Phi-features and Indices on Pronouns

I propose that the index of any pronoun should be construed as a set consisting of the pronoun’s phi-features, and a numeric value, which is assigned freely to all pronouns. E.g. *we* carries the index \{<1st>,<pl>, i\}, *she* - the index \{<3rd>,<sg>,<f>, j\}, etc., where i and j stand for freely assigned numeric values. All unbound pronouns and traces are uniformly interpreted by applying the assignment function g to this complex index.

Formally, the contribution of phi-features is incorporated into the definition of the assignment function:

A partial function g from indices to denotations is a variable assignment function in context c iff it fulfills the following conditions. For any index Ind, such that Ind ∈ dom(g):

1. If <1st> ∈ Ind, g(Ind) returns an individual that is a speaker in c;
2. If <f> ∈ Ind, g(Ind) returns an individual that is female;
3. If <sg> ∈ Ind, g(Ind) returns an individual that is a singularity;

... 

I argue that this approach has several advantages with respect to the interpretation of both bound and free pronouns, compared to the presuppositional treatment of phi-features proposed in Cooper 1983 (cf. e.g. Heim & Kratzer 1998, Heim 2005, Kratzer 2009). With respect to bound pronouns, the current proposal accounts for the fact that in contexts of semantic binding, phi-features do not seem to induce any presuppositions:

(1) Only I got a question that I understood. (from Kratzer 1998)

The relevant interpretation of (1) is ‘Only I am such x that x got a question that x understood’. Under the current proposal, the DP only I in (1) carries a complex index \{<1st>,<sg>,i\}. The second occurrence of I carries the index \{<1st>,<sg>,j\}. In case i = j the indices on the pronouns are equal, and assuming that semantic binding applies in the standard fashion (cf. Heim and Kratzer 1998:184-188), the second occurrence of I in (1) gets interpreted as a bound variable.

Since the relation between the binder and the bindee under this approach is purely semantic, it’s not expected to fall under the typical constraints on syntactic relations. This prediction is borne out, cf. the following example from Cable (2005) with a bound 1st person pronoun inside an adjunct island:

(2) Only I think it’ll fall if I let go. (After all, I have the firmest grip on it.)

With respect to the interpretation of free pronouns, cf. the following example:

(3) Bill announced that she stopped drinking.

This sentence can be uttered by a speaker who doesn’t believe that the individual referred to by the pronoun *she* used to drink (cf. Karttunen & Peters 1979). On the other hand, this sentence cannot be uttered if the speaker does not believe that this individual is female. This discrepancy between phi-features and presupposition inducing predicates noted by Cooper (1983) is clearly problematic for the presuppositional approach to phi-features. On the current proposal, however, the semantic contribution of phi-features is not predicted to be blocked by verbs of speech in the same way as presuppositions.
References