Pragmatic control of rationale clauses

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Constraints on reference play an important role in our understanding of language. Some constraints are grammatical: reference is determined by structural properties of the sentence itself. Other constraints are non-grammatical: reference is based on the understood intentions of the speaker and other discourse factors. I investigate a set of constraints on coreference that are sensitive to grammatical relations, but which I argue are not mediated by the grammar: those determining the interpretation of PRO in a Rationale Clause (RatC), as illustrated in (1). In (1), PRO must refer to Rita; it cannot corefer with the matrix object *Harry*. Some authors have claimed that this is due to syntactic binding of PRO [8, 10]. I defend the alternative view in [11]'s Responsibility Theory (RT), which states that PRO in a RatC is subject to non-grammatical constraints on reference such that it will refer to the party responsible for the "target fact," expressed by the clause for which the RatC provides the rationale (in most cases, the clause to which it adjoins). The apparent structural constraints result from the fact that subjects are likely to be portrayed as responsible, while objects are seen as non-responsible. In (1), PRO must refer to Rita because she is seen as responsible for the fact that she interviewed Harry. PRO cannot refer to Harry because he is represented as not responsible.

(1) Rita_1 interviewed Harry_2 [$_{\text{RatC}}$ in order $\text{PRO}_{1/*2}$ to feel better (about herself/*himself)].

My first argument against control through binding is that the same coreference constraints seen in Local RatCs (1) hold in cases where there can be no syntactic relation, as in Remote RatCs (2). Since syntactic relations cannot cross sentence boundaries, to maintain a grammatical account of control in Remote RatCs would require that PRO in a Remote RatC is bound by some sort of silent constituent, as in (3), for example.

(2) Rita_1 interviewed Harry_2. The reason was [$\text{PRO}_{1/*2}$ to feel better (about herself/*himself)].

(3)   The reason [~~Rita_1 interviewed Harry_2~~] was [$\text{PRO}_{1/*2}$ to feel better about herself].

There are several reasons to doubt this, though. First, there are cases of Remote RatCs where relative clause ellipsis will not help. For example, a pronoun can take the place of the ellipsis site (4). Even if we assume that pronouns can have unpronounced content [3], binding out of this position is impossible (5). Therefore, there seems to be no way for elided content to be in the proper configuration to syntactically control PRO.

(4) Rita_1 interviewed Harry_2. The goal behind it was [$\text{PRO}_{1/*2}$ to feel better about herself].

(5)   *The best evidence for Lin's improvement is that image of himself on the wall.   (A. Williams, p.c.)

Second, relative clause ellipsis in (3) is not clearly licensed. Ellipsis is only licensed for the complement of agreeing functional heads [7, 9], which N is not. Ellipsis in (3) should be impossible. For these reasons, there can be no hidden binder in a Remote RatC. Since PRO cannot be in the same syntactic domain as its controller, grammatical accounts of control of Remote RatCs must be rejected. For RT, on the other hand, which requires no structural dependencies, it makes no difference whether PRO and its antecedent are in the same sentence. PRO in (2) refers to Rita because she is seen as responsible, and Harry is not.

My second argument against grammatical accounts of RatCs is that they cannot explain what I call *superimplicit control* (6). Because of this, even local control in RatCs cannot be reduced to grammatical binding. Attempting to allow for superimplicit control under a grammatical theory of control leads to incorrect predictions. I demonstrate this for one such theory: [4]'s movement theory of control (MTC).

(6)   The ribbon was cut by a young girl [in order PRO acquire the support of female voters].

The MTC can easily handle cases of control by the subject of the matrix clause; a sentence such as (1) would involve sidewards movement of *Rita* into the matrix clause (8). Control by the object in (1) would also be ruled out under the MTC. If *Harry* had been merged as the subject of the RatC and then moved to object position in the matrix clause, this would need to occur while *Rita* was still in the Numeration, which would incur a Merge-over-Move violation [2]. Because of this, object control in (1) cannot arise through movement. It also cannot occur through the pronominalization in (8), because interpreting a null category as the trace of movement is preferable to interpreting it as a null pronoun [1]. Therefore, control through pronominalization is only available when control through movement is not [5].

(7)   [Rita [T [$_{\text{VP}}$ [$_{\text{VP}}$ ~~Rita~~ interviewed Harry][$_{\text{RatC}}$ in order [$_{\text{CP}}$ ~~Rita~~ to feel better (about herself)]]]]]]

(8)   *Rita_1 interviewed Harry_2 [in order pro_2 to feel better (about himself)].

RatCs can also have a controller that is completely absent from the sentence (6). Because there is no

antecedent for PRO in this sentence, it must be NOC PRO (i.e. the null pronoun *pro*, represented in (9)). The referent of this NOC/unbound *pro* would be determined by pragmatic principles such as those in RT. Even so, it is not clear why a null pronoun would be licensed in this position under the MTC. If NOC PRO is only available when control through movement is not, a null *pro* should only be available in (9) if movement out of the RatC is impossible. But it is unclear what would prevent that movement if it is allowed out of other RatCs. Specifically, (8) should be ruled out because of the availability of (10).

(9)   The ribbon was cut by a young girl [$_{\text{RatC}}$ just *pro* to acquire the support of female voters].

(10)   # [The ribbon] was cut by a young girl [just ~~The ribbon~~ to acquire the support of the female voters]

One obvious possible explanation for this under the MTC might be that RatCs require a purposeful agent to be their controller. Because ribbons cannot have intentions, the interpretation in (10) is blocked, and superimplicit control through pronominalization is available. When an intentional agent is available as an antecedent to control through movement, such as *a hired crook* in (11), superimplicit control is ruled out.

(11)   A hired crook$_1$ burned down the house [in order PRO$_{1/*2}$ to collect the insurance].

This explanation would suggest that under the MTC, interpreting the null subject of a Local RatC as the trace of movement should be strongly preferred, and it is only when the argument that could have moved from that position does not meet the requirements of RatCs that other interpretations are considered. But even this is probably not correct. Kehler [6] demonstrates that people are much more likely to resolve pronouns to the subject of a preceding passive, even when it would lead to an improbable discourse. Given this strong preference, in addition to the preference for traces over pronominalization, comprehenders should strongly prefer the interpretation in (10), even though this interpretation results in a very strange story.

Even ignoring this problem, these constraints still do not capture all the facts. In cases where the subject of the sentence cannot have intentions, *pro* should be possible, resulting in NOC. This leads to the prediction that in a sentence where the subject makes a bad controller, but the object a good one, object control should be possible. Specifically, (12) should have the unavailable interpretation where the intention is for *Ethan* to wash himself before school, since alarms do not have intentions. In addition, when the matrix subject is a purposeful agent, superimplicit control should always be blocked. However, in (13), *the guests* would make a perfectly good controller resulting from movement. Therefore, the MTC wrongly predicts that the overwhelmingly preferred interpretation will be that the guests intended to acquire support. Instead, (13) has an interpretation parallel to (6), where the intended support-acquirers are the organizers of the event.

(12)   * An alarm woke Ethan$_1$ up early in order PRO$_1$ to wash himself before school.

(13)   The guests were greeted by a young girl in order PRO to acquire the support of female voters.

In sum, the MTC fails to predict when superimplicit control will be available. Where it is available, the MTC requires something like RT to constrain PRO's reference. Under RT, PRO in (6) can be understood as the organizers of the event because they can be seen as responsible for the target fact. Why is superimplicit control not available in (11), with PRO referring to whoever hired the crook? If surface objects are viewed as not responsible, but subjects are, then in (11), perhaps superimplicit control is unavailable because its active form highlights the crook's responsibility and downplays the responsibility of his employer. Because of this, he is the most likely controller for PRO in the RatC under RT. When the sentence is changed to deemphasize the crooks responsibility, as in (14), superimplicit control becomes available.

(14)   The house was burned down (by a hired crook) in order PRO to collect the insurance.

Grammatical theories of control are unable to account for Remote RatCs or for superimplicit control. Instead, PRO in these RatCs is constrained by RT. Because RT is required even under grammatical accounts, and because it is able to account for Local and Remote RatCs on its own, the simpler theory is that it alone is responsible for the interpretation of any RatC. Additionally, positing a grammatical account for some Local RatCs leads to incorrect predictions about when superimplicit control will be available. Therefore, PRO in a RatC is interpreted through RT. Grammatical relations play no role. This suggests that there can be strong constraints on reference sensitive to structure that are not mediated by the grammar, and that there are cross-discourse constraints that are not information-structural, but conceptual.

[1] Boeckx & Hornstein. (2007). On (non-)obligatory control. [2] Chomsky. (1995). The Minimalist Program. [3] Elbourne. (2013). Definite descriptions. [4] Hornstein. (1999). Movement and control. [5] Hornstein. (2001). Move! [6] Kehler. (2004). Discourse topics, sentence topics, and coherence. [7] Lobeck. (1995). Ellipsis. [8] Roeper. (1987). Implicit arguments and the head-complement relation. [9] Saito & Murasugi. (1990). N ĭ-deletion in Japanese. [10] Whelpton. (2002). Locality and control with infinitives of result. [11] Williams, A. (2015). Arguments in syntax and semantics.