntactic) repair strategies that are required in cases of conjoined subject agreement to patch up the output of the syntactic derivation before the agreement features (on T) can be realized by a matching inflection/vocabulary item in the procedure of Vocabulary Insertion (Halle and Marantz 1993). Thus, the observed changes do not affect the basic syntactic mechanisms that establish agreement, but rather a set of interface operations that facilitate spell-out (cf. Himmelreich and Hartmann 2023 on a related Optimality-theoretic approach to agreement with disjoined subjects in MG; see also Marušič et al. 2015 on Slovenian).

¹²Note that I haven't found any cases where an inverted verb agrees with a second conjunct. Interestingly, this pattern seems to be unattested cross-linguistically, see Nevins and Weisser (2019: 223f)

The basic idea I would like to pursue is that in conjoined subject agreement, the verb picks up too many features in the syntactic derivation, which calls for post-syntactic repairs to facilitate spell-out of T's agreement features (cf. Fuß 2018; for related ideas see Coon and Keine 2021, and Himmelreich and Hartmann 2023). In what follows, I briefly outline some key properties of a relevant account (the details of which I hope to flesh out in future work). I adopt an asymmetric approach to coordination, where the conjoined subjects are merged as specifier and sister of the conjunction (cf. e.g. Johannessen 1998), assuming that the head of ConjP collects the features of both conjuncts (e.g. via upward and downward Agree operations). The Merge sequence is reflected in the feature structure, that is, Conj^0 carries an ordered pair of ϕ -sets $<[\phi_1], [\phi_2]>$ that corresponds to the values of both conjuncts, and is semantically interpreted as plural (i.e., a set of individuals). When T containing an unvalued ϕ -probe ([uPerson, uNumber]) enters the derivation, it finds ConjP (or rather, the ordered ϕ -set on its head) as the closest matching goal. As a result, the person and number features of T are valued by copying the ordered pair onto T. However, since an ordered pair cannot be matched with a vocabulary item, the feature set must be patched up post-syntactically before Vocabulary Insertion can take place, either via deletion of a feature set (\rightarrow SCA), or by resolution rules that compose a single feature set from the conflicting values (which might also involve feature deletion).

Let me start with the mechanisms giving rise to SCA, because this seems to be the historically primary pattern. In cases of SCA, only a single ϕ -set from the ordered pair on T is selected by the post-syntactic computation. The residue undergoes deletion (which can be modeled in terms of Impoverishment rules, Halle 1997). I assume that the selection process is sensitive to the linear position and structural properties of the conjoined subject.¹³ There are two options: Either the hierarchically higher conjunct may activate a corresponding ϕ -set on T, or the linearly closest conjunct.¹⁴ The first option leads to FCA, including instances where the verb agrees with a distant conjunct as in (2). The second option may lead to FCA or last conjunct agreement (LCA), depending on whether the verb precedes or follows the conjoined subject. In the history of German, we can observe that the disjunctive relation between activationby-closest and activation-by-highest has been replaced by a more restrictive system in which both conditions apply, giving rise to a situation where FCA is by and large restricted to inversion contexts (there are some residues of the

¹³Note that this account is related to approaches where Agree is split up into a syntactic and a post-syntactic part, where feature valuation/activation is accomplished post-syntactically, cf. Arregi and Nevins (2012), Marušič et al. (2015).

¹⁴The two options may be linked to the timing relative to linearization: Activation prior to linearization targets the highest conjunct while activation after linearization targets the closest conjunct, cf. Marušič et al. (2015).

former system, though; see Section 2.2). Note that the unattested pattern V_{2sg} [3sg/pl 'and' 2sg] is generally ruled out, since the second conjunct is neither the highest nor the closest conjunct in this configuration.

Resolution is the result of an alternative set of post-syntactic repairs, in which single values for [person] and [number] are composed of the ordered pair of ϕ -sets in T. In line with previous literature on the topic (e.g., Dalrymple and Kaplan 1997), I assume unification of the two ϕ -sets ($< [A], [B] > \rightarrow [A] \cup [B]$), followed by (language-specifc) rules that resolve feature conflicts in the resulting unified set. Number resolution can be attributed to a rule like $[\alpha PL], [\alpha / -\alpha PL] \rightarrow [+PL]$, which ensures that the resulting value for [number] is always [+pl], regardless of the number values of the two conjuncts ([+pl] or [-pl]) (making use of so-called alpha-notation, where different manifestations of a binary feature are replaced with a variable, Chomsky and Halle 1968).

Note that at least in German, there is a basic asymmetry between number resolution (which always leads to the same outcome, namely [+plural]) and person resolution, which can lead to 2pl or 3pl marking on the verb (note that 3pl is actually a misnomer; the verbal inflection *-en* is rather a default plural marker that appears with both 1pl and 3pl subjects, [+pl] \Leftrightarrow /- \mathfrak{d} n/). In the present approach, this kind of variation can be taken to reflect different and (diachronically and synchronically) competing repairs for [person] conflicts. More precisely, 2pl results from choosing the more marked person value in line with the (universal) hierarchy 1 > 2 > 3; in contrast, 3pl can be attributed to an alternative procedure that resolves the conflict by deleting the [person] features from the unified feature set (again via Impoverishment), leading to insertion of the general plural marker *-en*, which is underspecified for person distinctions ("emergence of the unmarked", McCarthy and Prince 1994, Halle 1997).

Finally, I would like to address the question how we can account for the diachronic developments, especially the drift from SCA to number resolution. What I would like to propose is that the preference for plural agreement (2pl or 3pl) can be attributed to a general tendency to align grammatical agreement and semantic agreement (where the verb agrees with a set of individuals composed of the two conjuncts), possibly promoted by linguistic prescriptivism (cf. e.g. Adelung 1782). Note that this approach can also capture the developing bias toward 3pl: Due to wide-spread syncretism of 3sg and 2pl in the present indicative, the marker *-en* can be taken to signal [+plural] more unambiguously than the competing 2pl form *-(e)t* (see fn. 3 above).¹⁵ In addition,

¹⁵The observation that the presence of a 3pl conjunct promotes 3pl marking on the verb can perhaps be accounted for along similar lines in that overt plural marking on the conjoined subject increases the tendency to unambiguously mark plural on the verb.

it makes available an explanation for singular agreement in cases where the second conjunct is a non-referential element (see Section 2.2): Since the conjoined subject cannot be interpreted as a set of individuals, only singular forms are in line with semantic agreement in this context.

5 Concluding remarks

This paper has attempted to shed some light on the diachrony and theoretical analysis of conjunct subject agreement in German. Based on a brief review of the present-day language, which exhibits variation between three major patterns (2pl, 3pl, 2sg/FCA under inversion, plus some additional minor options), I have traced the historical developments since MHG. It has been shown that earlier stages are characterized by a preference for agreement with only a single conjunct (including patterns where the verb agrees with a distant conjunct), which gradually gives way to a system where conjoined subjects tend to trigger plural agreement on the verb. I have then outlined a realizational account of the synchronic and diachronic facts that attributes agreement variation to a set of competing post-syntactic repair strategies. These procedures are required to patch up the outcome of a syntactic derivation in which T has picked up too many features. I have argued that the general shift towards plural agreement (and 3pl, in particular) has been promoted by a general tendency to align grammatical and semantic agreement in connection with conjoined subjects (which are usually interpreted as sets of individuals).

It is evident that the brief discussion in Section 4 leaves many questions unanswered, which hopefully will stimulate future work on CSA and its historical development. In particular, more should be said about the factors that govern the choice between different repair strategies, which might include dialectal and individual preferences as well as properties of the conjoined elements (e.g. animacy, definiteness, and referentiality), word order, phonological phrasing, and last but least prescriptive pressures, possibly inviting an analysis in terms of ranked constraints as proposed by Himmelreich and Hartmann (2023) for agreement with disjoined subjects.

References

- Adelung, J. C. (1782). Umständliches Lehrgebäude der Deutschen Sprache, zur Erläuterung der Deutschen Sprachlehre für Schulen. Leipzig: Breitkopf.
- Aoun, J., E. Benmamoun, and D. Sportiche (1994). Agreement, word order, and conjunction in some varieties of Arabic. *Linguistic Inquiry* 25(2), 195–220.
- Arregi, K. and A. Nevins (2012). *Morphotactics: Basque auxiliaries and the structure of spellout*. Dordrecht: Springer.

- Behaghel, O. (1928). *Deutsche Syntax: Eine geschichtliche Darstellung*, Volume 3: Satzgebilde. Heidelberg: Winter.
- Chomsky, N. and M. Halle (1968). *The sound pattern of English*. New York: Harper and Row.
- Coon, J. and S. Keine (2021). Feature gluttony. Linguistic Inquiry 52(2), 655-710.
- Corbett, G. (1983). Resolution rules: Agreement in person, number, and gender. In G. Gazdar, E. Klein, and G. Pullum (Eds.), *Order, concord and constituency*, pp. 175–206. Dordrecht: Foris.
- Corbett, G. C. (2000). Number. Cambridge Textbooks in Linguistics. Cambridge: Cambridge University Press.
- Dalrymple, M. and R. M. Kaplan (1997). A set-based approach to feature resolution. In M. Butt and T. Holloway King (Eds.), *On-line proceedings of the LFG97 Conference*. Stanford: CSLI.
- DeReKo (2023). DeReKo (Deutsches Referenzkorpus). Mannheim: Institut für Deutsche Sprache, http://www1.ids-mannheim.de/kl/projekte/korpora/.
- Donhauser, K., J. Gippert, and R. Lühr (2018). Referenzkorpus Altdeutsch, Version 1.1. http://www.deutschdiachrondigital.de/rea/.
- DTA (2016). DTA Deutsches Textarchiv, Kernkorpus (1598–1913), provided by the DWDS (Digitales Wörterbuch der deutschen Sprache). Berlin: Berlin-Brandenburgische Akademie der Wissenschaften, https://www.dwds.de/.
- Fuß, E. (2018). Sprachliche Variation. In A. Wöllstein, P. Gallmann, M. Habermann, and M. Krifka (Eds.), *Grammatiktheorie und Empirie in der germanistischen Linguistik*, pp. 185–224. Berlin: de Gruyter.
- Halle, M. (1997). Distributed morphology: Impoverishment and fission. In B. Bruening, Y. Kang, and M. McGinnis (Eds.), *MIT Working Papers in Linguistics 30: PF: Papers at the interface*, pp. 425–449. Cambridge, MA: MITWPL.
- Halle, M. and A. Marantz (1993). Distributed morphology and the pieces of inflection. In K. Hale and S. Keyser (Eds.), *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*, pp. 111–176. Cambridge, MA: MIT Press.
- Himmelreich, A. and K. Hartmann (2023). Agreement with disjoined subjects in German. *Glossa* 8(1).
- Johannessen, J. B. (1998). Coordination. Oxford: Oxford University Press.
- Klein, T., K.-P. Wegera, S. Dipper, and C. Wich-Reif (2016). Referenzkorpus Mittelhochdeutsch (1050–1350), Version 1.0. https://www.linguistics.ruhr-unibochum.de/rem/. ISLRN 332-536-136-099-5.
- Marušič, F., A. Nevins, and W. Badecker (2015). The grammars of conjunction agreement in Slovenian. *Syntax* 18(1), 39–77.
- McCarthy, J. and A. Prince (1994). The emergence of the unmarked: Optimality in prosodic morphology. In M. Gonzàlez (Ed.), *Proceedings of NELS 24*, pp. 333–379. Amherst, MA: MIT Press.
- Morgan, J. and G. Green (2005). Why verb agreement is not the poster child for any general formal principle. In S. Mufwene, E. Francis, and R. Wheeler (Eds.), *Polymorphous linguistics: Jim McCawley's legacy*, pp. 455–478. Cambridge, MA: MIT Press.
- Munn, A. (1999). First conjunct agreement: Against a clausal analysis. Linguistic

Inquiry 30(4), 643-668.

- Nevins, A. and P. Weisser (2019). Closest conjunct agreement. Annual Review of Linguistics 5, 219–241.
- van Koppen, M. (2005). *One probe two goals: Aspects of agreement in Dutch dialects.* Utrecht Institute of Linguistics: Netherlands Graduate School of Linguistics.
- Wegera, K.-P., H.-J. Solms, U. Demske, and S. Dipper (2021). Referenzkorpus Frühneuhochdeutsch (1350–1650), Version 1.0. https://www.linguistics.ruhr-unibochum.de/ref/. ISLRN 918-968-828-554-7.
- Wöllstein, A. (2022). Duden Die Grammatik. Struktur und Verwendung der deutschen Sprache. Satz Wortgruppe Wort (10 ed.), Volume 4. Berlin: Dudenverlag.