

Variation in the binding of indexicals—Feature sharing and a return to traditional binding

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Synopsis This paper shows, based on the distribution of bound indexicals in four Germanic languages, that binding is not sensitive, nor can it be assumed to be driven or mediated by functional heads as postulated in many current Agree approaches to binding (Reuland 2001 et seq., Heinat 2006, Chomsky 2008, Kratzer 2009). Instead data are provided that argue for a return to the traditional view that binding requires a direct dependency between the antecedent and the variable (Hicks 2006, 2009, Schäfer 2008). I propose that this dependency is best formalized as Reverse Agree (Wurmbrand 2011, 2012) constrained by a locality condition reminiscent of Rule H (Heim 1993, Fox 1998) and the concept of feature sharing proposed in Pesetsky & Torrego (2007).

Fake indexicals Bound variable [bv] interpretations are generally available for 1st/2nd person pronouns in constructions such as *Only I did my best* (*my* is not referential but varies with the alternatives of *only*). Such bound fake indexicals [FIS] where 1st person is not interpreted as the speaker are, however, restricted in relative clauses, (1): English and Dutch [E/D] allow them, whereas German and Icelandic [G/I] prohibit them (*my* can only be referential in (1b,d)). Kratzer (2009) proposes a morpho-syntactic spell-out approach for (1a,b) in which the feature sets of the relative pronoun (WH.F.SG), where F=3rd person, T, v (1SG), and the POSS(essor) unify, leading to conflicting 1/3 feature specifications on T and POSS, which cannot be realized in G (note, however, that the modified (1b), which involves a verb showing synchretism for 1/3.SG, still does not allow FIS). In E, markedness rules allow ignoring certain features, and the spell-out dilemma of e.g., 1.3.SG can be resolved in favor of person for POSS (1.SG—*my*) and in favor of gender for verbs (3.SG—*takes*.3.SG). This account does not address why only some languages have such markedness rules, in particular not why D patterns with E and I with G.

- (1) a. *I am the only one who takes care of her/my son.* ✓bv
 b. *Ich bin der einzige, der seinen^{✓bv} / meinen^{*bv} Sohn versorgen kann*
 I am the.M.SG only who.M.SG his^{✓bv} / my^{*bv} son take.care.of can.1/3.SG
 ‘I am the only one who can take care of his/my son.’ [based on Kratzer 2009]
 c. *Ik ben de enige die m’n best gedaan heeft* ✓bv
 I am the only.one who my best done has.3.SG
 ‘I am the only one who has done my best.’ [Maier and de Schepper 2010: 4, (11)]
 d. *Ég er sá eini hérna sem getur séð um börnin sín^{✓bv} / mín^{*bv}*
 I am DEM only here that can.3.SG see about children SELF^{✓bv} / my^{*bv}
 ‘I am the only one here who can take care of his/my children.’ [G. Harðarson, p.c.]

Direct licensing by antecedent [AC] Mediated Agree approaches rely on anaphoric licensing by v/C/T, rather than a dependency between AC and the bindee. Alternations with identical inflectional heads but different word orders in G show that the crucial relation is c-command between the AC and the bindee: a bv interpretation is only possible in (2) when the AC c-commands the pronoun.

- (2) a. *weil {unser^{*bv} Sohn} nur uns^{AC} {unser^{✓bv} Sohn} versorgt*
 since {our.NOM son} only us.ACC {unser^{✓bv} Sohn} take.care.of.3.SG
 ‘since our son is only taking care of us.’
 b. *der Tag an dem {unser^{*bv} Sohn} nur uns^{AC} {unser^{✓bv} Sohn} versorgt hat*
 the day on which {our.NOM son} only us.ACC {unser^{✓bv} Sohn} taken.care.of has
 ‘the day on which our son took care of only us/only we were taken care of by our son’

Further evidence for a direct AC–bindee dependency comes from inversion in specificational contexts. In both E/D, FIS are impossible when the relative DP_{REL} precedes the matrix pronoun as in (3b,c). Dutch is particularly important here since no change in matrix agreement arises—the subject remains the 1.SG pronoun which the matrix verb obligatorily agrees with. Yet despite this agreement, a FI is not licensed but variable binding can only be achieved with a 3rd person pronoun.

- (3) a. *I^{AC} am the only one who has done my^{✓bv}/his^{✓bv} best.*
 b. *[The only one who has done *my^{*bv}/his^{✓bv} best] is me^{AC}.*
 c. *[De enige die *m’n^{*bv} / z’n^{✓bv} / haar^{✓bv} best gedaan heeft] ben ik*
 [the only.one who *my / his / her best done has.3.SG] am.1.SG I
 ‘The only one who has done her best is me.’ [P. Fenger, p.c.]

Gendered relatives T1 shows that the two language groups differ in the morphological make-up of the head DP of the relative clause (in G also the relative pronoun): DP_{REL} shows gender distinctions in the singular in G/I but not in E/D. I propose that this difference, formulated as

T1	English	Dutch	German	Icelandic
F.SG	<i>the only one</i>	<i>de enige</i>	<i>die einzige</i>	<i>sú eina</i>
M.SG	<i>the only one</i>	<i>de enige</i>	<i>der einzige</i>	<i>sá eini</i>
PL	<i>the only ones</i>	<i>de enigen</i>	<i>die einzigen</i>	<i>þær einu</i>

Rule H_{PF} is responsible for the attested binding differences. The semantic dependencies in cases such as *I am the only one who did her/my best* are: i) predication (*I* » *the only one*), ii) rela-

tivization (movement of REL.OP or head NP, λ -abstraction), and iii) binding of the possessive (yielding I_x *am the only x, such that x does x's best*). Following Pesetsky and Torrego (2007), features specified on both elements in an Agree relation are linked (literally shared) and Agree between two unvalued elements is possible as well. The first dependency in (4) is binding/Agree between POSS and (*the one*) *who*, which I assume start the derivation unvalued (Kratzer 2009). However, a difference arises at this step already: in G/I the features shared are gender [σ] and number [#] (*der/die einzige(n)*), in English only # (since *the only one(s) who* is only specified for #). In both cases, the relevant features are linked but not valued. Eventually, the two further dependencies (relativization, predication) transitively link the features of the matrix subject to those of the POSS. If the subject is female, the shared features in G/I will be F.SG, and the POSS is realized as 'her' (3rd person [π] corresponds to the lack of person). In E/D, only SG is shared, and the POSS therefore needs to acquire the remaining feature values in a different way. I propose that this can happen via an additional feature sharing relation with an element linked (directly or indirectly) to the POSS already via the chain of dependencies. Thus, in English (4b), POSS can draw σ or π from the features of the matrix subject—if the former, *her* will arise, if the latter *my* will arise. Lastly, to exclude 'reaching up' as in (4b) in G/I, I propose a locality constraint, (5), similar to Heim's (1993) Rule H for binding.

- (4) I THE ONLY \emptyset WHO POSS
- a. $i\varphi$: 1.F.SG » σ .# σ .# » π . σ .# σ .# → F.SG 'her' G
- b. $i\varphi$: 1.F.SG » # [+HUMAN] » π . σ .# # → SG; (F: *her*; 1: *my*) E

- (5) Rule H_{PF}: A variable x cannot Agree with an antecedent α , in cases where a more local AC β (with the same binding index) could Agree with x and share morphosyntactic features with x .

Further evidence Rule H_{PF} is a general constraint on Agree/feature valuation not restricted to FIS, and as such covers a broader empirical domain than Kratzer's markedness rules. German gender agreement provides further evidence for a Rule H_{PF} approach. German nouns like *Mädchen* 'girl' are formally/morphologically neuter and semantically feminine (indicated as N+F). In such cases, (6a), a bound pronoun can agree either with the formal or the semantic gender of the AC. In contrast, nouns like 'person', which are formally feminine but semantically gender-neutral, can only trigger formal agreement, (6b). When such nouns head relative clauses, the same distribution arises: (6c) allows formal or semantic agreement of POSS with *the only girl*; (6d) only allows formal agreement. Crucially, although formal gender can be ignored in (6c), agreement with the matrix subject (a FI) is still excluded. This is exactly what Rule H_{PF} predicts. Binding/feature valuation is always determined within the relative DP in German—a bv must realize the formal or, when available, semantic features of DP_{REL}—i.e., the most local binder.

- (6) a. *Das Mädchen_i mag ihren/seinen_i Freund.* b. *Diese männl. Person_i mag ihren/*seinen_i Freund*
the.N girl.N+F likes her/its friend this.F male person likes her/*his friend
- c. *Ich bin [das einzige Mädchen, das sein/ihr/*my Bestes geben will.]*
I am [the only girl who its/her/*my best give want.1/3SG]
'I am the only girl who wants to give her/my best.'
- d. *Das Mädchen ist [die einzige (Person), die ihr/*sein Bestes geben will.]*
the.N girl.N+F is [the.F.SG only (person) who.F.SG her/*its best give wants]
'The girl is the only one/person who wants to give her best.'