

Bound pronouns are not ‘minimal pronouns’

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Overview: The construction in (1a,b) presents a famous case of apparent ‘LF-PF mismatch’: the bound pronouns (in bold) surface with ϕ -features that don’t contribute their expected semantic content, as they don’t restrict the range of individuals over which *only* quantifies (1c). I present an analysis of (1) in which, contra appearance, the ϕ -features are interpreted through and through. I then compare it to the ‘minimal pronouns’ approach (Kratzer 2009; Wurmbrand 2017 a.o.) - the only existing account so far for (1) - on which the bound pronouns are feature-less at LF and acquire features only at PF as a result syntactic agreement with their antecedent. I show that my analysis is superior when considering a broader range of data. I conclude that (1a,b) is not a case of ‘LF-PF mismatch’, and does not require postulating an agreement mechanism.

- (1) a. *I am the only one who did **my** homework* (✓ bound; based on Partee 1989)
 b. *Sue is the only one who did **her** homework* (✓ bound, not restricted just to females)
 c. SUBJ is the only individual in $\{x: x \text{ did } \underline{x}'\text{s homework}\}$ (values of x not ϕ -restricted)

Proposal: My analysis relies on two key ingredients: (i) expressions have ordinary and focus interpretations (Rooth 1985); ϕ -features on pronouns are always interpreted in the ordinary interpretation but crucially not in the focus interpretation (Sauerland 2013; Bassi and Longenbaugh 2017, a.o.), see (2). (ii) in DPs of the form [*the only*/(*Adj-est*) NP *who...*] (henceforth ‘superlative DPs’), *only*/(EST) associates with focus on the trace of the relative clause (Bhatt 2002:86). These assumptions derive the correct result for (1), as follows. The LF of (1a) is in (3). The head NP totally reconstructs (Bhatt) and undergoes Trace Conversion (Fox 2002, a.o) by inserting the type-shifter THE. The variable x_6 in the position of the trace is silently F-marked and associates with the reconstructed *only*. The subject of the embedded clause binds *my*, whose features are crucially present at LF. (4)-(6) give details of the semantic composition. The presuppositional content of the ϕ -features on my_7 project the way presuppositions do, so the λ_7 -abstract can only apply to the speaker, (4a). This restriction is not present at the level of focus alternatives, (4b), due to the conjecture in (2). (5) gives a focus-sensitive entry for *only*. When *only* combines with its two arguments, the result is equivalent to “only x_6 did their homework”, with the presupposition (whose source is still the ϕ -features on *my*) that x_6 is the speaker. After x_6 gets bound by λ_6 , the result is the predicate in (6), defined only for the speaker and only if they did their HW, and maps to 1 iff no one else did their own HW. (6) applies to the matrix subject to yield the correct meaning of (1a) (I assume that the definite article *the* of superlative DPs is vacuous in a post-copular position, as opposed to argumental positions; see e.g. Beaver and Coppock 2015 for arguments. The superlative DP is thus predicative, type $\langle et \rangle$). (7) is the result of an analogous derivation for (1b), yielding a predicate that’s defined only for female individuals, but that returns 1 iff no one else - whether male or female - did their HW. The ‘semantic inertness’ of the features in (1a,b) is thereby derived, without actually assuming that those features are not represented at LF.

- (2) ϕ -features aren’t interpreted in focus alternatives (Sauerland 2013; Jacobson 2012, a.o.)
 a. $\llbracket 1\text{ST-SG} \rrbracket = \lambda x: \mathbf{x = the speaker. } x$ b. $\llbracket 1\text{ST-SG} \rrbracket^f = \{\lambda x: \mathbf{x \in D_e. } x\}$
 $\llbracket \text{FEM-SG} \rrbracket = \lambda x: \mathbf{x is female. } x$ $\llbracket \text{FEM-SG} \rrbracket^f = \{\lambda x: \mathbf{x \in D_e. } x\}$
 (3) LF: I am the ~~only one~~ (who) λ_6 [$\llbracket \text{only} [\text{THE one } [x_6]_F \rrbracket \rrbracket \lambda_7 t_7$ did $\llbracket \mathbf{1ST-SG } x_7 \rrbracket$ homework]
my
 (4) a. $\llbracket \lambda_7 [t_7$ did $\llbracket \mathbf{1ST-SG } x_7 \rrbracket$ ’s homework] \rrbracket b. $\llbracket \lambda_7 [t_7$ did $\llbracket \mathbf{1ST-SG } x_7 \rrbracket$ ’s homework] \rrbracket^f
 $= \lambda x: \mathbf{x = the speaker. } x$ did x ’s HW $= \{\lambda x: \mathbf{x \in D_e. } x$ did x ’s HW $\}$
 (5) $\llbracket \text{only } \alpha_{\langle e \rangle} \beta_{\langle et \rangle} \rrbracket = \text{Presup: } \llbracket \beta \rrbracket (\llbracket \alpha \rrbracket) = 1. \text{ Asserts: } \forall y_{\neq \llbracket \alpha \rrbracket} \in \llbracket \alpha \rrbracket^f, \forall Q \in \llbracket \beta \rrbracket^f : Q(y) = 0.^1$
 (6) $\llbracket \lambda_6 \llbracket \llbracket \text{only THE one } [x_6]_F \rrbracket (4a) \rrbracket \rrbracket = \lambda x: \mathbf{x = speaker} \wedge x$ did x ’s HW. $\forall y_{\neq x} [\neg y$ did y ’s HW
 (7) $\llbracket \lambda_6 \dots \llbracket \llbracket \text{FEM-SG } x_7 \rrbracket$ homework] $\rrbracket \rrbracket = \lambda x: \mathbf{x is female} \wedge x$ did x ’s HW. $\forall y_{\neq x} [\neg y$ did y ’s HW

A strict reading for the bolded pronouns in (1a,b) can be gotten by almost an identical derivation, only difference being that the variable x_7 remains free throughout the derivation (so it isn’t bound by $\forall y$ in 6-7). In this case the predicate in (6) is not restricted to the speaker, and the one in (7) is not restricted to females.

¹*only*’s entry makes reference to alternatives of **both** its arguments (not just the subject). This assumption is needed for the composition to work. Evidence for it is that clause-initial *only* can associate with focus in the VP, as long as it also associates with focus in the subject: *there was almost no dancing; Only SUE danced with JOHN.*

Comparison: The present proposal stands in contrast to the ‘minimal pronoun’ approach, according to which the bolded pronouns in (1) enter the derivation without interpreted features, acquiring their surface realization as a result of syntactic agreement. That approach can explain the semantic inertness of the ϕ -features with a less sophisticated LF than (3). On Wurmbrand’s recent account, for example, a chain of Agree-inducing operations result in copying the semantically-active features from the c-commanding matrix subject onto the bound pronoun at PF. However, Jacobson (2012) noted an undergeneration problem for the agreement approach; I show that it is solved on my proposal. The issue comes from a minimal variant of (1b) as in (8)-(9), in which the superlative DP is in an argument position (i.e., referential) instead of a post-copular one (i.e. denoting a property). Here, gender on the bound *her* has a ‘double life’: (i) on the one hand, it seems to be semantically interpreted, because the superlative DP as a whole must refer to a female individual; (ii) on the other hand, just like in (1b), gender doesn’t restrict the range of individuals over which *only* quantifies (the students that didn’t do their homework could be male), so in some sense gender **isn’t** interpreted. The conjunction of these two facts is problematic for the agreement story: if gender is present at LF on *her*, (ii) is unexplained; and if it is present only at PF, (i) is unexplained. In contrast, the data is exactly what’s predicted on the present proposal: applying *the* to (7) can only denote a **female** individual (due to the domain restriction in (7)), and whoever it refers to is the only individual - **male or female** - who did their own HW. The correct pattern is predicted due to the system’s sensitivity to two separate levels of interpretation, only one of which interprets ϕ -features.

- (8) [_{DP} *The only student who did **her** homework*] got an A (✓ bound; cf. Jacobson 2012, ex. 25)
 (9) *John talked to* [_{DP} *the only student who did **her** homework*] (✓ bound)

Superlative DPs in argument position also pose an interesting **over**generation problem for syntactic agreement, this time when person features are involved. In (10) there is no bound reading, but on the agreement story it’s not clear what should block a derivation where *my* is base-generated without interpreted 1ST-SG features, and those features are transmitted to it at PF from *I*. Proponents of that theory must assume that the relevant transmission can only apply in copular/predicative constructions, for some reason to be spelled out.

- (10) *I voted for* [_{DP} *the only one who did **my** homework*] (✗ bound, ✓ strict)
 ✗ bound reading: I voted for the only person in {*x*: *x* did **x**’s HW}
 ✓ strict reading: I voted for the only person in {*x*: *x* did **my** HW} (# given world knowledge)

I argue that the present account can explain (10) in a principled way, which crucially relies on the hypothesis that the features on *my* are always interpreted (in the ordinary semantics). To get a bound reading for *my* in (10), the predicate in (6) would have to be applied to (argumental) *the* to yield the denotation of the object DP. The result would be a referring expression that **necessarily picks out the speaker**, given the definedness condition in (6).² But this configuration is a violation of the *i-within-i* constraint in (11), designed originally to capture the lack of intended co-reference in *_{[DP} *the friend of his₁ boss*]₁ (c.f. e.g. Marty 2017).

- (11) *i-within-i constraint*: A referential DP α properly dominating a DP β cannot be co-valued with β .

That the intended bound reading in (10) is a violation of (11) is derived on Heim’s (2009:ex. 12) explication of ‘co-valuation’: coreference in any world under any variable assignment that extends the original assignment given by the utterance context (‘presupposed coreference’). The object DP and the *my* it dominates are co-valued in this sense, as they both denote the speaker under any extension of the original assignment; the interpretation of the person feature, together with the projection mechanism of presuppositions, make sure of that. The strict reading of (10) is possible because the object DP can pick out any individual if *my* is a free variable. This predicts correctly that ‘accidental (=non-presupposed) coreference’ is possible, but only on the strict reading of *my* (e.g. *The only one who saw my parents is me* only has a strict reading for *my*). Finally, recall that in (1) the DP isn’t referential but predicative; therefore (11) doesn’t rule out (1a).

Selected References: Bassi, I & Longenbaugh, N. 2017. Features on bound pronouns: against syntactic agreement. [LINK](#). Bhatt, R. 2002. The Raising analysis of relative clauses. [LINK](#). Beaver, D & Coppock, E. 2015. Definiteness and determinacy. [LINK](#). Marty, P. 2017. Implicatures in the DP domain. [LINK](#). Heim, I. 2009. Forks in the road to Rule I. [LINK](#). Jacobson, P. 2012. Direct Compositionality and ‘uninterpretability’. [LINK](#). Kratzer, A. 2009. Making a pronoun. [LINK](#). Sauerland, U. 2013. Presuppositions and the alternative tier [LINK](#). Wurmbrand, S. 2017. Feature sharing. [LINK](#).

²So on the bound reading, (10) would basically assert ‘the speaker voted for the speaker’. It might be tempting then to explain the unavailability of this reading in terms of a condition C violation, but this strategy would not be successful: a bound reading for *my* in (10) is absent also if the subject is not 1ST person, removing condition C configuration.