

Agreement with PERSON Mismatch Coordinations

Introduction. DP-coordinations with a mismatch in PERSON features call for additional resolution rules to determine the values the agreement target has to copy. PERSON resolution typically follows a hierarchy of the form $1 \succ 2 \succ 3$ (Zwicky 1977, Corbett 1983) – with one well-known exception, namely German verbal agreement with coordinated subjects (Corbett 1983, 2006). The pattern in (1) shows consistent resolution agreement in NUMBER. PERSON resolution, however, cannot account for 3PL in (1-b). None of the judgements change if the order of the conjuncts is switched. Hence, an alternative strategy along the lines of *Closest Conjunct Agreement* (Bhatt & Walkow 2013, Marušič et al. 2015) cannot provide a solution.

- (1) a. Ich und mein Freund trag-en zu viel Verantwortung.
 I and my friend carry-1PL too much responsibility
 b. Du und dein Freund trag-t/**trag-en** zu viel Verantwortung.
 you and your friend carry-2PL/**carry-3PL** too much responsibility
 c. Ich und du *trag-t/trag-en zu viel Verantwortung.
 I and you carry-2PL/carry-1PL too much responsibility
 ‘I and my friend/You and your friend/I and you carry too much responsibility.’

I propose an analysis, couched in the framework of *Distributed Morphology* (Halle & Marantz 1993, 1994), that derives resolution agreement with the help of *Impoverishment* (Bonet 1991, Frampton 2002), rather than stipulating a hierarchy (Corbett 1983, 2006) or mechanically increasing the feature specification of the vocabulary items (Darymple & Kaplan 2000). This, ultimately, opens up a backdoor for agreement patterns which diverge from the PERSON hierarchy, as is shown in (1).

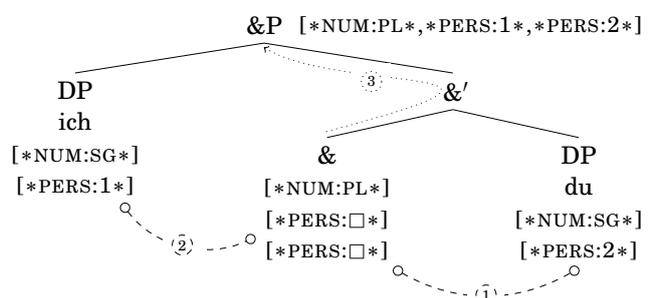
Morphology. In order to derive the paradigm shown in table 1, I propose the vocabulary items given in (2). Following Müller (2006), the marker (e) is abstract in that its phonological realization depends on whether there is stem alternation from present to past: (e) $\rightarrow \emptyset/\emptyset$ if there is no stem alternation (weak forms) and (e) $\rightarrow \emptyset$ if there is stem alternation (strong forms). Moreover, *Fission* (Noyer 1992) ensures that weak past tense inflectional markers can contain the additional vocabulary item: *-te* (see also Müller 2006). Following recent assumptions in Albright & Fuß (2012) and Sauerland & Bobaljik (2013), I assume that the 2PL and 3SG forms are homophonous. Evidence pointing towards this conclusion is, among others, the stem vowel alternation triggered by (2-a) in contrast to (2-e): compare 2PL *trag-t* to 3SG *träg-t* for the verb *tragen* in (1).

	STRONG				WEAK			
	PRES		PAST		PRES		PAST	
	SG	PL	SG	PL	SG	PL	SG	PL
1 st	-ə	-n	-∅	-n	-ə	-n	-te-∅	-te-n
2 nd	-st	-t	-st	-t	-st	-t	-te-st	-te-t
3 rd	-t	-n	-∅	-n	-t	-n	-te-∅	-te-n

Table 1: *Verbal inflection markers in German*

- (2) a. /-t/ \leftrightarrow [−SPEAKER, −HEARER, −PL, +PRES] d. /-n/ \leftrightarrow [−HEARER, +PL]
 b. /-te/ \leftrightarrow [−PRES, −STRONG] e. /-t/ \leftrightarrow [+HEARER, +PL]
 c. /-st/ \leftrightarrow [+HEARER, −PL] f. /-(e)/ \leftrightarrow []

The Proposal. I assume that the coordinator *und*, being the head of its own functional projection and taking the conjuncts as its arguments (Munn 1993, Zhang 2009), bears an already valued NUMBER feature for plural and separate unvalued PERSON probes that gather the PERSON features of its arguments via *Cyclic Agree* (Béjar 2003, Řezáč 2003, Béjar and Řezáč 2009). The valued ϕ -features project to the root node &P which acts as the closest goal for agreement with T. This mechanism opens the doors for resolution agreement. Mimicking the denotation of the *sum operator* \oplus , proposed for non-clausal coordination (Link 1983, Hoeksema 1983, Krifka 1990), I will assume that person resolution is performed by the *set union* of the PERSON features of the conjuncts (see



also Darymple & Kaplan 2000). With the use of the decomposed PERSON features [\pm SPEAKER] and [\pm HEARER] (also needed to capture the 1/3 syncretism, see Frampton 2002), the resolved functional morphemes on &P are shown in (3) (ignoring for simplicity the weak/strong and present/past distinction). In order to derive the agreement pattern for PERSON mismatch coordinations we need one impoverishment rule, shown in (4).

- (3) a. 1SG \cup 3SG = [+SPEAKER, -SPEAKER, -HEARER, +PL]
 b. 2SG \cup 3SG = [+HEARER, -HEARER, -SPEAKER, +PL]
 c. 1SG \cup 2SG = [+SPEAKER, -SPEAKER, +HEARER, -HEARER, +PL]
- (4) *Impoverishment*: [+HEARER] \rightarrow \emptyset / [+SPEAKER]___

The vocabulary items in (2), together with (3) and (4), will now derive the pattern observed in the data above. For (3-a) only (2d) *-n* is compatible, impoverishment applies vacuously. Contexts (3-b) and (3-c) are compatible with both (2d) *-n* and (2e) *-t*, respectively, but only in the latter does impoverishment apply and leave (2d) *-n* as the only exponent compatible.

Evidence. The impoverishment rule in (4) is independently motivated by markedness requirements (Noyer 1992, Nevins 2011, Arregi & Nevins 2012): since German does not provide a form for 1_{incl} =[+HEARER,+SPEAKER], (4) reduces markedness for the feature combination [+HEARER, +SPEAKER] by deleting [+HEARER]. The second piece of evidence comes from possessor agreement – a German agreement pattern (Heck & Müller 2007) which in fact does follow the PERSON hierarchy, see (5). The vocabulary items for the plural possessive roots: */uns-/* \leftrightarrow [+SPEAKER,+PL], */eu-/* \leftrightarrow [+HEARER,+PL], */ihr-/* \leftrightarrow []. This feature decomposition automatically derives (5): for (5-a) as well as for (5-c), *uns-* and *ihr-* are compatible but the former is more specific, while for (5-b), *eu-* and *ihr-* are compatible but, again, the former is more specific.

- (5) a. [Ich und mein Mann]_i haben unsere_i/*ihre_i Karten vergessen.
 I and my husband have.1PL POSS.1PL/POSS.3PL tickets forgotten
 b. [Du und dein Mann]_i habt eure_i/*ihre_i Karten vergessen.
 you and your husband have.2PL POSS.2PL/POSS.3PL tickets forgotten
 c. [Ich und du]_i haben unsere_i/*eure_i Karten vergessen.
 I and you have.1PL POSS.1PL/POSS.2PL tickets forgotten
 ‘I and my husband/You and your husband/I and you have forgotten our/your/our tickets.’

An alternative analysis, following the *agreement hierarchy* (Corbett 1979) where pronoun agreement patterns like (5) are rather handled as semantic agreement, can be questioned on the basis of agreement resolutions patterns found in Dutch (Timmermanns et al. 2004) where reflexive pronouns show exactly the same distribution as the verbal agreement affixes shown in (1). In short: *ik en jij ... ons* (*I and you ... ourselves*), *jij en je vriend ... jezelf* (*you and your friend ... yourselves/themselves*), *ik en mijn vriend ... ons* (*I and my friend ... ourselves*). This pattern can be captured easily by the current system with the following vocabulary items: */ons/* \leftrightarrow [+SPEAKER,+PL], */je/* \leftrightarrow [+HEARER], */zich/* \leftrightarrow [-SPEAKER].

Conclusion. The current proposal provides strong evidence for the post-syntactic nature of the morphological component, as it enables language systems to show agreement patterns impossible to derive with their syntactic set-up only. Optional agreement is derived by two exponents being equally specific – a lexical choice that only becomes visible in resolution agreement. Whether a language follows the PERSON hierarchy depends on the extent of underspecification of 3PS compared to 2PS and 1PS, while (4) assures the 1+2 \rightsquigarrow 1 outcome.

Selected References:

Corbett (1983) “Resolution rules: agreement in person, number, and gender”, in: *Order, Concord, and Constituency*, Foris: Dordrecht, 175-206. **Müller (2006)** “Pro-Drop and Impoverishment”, in: *Form, Structure, and Grammar*, Berlin: Akademie Verlag, 93-115. **Nevins (2011)** “Marked Targets versus Marked Triggers and Impoverishment of the Dual”, *LI*, 42:413-444. **Timmermanns et al. (2004)** “Disagreement on agreement”, *Linguistics*, 42:905-929.