

A reanalysis of the de re blocking effect

Overview. This paper provides a novel generalization and analysis of the de re blocking effect—that an obligatory de se anaphor cannot be c-commanded by its de re counterpart. Accounts by Percus & Sauerland (2003) and Anand (2006) derive blocking via reference to locality. I provide several pieces of novel cases of de re blocking, which may take place across clause boundaries (C2), take place with fully local but obligatorily de se anaphors like PRO (C3), and with inverted surface order with passives (C4). I verify that these cases exist with experimental evidence. To provide a descriptive generalization of these cases, I redefine the de re blocking effect in terms of θ -roles. I propose to derive this generalization via logophoric constraints.

Background. Dream reports allow us to shed more light on de se vs. de re: as Anand (2006) notes, de se pronouns in dream reports behave differently than other de se pronouns. Percus & Sauerland (2003) (P&S) note that a sentence like (1) does not allow the reading in which the real life-self, from the third person, fires the dream-self, from whose perspective the dream is reported. Pearson & Dery (2013) has provided further experimental evidence for this contrast:

- (1) **Case 1 (C1):** I dreamed that I was Trump and I fired me.
 Possible reading: In the dream, Trump fired me. (de se fired de re)
 Less plausible reading: In the dream, I fired Trump. (de re fired de se)

To rule this out, P&S define the Oneiric Reference Constraint (ORC), which states that a de se pronoun cannot be c-commanded by a de re pronoun in dream reports. This is derived via locality (Superiority) in the narrow syntax: the lower de se pronoun (t_x), c-commanded by the de re pronoun (I_f), cannot move, because the de re pronoun is a closer potential Goal for the probe P:

- (2) * I λf dreamed [_{CP} me* λx P I_f fired t_x]

Anand (2006) argues that the ORC is not general enough. It bears a striking resemblance to an interaction between logophoric and non-logophoric pronouns in Yoruba, where ordinary pronouns cannot c-command the obligatorily de se logophoric pronoun *òun* under coreference. If we replace the logophoric pronoun for the dream-self (de se) and the ordinary pronoun for the real-self (de re), these two puzzles are similar. Anand defines the de re blocking effect: *an obligatorily de se anaphor cannot be c-commanded by its de re counterpart*. The blocking itself is also derived via locality, by modifying Fox (2000)'s Rule H to not include de se vs. de re interpretations.

New Data. First, blocking may (sometimes, not always, see (7)) arise past clause boundaries:

- (3) **Case 2 (C2):** I dreamed that I was Trump and I said that I was fired.
 Less plausible reading: In the dream, I said that Trump was fired. (de re vs. de se)
LF of less plausible reading: I λf dreamed OP_{log} λx [I_f said that [I_{log_x} was fired]]

Blocking arises outside of dream reports with PRO, in which case locality is not an issue, because in (4), *she* is de re (relative to Miranda), but PRO is de se bound to *she*, crucially not Miranda. As such, a semantics for control like Chierchia (1990)'s does not derive the badness of (4).

- (4) **Case 3 (C3):** Miranda is unaware she, herself, had tried to prove GC in the past.
 # Miranda believes that she_{de re} tried PRO_{de se} to prove Goldbach's conjecture.
LF: Miranda λf believes that [she_f tried OP λx [PRO_x to prove GC.]]

Finally, blocking is present in passives, where the c-command order is inverted on the surface:

- (5) **Case 4 (C4):** I dreamed that I was Trump and my daughter was kissed by me.
 Possible reading: the dream-self (de se) kissed the real-self (de re)'s daughter.
 Less possible reading: the real-self kissed the dream-self's daughter, Ivanka.

These indicate the potential for a need to refine the de re blocking effect, but ideally first we would back up this observation with some quantitative data, given the judgments may be subtle.

Experiment. Two separate experiments on Prolific were conducted, one (Experiment 1) to verify the existence of blocking for C2 and C4, and one (Experiment 2) for C3. Both experiments were Qualtrics surveys with context-sentence pairs—a context together with a sentence—and participants were asked to judge the naturalness of a sentence paired with its context, on a Likert scale from 1 (very unnatural) to 6 (very natural). P-values were calculated using the Wilcoxon rank sum test, in which two sets of data are paired, because the responses are on a scale and do not follow a normal distribution. A p-value of <0.0001 was considered to be significant.

Full results have been omitted due to space. Experiment 1 had 100 participants. Illustrative pictures were used. To determine whether blocking was present, the average for the de se vs. de re and de re vs. de se reading was calculated for each sentence. In C1, the difference between the average for the de se vs. de re sentences (3.56/6) and de re vs. de se sentences (2.34/6), 1.22, was significant at $p < 0.0001$. For C2 and C4, the difference was also significant at $p < 0.0001$.

Experiment 2 had 50 participants. To determine whether blocking was present, the difference between the average score for "basic de re" sentences (such as *Caitlin said that she is happy* where *she* is a de re pronoun), expected to be marginal (3-4), and the average for sentences like C3, expected to be unnatural (1-2), was calculated. The difference between the average for "basic de re" sentences (2.86/6) and the average for C3 sentences (1.88/6), 0.98, was significant at $p < 0.0001$, providing evidence for blocking.

Analysis. The existence of "inverted" blocking in C4, with passives, indicates that θ -roles may be at play. Here is one way of doing so, where the de re blocking effect is defined as follows:

- (6) If a de se and de re pronoun have thematic relations to the same event, the de re must be below than the de se on the hierarchy: Agent, Experiencer, Source > Theme.

In C1 and C4, the de se and de re pronouns are Agent and Theme respectively.

For C2, the event of telling someone (as their boss) that they are fired is identical to the event of firing someone, so the thematic relations are the same. This predicts that blocking would not arise if the two events are not the same, which is borne out; no blocking is obtained below:

- (7) a. I dreamed that I (de re, Source) said that I (de se, Agent) ate a rabbit.
 b. I dreamed that I (de re, Source) said that a rabbit ate me (de se, Theme).

For C3, I provide an LF with events for *Mary tried PRO to win* based on Chierchia (1990):

- (8) **LF:** $\exists e. [\text{try}(e) \ \& \ \text{Exp}(e, \text{Mary}) \ \& \ \forall \langle y, w \rangle \in \text{try}_{\text{Mary}, w}: \text{win}(e) \ \& \ \text{Exp}(e, y)]$

(8) states that Mary and her de se counterpart both bear a thematic relation to the same event. If *Mary* were a de re pronoun, then blocking would be derived, as it would not be a Theme.

A few simplifications (6) were made: for example, (6) can be changed to account for blocking with possessors. And blocking does not arise with matrix subjects (ex. *He tried PRO to run*).

Conclusion. Why should de re blocking exist at all? This descriptive generalization bears a resemblance to another one concerning reflexives and their antecedents: Jackendoff (1972)'s Thematic Hierarchy Condition, which states that a reflexive cannot precede its antecedent on the following hierarchy: Agent, Experiencer < Location, Source, Goal < Theme.

Varaschin (2020) has proposed this hierarchy arises from logophoricity. I propose something similar for blocking. The perspectival center for an obligatorily de se anaphor such as PRO cannot be a de re pronoun, as seen in C3. I provide corroborating evidence from Chinese's *ziji* and Yoruba's *òun*, which are both also obligatorily de se anaphors. Further, to derive C1, C2 and C4, I propose a logophoric constraint in which de se pronouns must be higher on the thematic hierarchy than de re pronouns. To conclude, this paper has provided novel observations—backed up with experimental evidence—on a well-studied phenomenon, and an analysis.

References

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