

De Se, Transparent Readings and the Structure of Pronouns

Daniel Tiskin

Saint Petersburg State University & NRU HSE—Saint Petersburg

daniel.tiskin@gmail.com

The problem of *de re* and *de se* readings of pronouns and anaphors in attitude contexts has attracted linguists' and philosophers' attention at least since Castañeda's [1] (or even earlier, as Castañeda himself acknowledges), sometimes resulting in fairly complicated semantic treatments [2]. In the present paper, I propose an account for the data presented by Charlow [2] based on three crucial steps: (i) the idea that overt pronouns, but not PRO,¹ have complex internal structure [4], (ii) the (still disputed) treatment of reflexives as operators on the main predicate [9], and (iii) the recent advances in the understanding of transparent evaluation phenomena [16].

The Problem As Chierchia [3] has shown, third person subject pronouns in attitude contexts are ambiguous between a *de se* and a *de re* reading, while PRO in such contexts is always interpreted *de se*, as seen from (1,2).

1. John_i hopes that he_i will be elected President.

A possible SCENARIO: John is so drunk that he has forgotten who he is. He looks at an election poster with a picture of his. He thinks: "I hope this nice guy will be elected President."

2. John_i hopes PRO_i to be elected President. [Ruled out in the SCENARIO above.]

Charlow [2] further argued that if the embedded clause contains a reflexive in the object position, three of the four logically possible readings are attested: the pattern where the subject is construed *de re* and the reflexive *de se* is either ruled out or significantly degraded.

3. John_i thinks he_i is likely to injure himself_i.

^{OK}John, occupied with some dangerous work, thinks: "I am likely to injure myself" (*de se—de se*).

^{OK}John holds a heavy hammer just above his feet but believes they are not his. He thinks: "I am likely to injure that guy" (*de se—de re*).

^{OK}John is watching a video clip of himself falling down the hill. He does not realise it is him and thinks: "This guy is likely to injure himself" (*de re—de re*).

#For whatever reason, John thinks: "This guy [actually John himself] is likely to injure me" (*de re—de se*).

Charlow himself uses the heavy machinery of concepts generators to get the possible *de re* readings for subjects as well for objects. The need for acquaintance relations or concept generators, however, disappears once non-*de se* pronouns are viewed not as *de re* but rather as "narrow-Q[uantifier], R[estrictor]-*de re*" in the sense of [6].² In what follows I will show how this can be carried out.

The Steps (i) According to Déchaine and Wiltschko [4], pronouns differ in their internal syntax as well as in corresponding semantics. For them *he* is a ϕ P, i.e. a complex constituent of the form $[_{\phi P} he [_{NP} \emptyset]]$, where ϕ stands for its number, gender and person features; their proposed semantics for it is just a variable. I suggest that pronominal ϕ Ps take the null determiner when in argument position (as proposed for proper names as early as in [13]) so that the whole DP has the structure $[_{DP} \emptyset [_{\phi P} he [_{NP} \emptyset]]]$, whereas semantically the whole DP amounts to the assignment-dependent expression *the $x.x \simeq y$* , i.e. 'the x such that x is identical to y '. Assume further that PRO does not have any internal structure and that semantically it is only a variable.

(ii) Among the hypotheses about the semantics of reflexives, one trend is to view them as argument-reducing operators. Lubowicz [9] suggests that from the semantic viewpoint, (the Polish analogue of) *himself* consists of a detransitiviser $SELF_{\langle(e,et),et\rangle}$ that gets QRed to the position above the VP leaving a trace in its initial position within the object DP, and of the identity function $IDENT_{\langle e,e\rangle}$ that is responsible for the proper treatment of focus on *himself*. To generalise the proposed detransitivisation procedure to many-place predicates we would like a different technical device. Hints to such a solution can be found e.g. in Klein and Sternefeld's [8, section 3.6], but let us restrict ourselves to two-place relations here.

¹And not reflexives, *pace* [5].

²The issue of specificity has to be separately resolved in this setting. This is not so much of a problem: it has been convincingly argued that specific *de dicto* readings are possible [15, 11] (not to be confused with specific opaque readings such as Szabó's [17] summative reports).

(iii) The study of the transparent readings of quantifier restrictors and predicates began with Fodor’s [7] observation that the older *de re / de dicto* opposition is non-exhaustive. She argued that even if we quantify over objects in another possible world, the restrictor of the quantifier may be evaluated in the actual world. Percus [10] later claimed that the main predicate of the embedded clause cannot receive such transparent interpretation, but the claim still remains debatable [12]. What is more, Sudo [16] has recently defended the existence of another type of transparency typical of main predicates. To wit, he treats (4) in the given scenario as evaluated with the property *belongs to the same denomination as John* in the place of *is Catholic*; he allows for such substitutions in general provided that the two properties are “contextually equivalent” in intension (his “*De Re Rule*”). This is restricted by his *Default Assumption* that the agent in question shares the beliefs of the speaker and the hearer.

4. Mary thinks that Sue is Catholic.

A possible SCENARIO: Mary knows that John is a believer and that he usually dates girls of his religion. Now Mary has evidence for Sue being John’s new girlfriend. The speaker, but not Mary, knows John is Catholic.

In practice I will employ a lax version of the “*De Re Rule*” s.t. not intensional equivalence but entailment in all reasonable cases is required for substitution (cf. the proposal in [12]).

The Treatment As long as PRO does not denote any property, it cannot receive transparent interpretation. This is how we account for its being obligatorily *de se*.

Now, the four combinations Charlow discusses. Instead of Charlow’s, I adopt von Stechow’s semantics for *de se* [14] (ignoring time) where

5. $\llbracket \textit{think} \rrbracket = \lambda P_{\langle e, \langle s, t \rangle \rangle} . \lambda x_e . \lambda w_s . \forall \langle x', w' \rangle \in \text{DOX}(x, w) : P(x', w') \equiv \mathbf{1}$.

Let us show how we can keep the subject pronoun uniform in its structure and position and nevertheless get the desired readings of (3).

De se—de se. This is the base case. The meaning is calculated straightforwardly, taking into account only that *he is likely to injure himself* gets interpreted as “ $\lambda \langle x', w' \rangle . \text{the } y . y \simeq x' : y \text{ is likely to SELF-injure at } w'$ ”

De se—de re. If *himself* is a higher-order operator on predicates, how can we make it *de re* without making the subject *de re*? The solution is to apply Sudo’s rule for *de re* evaluation to the compound *is likely to injure himself*. (To simplify things, I treat *is likely to injure* as non-decomposable.) Indeed, for all $w' \in \text{DOX}(\text{John}, @)$, “ x is likely to SELF-injure in w' ” is entailed by “ x is likely to injure the guy whose feet John sees in w' ”, for the only individual (viz. John) who is likely to injure the guy whose feet John sees is likely to injure himself.

De re—de re. In contrast with the previous case, here the main predicate remains intact: what is subject to the “*De Re Rule*” is the restrictor predicate of the pronominal DP, i.e. $\lambda w . \lambda y . y = x'$. If we are explicitly informed that the agent does not share our belief about his identity, the *Default Assumption* gets obsolete and we get the *de re* construal. (Note that here I have modified Sudo’s criterion of contextual equivalence and made it dependent on the assignment.)

#De re—de se. Given that *himself* has no reference on its own, it comes as no surprise that non-*de se*-ness of the subject is incompatible with the *de se* construal of the reflexive.

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