Addressing Supersloppiness

Background and goal - According to Kaplan's (1977) Fixity Thesis, the semantic value of indexicals, i.e. first and second person pronouns (1P/2P), is fixed by the context of the actual speech act and cannot be manipulated by any logical operator: *I* refers to the speaker and *you* to the addressee. This theory has been challenged by empirical facts, especially the ability of 1P/2P to be bound in English focus constructions and to shift their reference in attitude contexts in some other languages. The goal of this paper is to provide novel data from English that further refute the Fixity Thesis. Crucially, my new contribution is to show that there is an intrinsic grammatical dependency between the two context parameters speaker *s* and addressee *a*: 1P can bind 2P and *vice versa*. This is so, I argue, because *I* and *you* can be understood as descriptions (e-type pronouns), i.e. resp. "your addressee" and "my addressee".

Novel English data - The argument is based on VP-ellipsis and focus constructions such as (1)-(2).

(1) i. *(Romeo to Juliet)* "I love you" ii. *(Juliet to Romeo)* "I do too".
   a. Juliet means: "I love you too". [Juliet loves Romeo] [79%] *(supersloppy reading)*
   b. Juliet means: "I love me/myself too". [Juliet loves Juliet] [49%] *(strict reading)*

(2) *(Tom to Sue, in a ballroom dancing class)* "Only I make you swirl".
   a. No other dancer$_i$ makes his$_i$ partner swirl. [65%] *(supersloppy)*
   b. No other dancer makes Sue swirl. [65%] *(strict)*

(1) differs from canonical cases of VP-ellipsis with sloppy and strict readings respectively derived from lambda-bound and referential representations of 3P (Ross 1967, Fiengo and May 1994, a.o.). In particular, (1) does not exhibit a standard sloppy reading, but what I call a supersloppy reading in (a). The elided pronoun *you* cannot be standardly bound by *I* since they do not share the same person feature; it is not referentially identical to the antecedent *you* (i.e. Juliet) either as under the strict reading in (b). But *you* in (a) depends on the reference of *I*: it refers to the addressee of the second speaker Juliet, namely Romeo.

The focus construction in (2) can be interpreted in the same supersloppy way: in (2a), the denotation of *you* co-varies with the subject in the focus alternatives involving other salient pairs of dance partners.

The data of this study have been experimentally checked using a controlled questionnaire on Qualtrics. 30 English sentences were presented to 28 native English speakers, who had to decide to which extent the different interpretations (esp. strict or supersloppy) are accessible based on a continuous scale 0-100. Thus (1a) was on average judged available at 79%, and (2a) at 65% (scores are noted between brackets).

Problems of previous approaches – Previous approaches to 1P/2P fail to derive (1a) and (2a).

(a) Variable binding analyses treat 1P/2P as variables similar to 3P based on data like (3) (Heim 1991).

(3) Only I did my homework. a. $\lambda x.$ x did x's homework. Nobody$_i$ else did her$_i$ homework *(sloppy)*
   b. $\lambda x.$ x did my homework. Nobody else did my homework *(strict)*

All variants of this approach (Heim 2008a, Kratzer 2009, Sudo 2012, a.o.) assume that bound 1P/ 2P do not denote constant indexicals, but variables interpreted *via* the assignment function g. While deriving (3a), they undergenerate the supersloppy readings in (1a)-(2a) since they crucially rely on the sharing of person feature between binder and bound pronoun; but *I* and *you* do not have the same person feature.

(b) Based on shifted indexicals in attitude contexts in languages like Amharic or Zazaki, context shifting approaches (Schlenker 2003, Anand 2006, a.o.) assume that the context can be manipulated contrary to the Fixity Thesis. Extending this approach to our cases, we can derive (1)-(2)a by supposing that the characters (1)' and (2)' can be copied into ellipsis sites and quantified over by *only* respectively.

(1)' $\lambda c.\ \lambda x.$ x loves a_c (2)' $\lambda c.$ s_c makes a_c swirl

But this approach wrongly predicts readings (4)-(5) to be available, while the contrast between (1) and (4)-(5) is strongly significant ($p<0.0001$): assuming character copy in ellipsis clearly overgenerates.

(4) *(Juliet to Romeo)* i- "I love you." *(R to J)* ii- "Count Pâris does too" (*love you [i.e. Juliet]) [12%]

(5) *(R to J)* i- "Pâris loves you." *(J to R)* ii- "Rosaline does not" (*love you [i.e. Romeo]) [11%]

Hypothesizing context quantification by *only* also overgenerates: it wrongly predicts that any coordinate of the context can be quantified over, while (6) shows that *here* cannot vary in the focus alternatives.

(6) *(Tom on the phone with friends living in different cities)* Only I like it <u>here</u>. $\lambda c.$ s_c like l_c
   *None of Tom's friends like the city where they live. [44%, significant contrast with (2a): $p=0.004$]

(c) An analysis in terms of complex focus, where both *I* and *you* are focused, could appear to capture the facts: this correctly creates alternative pairs of individuals in the focus meaning. This analysis is however not generally applicable: not all speakers have to stress *you* in (2); none does in (1); and in languages with clitics like Romance languages, a clitic has to be used in (1)-(2), which cannot be focused.

Proposal – The key to derive supersloppy readings, I propose, is to hypothesize a specific grammatical dependency between the context parameters speaker *s* and addressee *a*. Specifically, I assume that *I* and *you* can be construed as e-type pronouns (Evans 1977, Cooper 1979, a.o.) containing a lexically fixed function "addressee" A as defined in (7). Note that "addressee" here does not correspond to the common notion of addressee, but expresses reciprocal dependency between two discourse participants without necessarily implying that words are uttered (cf. context of thoughts, Schlenker 2003).

(7) a. A = {<s, a>, <a, s>} b. $[\![\text{you}]\!]^{c,w,g} = [\![\text{A(s)}]\!]^{c,w,g} = a$ *you*: "my addressee"
c. $[\![\text{I}]\!]^{c,w,g} = [\![\text{A(a)}]\!]^{c,w,g} = s$ *I*: "your addressee"

The definition of A correctly allows for reverse supersloppy readings (with 2P as subject) in (8)-(9):

(8) i. *(Lucy to her mother)* "You don't understand me". ii. *(L's mother to L)* "You don't either". $[64\%]_{\text{supersloppy}}$

(9) *(Sue to Tom, in a ballroom dancing class)* "Only you didn't make me fall over". $[65\%]_{\text{supersloppy}}$

Once this assumption made, we can derive supersloppy readings by coupling it with an analysis of bound readings of 1P/2P, since the e-type pronoun hypothesis makes binding possible: supersloppy readings are thus a specific kind of bound readings. This is supported by the c-command requirement between 1P-2P:

(10) *(R to J)* i- "The man I hate loves you." *(J to R)* ii– "The woman I hate does not" (*love you). [27%]

Moreover, supersloppy readings arise in the exact same situations as regular bound readings like (3), namely in VP-ellipsis and focus constructions. We nevertheless need to adopt a theory of 1P/2P bound readings that does not crucially rely on the sharing of the same features between binder and bindee (cf. Feature Transmission in Kratzer 2009). A presuppositional theory of 1P/2P according to which focus values are blind to the presuppositional content of *phi*-features (Heim 2008b, Sauerland 2013) meets this requirement. Specifically, the presuppositional view treats 1P/2P as variables and person features as presupposition triggers, but the mechanisms that compute focus values (and also ellipsis resolution, assuming that the identity condition on ellipsis is subject to focus conditions, see Heim 1997, Merchant 2001, a.o.) may disregard features of bound pronouns. In sum, this theory complemented with my e-type hypothesis allows us to derive the supersloppy readings as follows: (1)'' and (8)' represent the VPs to be copied into the ellipsis sites, and (2)'' and (9)' the form of the VP in the focus alternatives.

(1)'' λx. x loves A(x) (8)' λx. x does not understand A(x)

(2)'' λx. x makes A(x) swirl (9)' λx. x does not make A(x) fall over

Furthermore, since the function A only ranges over discourse participants, the readings in (4) and (5) are correctly ruled out, as well as (10), while (11) and (12) are correctly ruled in. Note that this also implies that focus alternatives can be evaluated in different contexts: this more complex computation could explain why supersloppy readings get lower ratings in focus constructions than in VP-ellipsis (1a vs. 2a).

(10) *(Juliet to Romeo)* i- "I love you." *(R to J)* ii- "Count Pâris does too" (*love his addressee)

(11) I did my homework. John didn't (do his homework).

(12) I saw you before you did (see me). [60%]

I and *you* are thus lexically related by A. But note that this phenomenon can be more general if the e-type pronouns contain a contextual function P ranging over pairs: the pairs can be less specific than s-a, e.g. adviser-advisee in (13), and proper names can also be construed this way, e.g. as lovers in (14).

(13) *(Adviser to advisee)* "Only you won't meet with me on Tuesday." λx. x won't meet with P(x) on T [66%]

(14) Juliet loves Romeo. Romeo does too [love his lover, i.e. Juliet]. λx. x loves P'(x) [57%]

Such functions P however require rich contexts, while A is lexically available: any two elements can be made more or less easily dependent, but speaker and addressee are intrinsically dependent.

Selected references: Anand 2006: *De* de se. MIT PhD**; Heim 2008a**: Features on Bound Pronouns. *Phi Theory: phi features across modules and interfaces***; Heim 2008b**: Bound Pronouns and Morphology. UBC handout; **Kaplan 1977**: Demonstratives. *Themes from Kaplan***; Kratzer 2009**: Making a Pronoun: Fake Indexicals as Windows into the Properties of Pronouns. *LI* 40(2); **Sauerland 2013** Presuppositions and the Alternative Tier. *SALT* 23; **Schlenker 2003:** A Plea for Monsters. *L&P* 26; **Sudo Y. 2012**: *On the Semantics of Phi Features on Pronouns*. MIT PhD.