

PROXY CONTROL: A NEW FORM OF CONTROL IN GRAMMAR*

AARON DOLIANA
University of Maryland

SANDHYA SUNDARESAN
Universität Leipzig

1 Overview

As is well known, the control dependency in grammar is broadly distinguished into two classes: obligatory control (OC) and non-obligatory control (NOC). Simplifying quite a bit, the former obtains under strict structural conditions of c-command and (for the most part) Relativized Minimality; the controlled element is semantically interpreted as a bound variable. The latter involves all other types of control relation, and is thus essentially an Elsewhere dependency (Williams, 1980; Hornstein, 1999; McFadden and Sundaresan, 2016). OC has been further categorized as exhaustive vs. non-exhaustive. In the former, the reference of the controller is identical to that of the controllee, yielding a relation of the form $i \rightarrow i$ as in (1) below:

- (1) EXHAUSTIVE CONTROL ($i \rightarrow i$):
Bill_i tried [EC_i to eat the pizza in one bite].

* Authors are listed in alphabetical order. The first author is bilingual in the southern standard variety of German and the Grossetano dialect of Italian which form the core of the primary data presented here. We thank the audience at IATL 32 in Jerusalem, where an earlier version of this paper was presented, for helpful comments, and the editor of that conference for putting this proceedings volume together. Other versions of the ideas contained here were presented at the Syntaxzirkel at ZAS, Berlin, the “Pronomes” Workshop in Salvador, the Non-Finite Subjects Workshop in Nantes, and the GLOW in Asia XI conference in Singapore, and were greatly improved by audience input there. We would like to thank Rajesh Bhatt, Norbert Hornstein, Idan Landau, Howard Lasnik, Paul Pietroski, Masha Polinsky, Omer Preminger, Ken Safir, and Alexander Williams for feedback, and are especially grateful to Tom McFadden, Marcel Pitteroff, and Barbara Stiebels for meeting with us on multiple occasions. Finally, we are extremely indebted to the following native speaker informants: András Bárány, Renata Caprini, Pier Luigi Doliana, Ivana Fumagalli, Mariangela Fusco, Daniel Gleim, Fabian Heck, Christine Marquardt, Lorenzo Pala, Marco Picchianti, Martin Salzmann, Marie-Luise Schwarzer, and Sören E. Worbs; special thanks to Irene Amato, Lotte Davids, Julian Doliana, Anke Himmelreich, Simone Loi, and Philipp Weisser for their in-depth judgments on multiple occasions, and to our many online German informants, too many to name individually here.

In the former, the reference of the controller is properly contained in that of the controllee, yielding a relation of the form $i \rightarrow i + (j)$. This may be even further distinguished with respect to whether j is overtly represented in the sentential structure or not. If it is, we get what is called “split control”; if it is not, and its identity must be recovered from the salient discourse-context alone, we get so-called “partial control”. Examples of both are given below:

- (2) NON-EXHAUSTIVE CONTROL ($i \rightarrow i + (j)$):
- a. SPLIT CONTROL ($i \rightarrow i + j$):
Bill_{*i*} asked Sue_{*i*} [about EC_{*i+j*} splitting the tab].
 - b. PARTIAL CONTROL ($i \rightarrow i+$):
Bill_{*i*} asked [about EC_{*i+*} getting together tonight].

As discussed in detail in Stiebels (2007) and elsewhere, these different types of control vary not only with respect to their referential possibilities, but also according to the types of predicate that effect them.

The goal of this paper is to show that languages seem to allow another type of control in addition to these and to provide a formal account for how it may be derived in grammar. This new type of control is neither exhaustive nor strictly non-exhaustive, in the sense defined above. Rather, it involves a mapping between an individual i and another individual $f(i)$, where f is a discourse-contextually defined function denoting some sort of social group or class membership. The mapping between the controller and controllee does not characterize an exhaustive $i \rightarrow i$, or a part-whole non-exhaustive $i \rightarrow i+$ relation; rather, it is a relation of the form $i \rightarrow f(i)$. We call this new type of control *proxy control*, in analogy with instances of proxy anaphora (Jackendoff, 1992; Schladt, 2000; Reuland and Winter, 2009) which has also been argued to involve a relation of this nature.

Proxy control is interesting not only because it extends the typology of possible control relations in grammar, but also because it raises some interesting questions about the distribution of obligatory vs. non-obligatory control and the factors that condition the parametric choice between the two. As we will show, for a proper subset of the speakers tested – namely speakers of the southern standard dialects of German (Bavarian-Swabian, Swabian, Bavarian, and Austrian) and the Grossetano dialect of Italian (spoken in parts of Tuscany), including one of the authors of this paper – proxy control instantiates a species of OC. For such speakers, the controlled silent element (which we will argue is PRO but have nominally been labelling EC/empty category) is bound under conditions of (phase-)minimality and c-command. Sloppy readings under ellipsis show that it must also be interpreted as a bound variable. For the rest of the native speakers of German and Italian tested, proxy control instantiates a choice of NOC, and is thus negatively defined with respect to these diagnostics. The data we present here involve a combination of the native-speaker intuitions of one of us, combined with primary data collected from 37 other native speakers via face-to-face elicitation tasks and online questionnaires.

We focus primarily on proxy OC in this paper and propose that it involves a kind of “cyclic” control. The first cycle involves a $i \rightarrow f(i)$ control dependency into a bouletic modal complement; the second, an $i \rightarrow i$ exhaustive control dependency into a deontic modal clause. Proxy OC is the composite consisting of these put together. We present evidence from floating quantifiers in Italian and Condition B effects in German to argue that the $i \rightarrow f(i)$ relation is not established in syntax; rather, a simple $i \rightarrow i$ exhaustive control relation alone is syntactically encoded. This i on PRO is then

semantically *extended* at LF to $f(i)$ (following an adaption of the extension semantics for partial control in Pearson, 2016), yielding $i \rightarrow f(i)$. Toward the end of the paper, we turn to a discussion of dialectal and crosslinguistic variation for proxy control, which revolves around whether proxy control is instantiated as a species of OC or NOC. We discuss the nature of the variation in detail and also propose the ways in which such variation could be theoretically understood and modelled within the analytic framework of our approach to proxy OC.

2 Proxy Control: What It Is; What It Is Not

Here, we introduce proxy control with examples from German and Italian. Consider first the sentence in (3a) below from Italian. It gets different control readings depending on which discourse scenario it is evaluated against:

- (3) a. La maestra_i ha chiesto al contadino_j [di EC_{i,i+k,f(i)} poter accarezzare l' asino].
 the teacher has asked to.the farmer C may.INF pet.INF the donkey
 'The teacher asked the farmer for permission to pet the donkey.'
- b. **Exhaustive Scenario:** *There is a donkey next to the elementary school. The teacher would like to pet it and asks the farmer if she is allowed to do that.*
- c. **Partial Scenario:** *There is a donkey next to the elementary school. The teacher and her students would like to pet it. The teacher asks the farmer if she and the kids are allowed to do that.*
- d. **Proxy Scenario:** *There is a donkey next to the elementary school. The kids would like to pet it. The teacher asks the farmer if they are allowed to do that.*

Under the Exhaustive Scenario in (3b), the teacher asks the farmer whether she (the teacher) may pet the donkey. We thus have a simple, exhaustive OC relation between *la maestra* ('the teacher') and the controlled EC, of the form $i \rightarrow i$. In the Partial Scenario in (3c), the teacher is asking whether she and her students may pet the donkey; we thus have a partial control scenario with a part-whole $i \rightarrow i+$ relation. In the Proxy Scenario in (3d), the teacher asks the farmer whether her students may pet the donkey. The discourse-context makes clear that she herself will crucially not be petting the donkey. We thus have a new kind of relation, one that is neither $i \rightarrow i$ nor $i \rightarrow i+$, but an $i \rightarrow f(i)$ dependency which maps the teacher to a set that is discourse-contextually related to her, namely the teacher's students. Furthermore, the discourse-context makes clear that $i \neq f(i)$.¹

Similar examples can be constructed in German, as in (4b). For the sake of simplicity, we only illustrate the proxy reading below. But just like with (3a), exhaustive and partial readings may be obtained by adjusting the discourse scenarios:

- (4) a. **Proxy Scenario:** *The prisoners of a prison want to spend their breaks outside when there is good weather. A warden does them the favour of asking the director for permission for them to do so.*

¹ In other words, f cannot be an identity function; nor can it denote any other relation that yields identity by accident.

- b. Der Wärter_i hat den Gefängnisdirektor_j gebeten, [EC_{f(i)} bei schönem Wetter die
 the warden has the prison.director asked with nice weather the
 Pause draußen verbringen zu dürfen].
 break outside spend.INF to may.INF
 ‘The warden asked the director for permission (for the prisoners) to spend the break
 outside when there is good weather.’

In (4b), the warden asks the director for permission, not for himself, but for the prisoners, to spend the break outside. The control relation is thus again of the form $i \rightarrow f(i)$, with the context making clear that $i \neq f(i)$. The function f is again discourse-contextually defined with respect to i and yields the mapping from the warden to the warden’s prisoners.

Generalizing, proxy control obtains under a discourse scenario where an individual x asks permission for y to do z . Crucially, $y = f(x)$, where f is a discourse-contextually defined function on x . So we get a control relationship of the form $x \rightarrow f(x)$. The f relation is discourse-contextually defined, as we have seen, and defines membership in a certain saliently defined class, be it membership in an elementary school class as in (3a) or in a prison group, as in (4b).

2.1 Restriction to Deontic Modality

A central property of proxy control sentences is that they all involve some sort of *permission* semantics – more formally, a reading of deontic modality. Indeed, proxy control seems to be impossible in the absence of such a reading, so we take this to be a necessary input condition. This has a direct bearing on the predicates that allow proxy control in their scope. In German and Italian, the primary languages we have considered here, it seems that proxy control always and only appears with predicates that are associated with deontic modality. These involve verbs like Italian *chiedere* ‘ask’, *richiedere* ‘ask, demand’, *pregare* ‘ask, beg’, *promettere* ‘promise’, *assicurare* ‘assure’, or German *bitten* ‘ask’, *anflehen* ‘beg’, and *versprechen* ‘promise’, *versichern* ‘assure’).

We will take the view that the thematics of permission-seeking and -receiving are hardwired into the definition of proxy control. In all the cases of proxy control that we have seen so far, the (proxy-)controller is the seeker of permission. The (proxy-)controllee is the (potential) receiver/goal of whatever permission is being sought for. Incidentally, the question of whether the deontic modal encoding permission is overt or silent seems to be subject to considerable variation. In German, an overt deontic modal is apparently redundant with a number of predicates, such as ‘permit’, which are inherently modal. In Italian, however, a modal verb, even if seemingly redundant, must be present in the control complement for partial or proxy control readings to obtain. In German, its presence facilitates proxy control readings according to the German/Italian author, though the contrast is not as strong as in Italian. Furthermore, there is disagreement between the speakers of German that were consulted, on the point of whether the addition of the redundant modal would contribute meaningfully to the sentence.²

² Barbara Stiebels (p.c.) also informs us, based on a brief survey of a German newspaper corpus, that the frequency of such redundant modals is very slim in comparison to examples without them (i.e., juxtapositions as ‘permit-V.INF’ vs. ‘permit-may.INF-V.INF’). A clear contrast, however, ensues between the availability of a redundant permission modal verb and the availability of a redundant obligation or ability modal verb. The latter are generally judged as ungrammatical (Italian: **obbligare di dover* ‘force to must’, **essere in grado di poter* ‘be able to can’; German: **zwingen zu müssen* ‘force to must’, **in der Lage/fähig sein zu können* ‘be able to can’).

The conditions on the overtness of the modal in the controlled constituent clearly warrant further research. But we will assume that this is a matter for the PF component of grammar. What remains incontrovertible and generally invariant is that there is a semantic interpretation of permission seeking that is involved in all the proxy control structures. This will centrally inform the way in which we model this phenomenon down the line.

2.2 Proxy Control vs. Control Shift

Control shift is the phenomenon wherein the subject control that is standardly effected in the scope of a predicate is “shifted” to yield object control, or vice-versa. For instance, ‘promise’ is a predicate that typically effects subject control, but when a permission-seeking predicate like ‘to be able’ is embedded in the control complement, this control is shifted to yield object control, as in (5a). Conversely, ‘ask’ is typically an object-control predicate, but the presence of ‘to be allowed’ in the complement shifts the dependency to subject control, as in (5b):

- (5) a. Grandpa promised the children_i [EC_i to be able to stay up for the late show].
 b. Jim_i asked Mary [EC_i to be allowed to get himself a new dog].

(Landau, 2013:143–144)

Strikingly, both examples of proxy control discussed so far have also involved control shift. Thus, the proxy control readings in Grossetano (3a) and in Southern German (4b) also involve subject control of the deontic predicate ‘ask’. However, ‘ask’ typically involves object control, not subject control, as in (6) below:

- (6) [The farmer]_i asked [the students]_j [EC_j to pet the donkey].

Similar effects can be observed with other permission-seeking predicates in these dialects, like *pregare*, *anflehen* (‘beg’) and *richiedere* (‘demand’). This suggests that the availability of proxy control is perhaps parasitic on that of control shift (or vice-versa).

Here, we will show that, despite initial appearances, there is no *direct* dependence between the two phenomena. The clearest evidence for this is that proxy control may obtain even in the absence of control shift, as in (7b):

- (7) a. **Proxy Scenario:** *There is a donkey next to the elementary school. The kids would like to pet it. The teacher asks the farmer if they are allowed to do that.*
 b. Il contadino_j ha permesso alla maestra_i [di EC_{i,i+k,f(i)} poter accarezzare l’
 the farmer has allowed to.the teacher C may.INF pet.INF the
 asino].
 donkey
 ‘The farmer allowed the teacher for permission [PRO_{f(i)} to pet the donkey].’

Control shift is thus not a necessary condition on proxy control. Conversely, control shift may obtain even in the absence of proxy control, for instance, as a result of passivization in the embedded complement (cf. (8)):

- (8) L’ impiegat-a_i ha pregato il suo collega_j [di EC_i essere trattat-a con
 the employee-F.SG has asked the his colleague.M.SG C be.INF treated-F.SG with
 piú rispetto].
 more respect
 ‘The employee asked her colleague to be treated with more respect.’

(8) shows that control shift is also not a sufficient condition on proxy control.

Nevertheless, the fact that the two co-occur in so many cases cannot be an accident. We argue that such co-occurrence has to do with the fact that both control shift and proxy control are *independently* influenced by the presence of modality in the local clause, something that has been observed in the literature on control shift (see Sag and Pollard, 1991; Petter, 1998 for discussion of control shift). In other words, proxy control entails, not control shift, but modality – in particular, deontic (ability) modality, as discussed above. Since certain types of control shift depend on this as well, it creates the illusion of a direct connection between proxy control and control shift.

2.3 Proxy Control vs. Metonymic Extension

Metonymic extension is illustrated in sentences like (9) (going back to an observation made in Nunberg, 1979):

(9) (One nurse to another): The measles in Room 426 needs/*need a fresh IV.

In (9), the agreement on the root verb is not plural, as is expected given the plural marking on ‘measles’, but singular. The reason, it is surmised, is that the actual trigger of agreement is not ‘measles’ (as it refers to the disease) but the metonymic referent of ‘measles’, namely the (atomic) patient with measles in Room 426.³ More recently, Landau (2013) (citing Postal, 2004) has illustrated that metonymic extension can also apply to control, as in (10):⁴

(10) Sue plans to park on Broad Street.

In (10), the controller *Sue* is coreferent with an extension of herself, presumably her car or other vehicle of transport. There are clear descriptive similarities between these and sentences involving proxy control. In particular, the metonymic relation in (10) formally *also* seems to delineate a relation of the form $i \rightarrow f(i)$. Nevertheless, we will argue here that, while proxy control may end up denoting a sub-category of a more general $i \rightarrow f(i)$ referential dependency in grammar, what is typically meant by metonymic extension ultimately encodes a distinct type of $i \rightarrow f(i)$ relation.

A crucial difference between the $i \rightarrow f(i)$ relation in metonymic extension scenarios, like that in (10) and the $i \rightarrow f(i)$ relation in proxy control cases, is that the former does not require the presence of deontic modality, while the latter does. The independent restrictions on the grammaticalization of deontic modality in embedded contexts, in turn entail that metonymic extension is crosslinguistically less restricted, as the small sampling of proxy control vs. metonymic examples discussed so far already suggests. Thus, there is no proxy control equivalent to the Italian and German sentences in (3a) and (4b), respectively, whereas the English sentence in (10) is clearly grammatical. Conversely, once we add in a deontic modal reading to the sentence in (10), a proxy + metonymic control reading does become available. The sentence in (11) displays a purely metonymic reading: Sue (*i*) is simply asking permission for herself to park her car ($f(i)$) on Broad Street. In (12), we have a complex proxy + metonymic reading: Sue (*i*) is asking for permission on behalf of her friends ($f(i)$) for them to park their car ($f(f(i))$) on Broad Street:

³ Incidentally, when ‘measles’ is used in its literal and not metonymic sense, plural marking is triggered, as expected, as in: “Measles have/*has been practically eradicated from the face of the earth.”

⁴ Postal’s specific claim was actually not about control but about restrictions on metonymic shift with pronominal antecedence in finite clauses. We thank Idan Landau (p.c.) for bringing our attention to this set of data.

- (11) Sue_i asks [PRO_{f(i)} to park on Broad Street]
 METONYMIC: $i \rightarrow Sue; f(i) \rightarrow Sue's\ car$
- (12) Sue_i asks [PRO_{f(f(i))} to park on Broad Street]
 PROXY+METONYMIC: $i \rightarrow Sue; f(i) \rightarrow Sue's\ friends; f(f(i)) \rightarrow Sue's\ friends' car$

As mentioned above, such differences suggest that the specific kind of metonymic extension in (10) and the kind of extension that yields proxy control are ultimately distinct phenomena. In particular, the latter involves deontic modality while the former does not. At the same time, it is undeniable that both types of dependency involve a mapping of the form $i \rightarrow f(i)$ between the controller and controllee – thus may ultimately just be different sub-types of a more general underlying class of referential extension allowed in grammar.⁵

2.4 Proxy Control vs. Partial Control

Finally, we observe that proxy control is similar to partial control in many respects. Broadly speaking, they both involve a referential relationship between the controller i and another entity. The reference of the controllee is discourse-pragmatically related to, but is ultimately different from, it. The only difference is that, in the case of partial control, the extension of the controller is properly included in that of the controllee, yielding a part-whole dependency relation of the form $i \rightarrow i+$, as we have seen. In the case of proxy control, on the other hand, the individual(s) denoted by the controller are not thus included. So we get a non-part-whole relationship. The controller and controllee are extensionally related but, ultimately, disjoint. Nevertheless, given the close connection between the two phenomena, it makes sense to probe the connection between the two phenomena further, to see to whether each is a primitive phenomenon in its own right, rather than simply being a derivative of the other.

As it turns out, there is a one-way entailment relationship between the two. It is, indeed, possible to get partial control without proxy control, as in (13) below (adapted from Landau, 2013:164):

- (13) Il presidente crede [di EC_{i+,*f(i)} esser-si riuniti la notte scorsa].
 the president believes C be.INF-REFL gathered.M.PL the night last
 ‘The president believes to have gathered last night.’ (Literal)

However, the converse does not seem to be the case. In other words, without changing their fundamental structure, all the proxy control sentences on this handout could, in principle, also yield a partial control reading given a different discourse-context. To put it a different way, while a partial control reading can be pragmatically ruled out to yield a proxy control reading, it does not seem possible to rule it out semantically (or lexically). Logically, the structural requirement for proxy control entails the structural requirement for partial control. Alternatively, we might say that the environments that license proxy control are a proper subset of those that license partial control. Not unexpectedly, given this, the predicates that license proxy control, at least those tested so far, also seem to be a proper subset of those predicates that have been shown to license partial control, e.g., factive *regret*, *surprised*, *hate*, *shocked*, attitudinal *believe*, *think*, *imagine*, *deny*, desiderative *want*, *prefer*, *yearn*, *refuse*, and interrogative *wonder*, *ask*, *interrogate*, *inquire*.

⁵ It is irrelevant to us whether this relation is called metonymic or something else. We are ultimately interested in investigating the precise conditions of deontic modality under which the proxy control extension obtains, and in determining a formal mechanism to derive the $i \rightarrow f(i)$ relation in grammar.

We exploit the nature of this asymmetric relationship in two ways. First, Landau (2013) presents diagnostics for bound variable behavior to argue in detail that partial control constitutes a species of OC crosslinguistically. Given our discussion of the entailment relations between partial and proxy control relations above, we expect that (all else being equal) proxy control, too, should be a species of OC, as well. Below, we present independent empirical arguments that this is indeed true for a proper subset of the German and Italian speakers that we tested. These were speakers of the southern standard dialects of German and the Grossetano dialect of Italian, as mentioned earlier. For the remaining speakers of German and Italian, proxy control is actually a species of NOC, a point of dialectal variation we return to in §6. Crucially, however, such speakers had NOC readings for *partial* control, as well. This is precisely what is predicted given the entailment relation between partial and proxy control described here. Second, our analysis of proxy OC involves a modification of an extension analysis of partial control discussed in Pearson (2016). In addition to deriving the nature of proxy control, such an analysis also makes sense of the strong connection between partial and proxy control.

3 Proxy Control Is a Species of OC

Landau (2013), 33, defines OC as in (14) below:

(14) “THE OC SIGNATURE:

In a control construction [$.X_i.[S \text{ PRO}_i..]$], where X controls the PRO subject of the clause S:

- The controller(s) X must be (a) co-dependent(s) [argument or adjunct] of S.
- PRO (or part of it) [this caveat subsumes cases of partial control as a sub-species of OC] must be interpreted as a bound variable.”

We can contrast this with NOC which, citing Williams (1980:212) is defined as follows:

(15) “NON-OBLIGATORY CONTROL:

- a. No antecedent is necessary.
- b. If there is an antecedent, it need not c-command.
- c. The antecedent may follow S [the clause containing PRO].
- d. The antecedent is not uniquely determined.
- e. Lexical NP can appear in the position of PRO.”

Hornstein (1999) as well as McFadden and Sundaresan (2016), among others, argue that the properties in (15) simply fall out of the fact that NOC PRO has the properties that OC PRO lacks: I.e., it is an Elsewhere form. To elaborate, OC PRO is obligatorily coreferent with its antecedent (the “controller”) and can only have sloppy identity readings under *vP* ellipsis. In the relevant attitude contexts, it is interpreted obligatorily *de se* (pace Landau, 2013). Little *pro*, including cases of NOC PRO, yields not just sloppy but also strict readings under ellipsis, can but need not be coreferent with a local antecedent, and can but need not be interpreted *de se* in attitude contexts.

In the remainder of this section, we show that for the speakers of Southern Standard German and Grossetano Italian, proxy control does count as a species of OC, with respect to these diagnostics. As we have already noted, this is already what we expected, given the afore-mentioned entailment relation between partial and proxy control, and given independent evidence that partial control itself constitutes a type of OC.

3.1 Proxy Controller Must Be Co-dependent of Control Clause

The first piece of evidence for OC comes from the fact that, for the speakers in question, there is a minimality condition on the proxy control relation, as described in the OC Signature in (14). In other words, the controller involved in the proxy control relation must be a thematic participant of the clause that directly embeds the control clause. As such, only one level of embedding is allowed – there is no cyclic control or true long-distance control across multiple clauses.

This is illustrated by the multiply embedded Italian sentence in (16) under the “proxy-proxy” scenario given in (17):

- (16) La maestra_k ha pregato suo marito_i [di EC_{i,*j,*k} chiedere al contadino_j [di EC_{f(i),*f(k)} poter accarezzare l' asino]].
 the teacher has asked her husband C ask.INF to.the farmer C
 may.INF pet.INF the donkey
 ‘The teacher asked her husband to ask the farmer for permission to pet the donkey.’

- (17) **Potential proxy-proxy scenario:** *There is a donkey next to the elementary school. The kids would like to pet it. The teacher asks her husband if he could do her the favour on the way back from dropping her off at school, of asking the farmer if the kids are allowed to pet the donkey.*

In (16), the teacher’s husband is an immediate associate of the teacher. The kids are direct associates of the teacher, but only indirect associates of the teacher’s husband. The discourse-context we have set up favors a non-minimal proxy control reading between the matrix subject *l’ insegnante* ‘the teacher’ and the innermost embedded subject, across the medial subject. Despite this, such a reading is impossible. Parallel tests for German yield identical results.

3.2 Bound Variable Status of Controllee

The second piece of evidence for OC is that the controllee in proxy control structures must be interpreted as a bound variable. A standard test for the bound variable status of pro-forms is whether they yield only sloppy readings or whether they can yield both strict and sloppy readings, under ellipsis. A bound variable is predicted to yield only the former, but a deictic form is compatible with the latter (Reinhart, 1983). When we apply this diagnostic to our proxy control structures, the results are again very clear. Only a sloppy reading is possible under ellipsis.

Thus, in the Italian proxy control example in (18), the only way to get a strict reading is if the extension of $f(i)$ and $f(j)$ happened to be extensionally equivalent – e.g., if both the teacher and her husband happened to teach in the same elementary school, thus shared the same set of students; but this would, of course, be nothing but an instance of accidental coreference:

- (18) La maestra_i ha pregato il contadino_j [di EC_{f(i)} poter accarezzare l' asino] e suo marito_k uguale ... [EC_{f(k),*f(i)}].
 the teacher has asked the farmer C may.INF pet.INF the donkey and her husband too
 ‘The teacher asked the farmer for permission to pet the donkey and her husband, too.’

- (19) **Potential strict ellipsis proxy scenario:** *There is a donkey next to the elementary school. The kids would like to pet it so the teacher asks the farmer if the kids are allowed to do so. And on the way back from dropping his wife off at school, thinking that his wife had forgotten, the teacher’s husband also asks the custodian if the kids are allowed.*

The fact that we can only get sloppy readings under ellipsis in turn shows that the controlled subject in proxy control environments is interpreted as a bound variable, a typical signature of OC.⁶

In structures where the controller is an overt quantifier, the controllee must be interpreted as a bound variable. Crucially, it is possible to construct sentences involving an overt quantifier controller that yield a proxy control reading, as in German (20). The proxy control reading below survives under a distributive interpretation for $i \rightarrow f(i)$:

- (20) a. *Context:* The big conference is held. The conference is composed of multiple workshops, each one organized by different work groups. Each work group has a person responsible for organizing the rooms with Mrs. Pohl who administrates the lecture building. The room organizers, however, all have so many other duties that they won’t get a chance to actually attend the conference and use the rooms themselves.
- b. Jede Organisatorin_i hat Frau Pohl_j gebeten, [EC_{f(i)} das Hörsaalgebäude für ihren_i each organizer has Mrs. Pohl asked the lecture building for her Workshop nutzen zu dürfen].
workshop use.INF to may.INF
‘Each organizer has asked Mrs. Pohl for permission to use the lecture building for her workshop.’

Similarly, Italian (21) can only mean that each student representative i asks on behalf of his or her own class $f(i)$:

- (21) [Ogni rappresentante di classe]_i ha chiesto alla responsabile_j [di EC_{f(i)} poter utilizzare each representative of class has asked to.the responsible C may.INF use.INF l’ aula magna per la loro_i assemblea di classe.
the lecture hall for the their assembly of class
‘Each class representative asked the person in charge for permission to use the lecture hall for their class assembly.’

3.3 No “Sub-group” Control

Our final diagnostic for OC involves what we will nominally term here “sub-group control”. As we have already noted, in an NOC environment, the reference of the controllee is not syntactically constrained, as it is in the case of OC. Given this, Hornstein (1999) and McFadden and Sundaresan (2016), among others, have proposed that the reference of the controllee in an NOC structure falls out as an Elsewhere, when the syntactic conditions for OC fail. An OC controllee may not denote a sub-group of a plural controller since this would violate conditions on c-command between the controller and controllee. However, assuming that NOC really is failed OC, such sub-group control

⁶ Italian does not have vP ellipsis, only TP ellipsis. Nonetheless, the subjects need not be identical, which is the only relevant factor here.

should be possible with an NOC reading. This prediction is fulfilled, as illustrated in English (22). Analogous patterns hold for German and Italian:

- (22) “Sub-group control” - Control out of a conjunct phrase:
- a. *John_i and Mary_j [wanted PRO_{i/j} to eat pizza].
 - b. John_i and Mary_j thought that it would be a shame EC_{i/j/k} to give up now.

In (22a), the controller (‘John’ or ‘Mary’) may not control the PRO out of the conjunct phrase, because such a control relation would violate c-command (a prerequisite for OC). But such a relation is perfectly licit in (22b), showing that the violation of c-command is not an issue here. We can thus use the availability of sub-group control as another diagnostic for the presence of OC.

We now predict that, if proxy control is a species of NOC, sub-group control should be licit, just as in (23b); if it is a species of OC, it should be ruled out, as in (23a). We put this to the test in (23) below:

- (23) a. **Scenario:** *An attorney (i) and the wife of a detainee (j) ask the prison-warden for permission for the wife to meet with the detainee (l/f(i/j)) – her husband.*
- b. L’ avvocato_i e la moglie_j hanno pregato la guardia_k [di EC_{i+j+1/*j+1=f(i)}
the attorney and the wife have asked the warden C
poter-si incontrare in privato].
can.INF-REFL meet.INF in private
‘The attorney and the wife asked the warden for permission to meet in private.’

Assuming that the structure of the conjoined plural is such that neither of the conjuncts c-commands the embedded clause, (23) shows that the same syntactic conditions that hold for partial control also hold for proxy control. As the relevant referential indices show, sub-group control is ruled out. The only reading is one where the attorney and wife *together* meet the wife’s husband – not one where the attorney alone does so, or where the wife alone does so. Similar judgments hold for parallel sentences in German.

3.4 Summary

Given the discussion so far, proxy control emerges as a genuinely new form of control in grammar, with the following empirical properties. It entails the presence of a deontic modal, either overt or silent, in the control complement; we have argued that this is a necessary ingredient for proxy control to obtain. This requirement also allows us to distinguish proxy control from cases of metonymic extension in control. The latter *do* bear an overarching connection to instances of proxy control in that they, too, involve a mapping between the controller and controllee of the form $i \rightarrow f(i)$. The fundamental point of divergence is that the specific types of $i \rightarrow f(i)$ relation encoded in the metonymic extension sentences discussed in the literature are not parasitic on deontic modality in the way that proxy control is. The environments that license proxy control also license partial control. While the former can pragmatically rule out the latter, it cannot do so semantically. This conclusion is bolstered by the fact that the predicates that license proxy control seem to be a proper subset of those that license partial control. Given this, and given that partial control itself is a kind of obligatory control (OC), we predict that proxy control, too, should be available as a kind of OC. Tests involving sloppy readings under ellipsis and locality of antecedence confirm this prediction for a proper subset of the German and Italian speakers tested.

(24) *Formal definition of Proxy control (OC and NOC):*

- a. Proxy control obtains in the scope of deontic modality. Specifically, it involves a set of individuals i asking for permission on behalf of another set of individuals j (to do x).
- b. j is discourse-contextually related to i in some way (e.g., they bear an association that is relevant for the activity that permission is being asked for), such that $j = f(i)$, with f being a discourse-contextually defined function, and $i \neq f(i)$
- c. The controller i is the seeker of permission, the controllee $f(i)$, the intended receiver/target of said permission.

The definition of proxy OC will include the additional condition that the controllee be interpreted as a bound variable. In cases of proxy NOC, the controllee will be specified not to be interpreted as a bound variable. In other words, it will be interpreted as a free variable.

4 Proxy OC: $i \rightarrow f(i)$ Is Not Syntactic

We are working within a Minimalist Y-modular framework (Chomsky, 2001, et seq.) involving a “narrow” computational syntax that feeds into the form (PF) and meaning (LF) components. In this section, we present theoretical as well as empirical arguments to show that, under such a model, the $i \rightarrow f(i)$ relation in proxy OC cannot be modelled in the syntactic module. Rather, we will propose that what is syntactically encoded is an Agree relation between the controller and controllee, which is interpreted as an $i \rightarrow i$ dependency at LF. The individual i coordinate on the controllee is then *semantically extended* at LF to $f(i)$. This yields an $i \rightarrow f(i)$ control relation.

4.1 Theoretical Counter-arguments

The $i \rightarrow f(i)$ relation between the controller and controllee in proxy control presents a non-trivial challenge to both movement- and Agree-based syntactic approaches to OC because, given the nature of this mapping, the set of individuals denoted by the controller is not contained in the set denoted by the controllee.

This is in direct contrast to the $i \rightarrow i+$ relation of partial control (and the $i \rightarrow i(+j)$ relation of non-exhaustive control in general). The fact that these relations involve set-containment (namely, that the extension of the controller is properly included in that of the controllee) makes them much easier to capture in syntactic terms. Under the movement theory of control (MTC) (Hornstein, 1999, et seq.), OC is simply the result of (thematic) A-movement from the controlled to the controlling position. The controller and controllee are thus simply the head and tail of the same A-chain. Typically, the former is overtly pronounced, and the latter remains silent; in instances of so-called backward control, it is the other way around.

Instances of partial control initially seem problematic for the MTC. After all, how can a nominal partially move from one position to another? However, one line of recent alternative analyses within the MTC (Hornstein, 2003; Słodowicz, 2008; Boeckx et al., 2010; Sheehan, 2012, 2014; Rodrigues, 2007) proposes that partial control should be derived by having the controllee (the tail of the movement chain) associate with a null comitative PP in the control complement. Abstracting away from technical details (which often vary from one analysis to the other) for the moment, this means that a partial control sentence like that in (25) really has the underlying structure in (26):

(25) John_{*i*} agreed [PRO_{*i+(j)*} to meet this afternoon].

(26) John_i agreed [[PRO_i (with [the others]_j)]_{i+j} to meet this afternoon].

The nominal thematically raises from the control complement to the matrix, just like in cases of exhaustive control. The partial control reading is added on top of this, and results purely from the associative reading contributed by the null PP putatively associated with the nominal in its base-merge position. Landau (2016a) has recently argued that the null comitative analysis for partial control is incorrect. As we have seen, it is predicated on the notion that the controllee is itself semantically singular and that the plurality associated with partial control comes out only due to its association with a null comitative PP. However, empirical tests for number, involving reflexive binding and secondary predication, among others, suggest that the controllee must itself be underlyingly plural in these cases.

In this paper, we are not so concerned with whether a null comitative analysis works for cases of partial control. However, it is fairly easy to show that such an analysis *cannot* work for cases of proxy control. Thus, even if it is a robust alternative for non-exhaustive control relations involving part-whole dependencies, it is unviable as an analysis for $i \rightarrow f(i)$ mappings. The first reason for this is that the proxy OC $i \rightarrow f(i)$ relation is simply not a comitative relation. A more devastating problem, however, is that the extension of the controllee does not contain that of the controller, as described above. For the MTC, this would essentially mean that the head and tail of the A-movement chain should be able to have *different* referents, with the head of the chain (instantiating the controller) denoting i and the tail (instantiating the controllee) denoting $f(i)$, where $f(i)$ can explicitly exclude i . Crucially furthermore, it really does not matter whether such a dependency is the result of movement or some sort of primitive Agree operation based on simple feature-matching. The latter would thus have precisely the same problems in deriving $i \rightarrow f(i)$, for these same reasons.

4.2 Empirical Counter-arguments

The theoretical issues mentioned above argue that an analysis based on simple feature identity between the controller and controllee – whether this be derived via A-movement or simple feature-copying between a Probe and a Goal, as part of Agree – cannot derive the $i \rightarrow f(i)$ relation involved in proxy OC. Nevertheless, we might imagine that such a dependency is established as the result of a more complex Agree relation. Such a scenario might involve the probe (instantiated by the controllee) Agreeing with multiple goals: The controller i , as well as a discourse salient and implicit (but crucially syntactically represented) set of individuals $f(i)$ that are pragmatically related to the individual denoted by the controller. Such an Agree operation would trivially yield partial control. We would then need a mechanism to remove the features pertaining to the controller from the whole. Alternatively, we could simply have the controllee Agree with the set of individuals $f(i)$ alone. The controller denoting i might be involved in mediating this relationship but would crucially not participate in feature-valuation.

Below, we present empirical counter-arguments from German and Italian for the two types of dialects for which proxy OC was attested, namely Southern Standard German and Grossetano Italian, respectively. The evidence we provide involves subject agreement on floating quantifiers in proxy control structures in Grossetano and Condition B obviation effects in Southern Standard German. Both types of evidence, we argue, militate against modelling $i \rightarrow f(i)$ in Narrow Syntax, and show convincingly that such a relation obtains only at LF.

4.2.1 Floating Quantifiers in Grossetano Italian

Floating quantifiers (FQs) in Italian show overt ϕ -agreement with subjects and can thus be exploited to diagnose subject ϕ -features. In (27a), when the FQ bears M.PL agreement, a partial control reading ($i \rightarrow i+$) is available; i.e., the (male) teacher (i) asks permission for himself and the girls ($i+$) to have breakfast. In this case, the gender is masculine because groups of mixed gender are resolved by using (default) masculine gender in Italian. The sentence in (27b) shows a significant point of agreement variation that co-occurs with a difference in the type of control reading that is attested. The FQ in this sentence bears F.PL;⁷ crucially, only a proxy control reading is warranted, and a partial control reading is ruled out, because interpretable feminine plural inflection can only refer to uniformly female groups in Italian. The male teacher (i) therefore asks for permission for the girls alone ($f(i)$):

- (27) a. (Quando noi ragazz- e_j della 4F andiamo in gita), il nostro maestr- o_i chiede
 when we girls-F.PL of.the 4F go.1PL in excursion the our teacher-M.SG asks
 alla receptionist [di EC $_{i+}$ poter fare colazione tutt- i insieme].
 to.the receptionist C may.INF do.INF breakfast all-M.PL together
 ‘(When [we girls] $_j$ go on a school trip), [our teacher] $_i$ asks the receptionist for permission
 [to all EC $_{i+j}$ have breakfast together].’ (Literal)
- b. % (Quando noi ragazz- $e_{f(i)}$ della 4F andiamo in gita), il nostro maestr- o_i
 when we girls-F.PL of.the 4F go.1PL in excursion the our teacher-M.SG
 chiede alla receptionist [di EC $_{f(i)}$ poter fare colazione tutt- e insieme].
 asks to.the receptionist C may.INF do.INF breakfast all-F.PL together
 ‘(When [we girls] $_{f(i)}$ go on a school trip), [our teacher] $_i$ asks the receptionist for
 permission [to all EC $_{f(i)}$ have breakfast together].’ (Literal)

The variation in (27a) vs. (27b) suggests that proxy control can feed FQ ϕ -agreement. So it actually seems to represent strong evidence *for* a syntactic analysis of proxy control (and for its treatment as a syntactically distinct control phenomenon), contrary to what we have been arguing so far.

But a closer look at these sentences shows us that, though they look identical on the surface (except for the difference in agreement), they actually have very different syntactic structures. This difference emerges when we perform ellipsis tests on these sentences. The partial control structure (with M.PL FQ) allows only sloppy readings under ellipsis as shown in (28a). In contrast, the F.PL FQ can also yield strict readings under ellipsis, as in (28b):

- (28) a. (Per le ragazze $_j$) [il maestro] $_i$ ha chiesto alla receptionist [di EC $_{i+}$ poter
 for the girls the teacher.M.SG has asked to.the receptionist C may.INF
 fare colazione tutt- i_+ insieme e [il maestro della 4F] $_k$ uguale.
 make.INF breakfast all-F.PL together and the teacher of.the 4F same
 ‘(As for the girls,) [the teacher] $_i$ asked [the receptionist] [CP (to be allowed) EC $_{i+j}$ to
 have breakfast all $_{i+j}$ together] and [the teacher of the 4F] $_k$ asked the receptionist [CP (to
 be allowed) EC $_{k+j, *i+j}$ to have breakfast all $_{k+j, *i+j}$ together] too.’

⁷ (27b), as well as (28b), are prefixed by the %-sign because there is speaker variation. Some of the speakers have a strong preference for having an overt adjunct that contains the referent of the F.PL FQ. Given the adjunct status of the referent, we abstract away from this point of variation. We return to the point of speaker variation in §6.

- b. $\%(\text{Per le ragazze}_{f(i)})$ [il maestro]_i ha chiesto alla receptionist [di $\text{pro}_{f(i)/k}$ for the girls the teacher.M.SG has asked to.the receptionist C poter fare colazione tutt- $e_{f(i)/k}$ insieme e [il maestro della 4F]_j uguale. may.INF make.INF breakfast all-F.PL together and the teacher of.the 4F same ‘(As for the girls,) [the teacher]_i asked the receptionist [_{CP} (to be allowed) $\text{pro}_{f(i)/k}$ to have breakfast all $_{f(i)/k}$ together] and [the teacher of the 4F]_j asked the receptionist [_{CP} (to be allowed) $\text{pro}_{f(i)/k}$ to have breakfast all $_{f(i)/k}$ together] too.’

The fact that (28a) allows only sloppy readings under ellipsis shows that the controllee must be interpreted as a bound variable. I.e., the partial control structure instantiates an OC dependency. The fact that (28b) can yield both sloppy and strict readings indicates, in contrast, that the controllee is not obligatorily bound. In other words, the proxy relation is not OC; it is NOC. We take this to mean that the $i \rightarrow i+$ relation involved in partial control *can* be syntactically established; in contrast, the $i \rightarrow f(i)$ relation in proxy control cannot. As soon as an $i \rightarrow f(i)$ relation is independently enforced (as by the FQ agreement in this instance), the controllee can no longer bear fingerprint of an obligatorily bound variable.

4.2.2 Condition B Obviation in Southern German

Condition B obviation patterns in Southern German make essentially the same point as the FQ data for Grossetano Italian above. In (29b), it is possible to add a pronoun in the embedded clause that refers back to the controller. Given the discourse-context in (29a), (29b) is interpreted such that the parents (i) ask for permission for their kids ($f(i)$) to go without them (i):

- (29) a. **Scenario:** *There is a school holiday being planned from Berlin to Venice. Since it’s an international trip, parents are expected to accompany their kids. Max and Susie’s parents are unable to accompany their children this time because of prior engagements, but they want Max and Susie to still be able to go on the school trip.*
- b. Die Eltern_i haben den Rektor_j gebeten, [EC $_{f(i)}$ $\%(auch)$ ohne sie_i ins Ausland the parents have the principal asked also without them in.the abroad fahren zu dürfen]. travel.INF to may.INF
‘The parents asked the principal for permission (*for Max and Susie*) to go abroad (even) without themselves.’ (Literal)

If the reference of the controllee were i or $i+$ (due to exhaustive and partial control, respectively), the sentence in (29b) should be both ungrammatical and illogical. It would be ungrammatical because it would violate Condition B; it would be nonsensical because it would essentially be stating that an individual (i) is allowed to travel (even) without i . The fact that the sentence is grammatical and coherent thus indicates that an $i \rightarrow f(i)$ reading is available. Furthermore, just as with the agreeing FQ in (27b) above, this initially seems to support a syntactic treatment of $i \rightarrow f(i)$.

However, just as with the sentences in (28a) and (28b) in Grossetano, sentences like (29) also substantially facilitate the availability of strict readings under ellipsis. This is illustrated in (30). For proxy OC, such strict readings under ellipsis are only achievable by accidental coreference, for instance, if the controller at the ellipsis site is also an immediate associate of the same set that the first controller is an immediate associate of. This is in sharp contrast with (30), where the controller

at the ellipsis site, *Martin* (k), may be anyone and may still be asking that the same kids ($f(i)$), but not necessarily also $f(k)$ be allowed to travel abroad without their parents:

- (30) Die Eltern_i haben die Rektorin_j gebeten, [EC_{f(i)/1} %(auch) ohne sie_i ins Ausland
the parents have the principal asked also without them in.the abroad
fahren zu dürfen] und der Martin_k auch.
travel.INF to may.INF and the Martin also
'The parents_i asked to go abroad without them_i and Martin asked [the principal]_j [CP (to be
allowed) EC_{f(i)/1} to travel abroad without them_i]too.' (Literal)

Just as with the FQ sentence in (27b), we take this kind of data to show that the syntactic encoding of an $i \rightarrow f(i)$ relation is only possible under conditions of NOC. In §6, we discuss how such readings may be derived. For now, we simply note this as evidence against the idea that $i \rightarrow f(i)$ is modelled in the narrow syntax for an OC reading of the proxy dependency.

4.3 Analytic Implications

We have presented theoretical as well as empirical arguments against modelling the proxy control $i \rightarrow f(i)$ relationship syntactically. The empirical arguments from FQ in Italian and Condition B obviation in German indicate that, as soon as an $i \rightarrow f(i)$ relation is syntactically forced (as by the FQ in (27b), or the coreferent pronoun in (29b)), a proxy dependency *based on* OC is ruled out; only an NOC analysis is viable.⁸ These conclusions show two things:

- (i) The $i \rightarrow f(i)$ OC relation in proxy control must be semantically – not syntactically – implemented.
- (ii) Speakers that allow proxy readings with an OC structure, must *additionally* allow proxy readings with a superficially identical (but underlyingly distinct) NOC structure, at least with a subset of these same predicates.

We now turn to an analysis of the OC variant of proxy control, based on the insight presented in (i) above. We have said that the $i \rightarrow f(i)$ proxy relation is not syntactically implemented. And yet, given that c-command and locality *are* relevant conditions for proxy control, the role of syntax cannot be entirely dispensed with. We thus propose that proxy control is encoded as an exhaustive $i \rightarrow i$ relation in syntax, which is established as an Agree relation between the controller and controllee. We will assume that this proceeds as a kind of mediated control, via *C*, as discussed in Landau (2013). This is an OC dependency, which explains the locality and c-command restrictions on proxy control discussed earlier. The i denoted by PRO is then *semantically extended* at LF to denote a discourse-contextually defined function f on i , yielding $f(i)$. The result is a mapping between $i \rightarrow f(i)$, which has been constrained by the structural parameters for OC. We thus envision derivation cycles like those in (31) and (32) below:

⁸ The $i \rightarrow i+$ relation of partial control, on the other hand, seems to have the option of being modelled in the syntax, a view that is further bolstered by independent case transmission facts from Russian (Landau, 2008). There are also strong arguments for a semantic treatment of partial control, however (Pearson, 2016). The arguments for a syntactic treatment of partial control can thus be seen as additional evidence for the idea that there are two types of partial control in language, one that is syntactically modelled and one that is semantically modelled, as recently proposed in Pitteroff et al. (2017).

(31) **Proxy control implemented as $i \rightarrow i$ in syntax:**

- a. Marie_i asked [C PRO_i to leave early].
 b. DP V [C PRO ...]
 └──┬──┘
 └──┬──┘

(32) **Extension of $i \rightarrow f(i)$ in semantics:**

- a. $\llbracket \text{PRO} \rrbracket^{c,g} = g(i) \rightarrow f(g(i))$
 b. **LF Output:** Marie_i asked [C PRO_{f(i)} to leave early].

In the section below, we discuss how the semantic extension from $i \rightarrow f(i)$ described in (32a) above is formally implemented.

5 Semantically Extending $i \rightarrow f(i)$: A Centered Worlds Treatment

The way in which we model the $i \rightarrow f(i)$ semantic extension of the controllee takes much of its insight from a recent proposal in Pearson (2016) regarding the treatment of partial control. Pearson, following Chierchia (1989), proposes that control predicates involve attitude verbs that quantify, not over worlds, but over “centered worlds” (Lewis, 1979), i.e., tuples involving (but not necessarily limited to) a world and an individual. This has the result that an attitude verb participating in a control relation selects, not a proposition (of type $\langle s, t \rangle$), but a property (minimally, of type $\langle e, \langle s, t \rangle \rangle$). Consequently, “the control infinitive expresses a property that is self-ascribed by the individual denoted by the controller” (Pearson, 2016:699). Partial control, for Pearson, obtains when this property applies, not directly to the individual (or set of individuals) denoted by the controllee (which would yield strict identity or exhaustive control), but to another individual (or set of individuals) that stands in a part-whole relation with the controllee. In other words, the reference i on the individual coordinate of the controllee is *semantically extended* to yield $i+$. Pearson argues that partial control predicates quantify over world-time-individual triples; i.e., they quantify over a property of type $\langle e, \langle i, \langle s, t \rangle \rangle \rangle$. Some partial control predicates may semantically extend the individual coordinate alone. But Pearson also provides empirical evidence showing that, in certain partial control structures, not only the individual coordinate, but also the time and world coordinates, may be similarly extended by the part-whole relation and thus defines an extension as a ‘part of’ relation (Pearson, 2016:702, Ex. 27) as in (33):

(33) *The part of relation*

- a. For any two sets P and Q, $P \leq Q$ iff $P \subseteq Q$ (for time and world extensions).
 b. For any two individuals a and b, $a \leq b$ iff $a + b = b$.

A simple modification of the *part of* function in (33) allows us to accommodate the proxy control facts discussed here. This merely involves broadening our conception of the extension from being a ‘part of’ relation to being a more generic $i \rightarrow f(i)$ proxy relation, as in (34):

(34) *The proxy relation*

- a. For any two sets P and Q, Q is a proxy of P iff $Q \rightarrow f(P)$ (for f , a discourse-salient function) and $P \cap Q = \emptyset$.

Proxy control structures in the German and Italian dialects inspected allow the time variable of the control complement to co-vary from that of the matrix as in (35):

- (35) Ieri Maria_i ha chiesto al sindaco_j [di PRO_{f(i)} poter manifestare settimana
yesterday Maria has asked to.the mayor C may_{inf} rally_{inf} week
prossima].
next
'Yesterday Maria_i asked [the mayor]_j [C_{CP} (to be allowed) PRO_{f(i)} to rally next week].'

We will tentatively take this to mean that time-, world-, as well as individual coordinates may undergo proxy extension for the dialects under consideration. More concretely, this means that the sets P and Q in (34) must denote not only sets of individuals, but also sets of time and world variables. Against this background, we formally define a proxy control predicate as in (36) below:

- (36) PROXY CONTROL PREDICATE:

$$\llbracket C_{\text{proxy}} \rrbracket^{c,g} = \lambda P_{\langle e, \langle i, \langle s, t \rangle \rangle} \lambda x_e \lambda t_i \lambda w_s. \forall \langle w', t', y \rangle [\langle w', t', y \rangle \in C_{x, w, t} \rightarrow \exists \langle w'', t'', z \rangle [\langle w'', t'', z \rangle \text{ is an extension of } \langle w', t', y \rangle \ \& \ P(z)(t'')(w'')]]$$
 where for any pair of world-time-individual triples $\langle w, t, x \rangle$ and $\langle w', t', y \rangle$, $\langle w', t', y \rangle$ is an extension of $\langle w, t, x \rangle$ iff for every α, β such that α is a coordinate of $\langle w, t, x \rangle$ and β is a coordinate of $\langle w', t', y \rangle$ of the same type as α , $\beta = f(\alpha)$, where f is a discourse-contextually defined function on α , and $\beta \neq \alpha$.

(36) defines a proxy control predicate C_{proxy} which universally quantifies over a control infinitive which is a property involving centered worlds consisting of world-time-individual triples, as discussed above. The proxy reading obtains because of the proxy extension relation, defined as in (34), which applies to each of the individual, time, and world coordinates quantified over and yields a corresponding individual, time, and world, each of which is a discourse-contextually defined, non-identical function of the original individual, time and world, respectively. The lexical entry for (36) thus states that, for every individual, time, and world that are candidates for the controller's real individual, time, and world, there exist a proxy-individual, a proxy-time, and a proxy-world, defined as in (37), of whom the property expressed by the control infinitive holds.

Let us now say a bit more about the underlying structure of a proxy OC sentence, taking (37) as illustration:

- (37) Maria_i ha chiesto al sindaco_j [di PRO_{f(i)} poter manifestare in piazza].
 Maria has asked to.the mayor C may_{inf} rally_{inf} in square.
 'Maria_i asked [the mayor]_j [C_{CP} (to be allowed) PRO_{f(i)} to rally in the square].'

Under an object control reading (non-existent with proxy OC), (37) would have the purely bouletic reading that Maria desires that the mayor bring about X , for $X =$ mayor rallies in the square. In the actually attested (control-shifted) subject-control reading, Maria still desires that the mayor bring about X , but $X =$ that the mayor allow Y (for $Y = f(\text{Maria})$) to do Z ($Z = Y$ rallies in the square).⁹ The proxy reading in (37) thus seems to encode a complex bouletic + deontic modal predication, as in (38):

⁹ Still, the true trigger for proxy control is not control-shift, as we have already seen. It is the bouletic + deontic modal predication; e.g., in German/Italian, proxy control obtains with 'promise' with no control shift, but has the same complex modal reading described above.

(38) $[CP_{root} Maria_i \text{ asked}_{bul} [CP_1 PRO_{f(i)} BE-ALLOWED_{deon} [CP_2 PRO_{f(i)} \text{ to rally}]]]$

As per (38), we assume two cycles of control dependency. The first involves an $i \rightarrow f(i)$ control dependency across a bouletic modal, while the second involves an exhaustive $f(i) \rightarrow f(i)$ dependency across a deontic modal. The proxy OC dependency is thus the composite consisting of both cycles taken together.

Against this background, we now derive the denotations in (39)-(43):

(39) $\llbracket ask \rrbracket^{c,g} =$

$\lambda P_{\langle e, \langle i, \langle s, t \rangle \rangle \rangle} : P \text{ is deontic. } \lambda x_e \lambda t_i \lambda w_s. \forall \langle w'', t'', y \rangle [\langle w'', t'', y \rangle \in Boul_{x,w,t} \rightarrow \exists \langle w''', t''', z \rangle [\langle w''', t''', z \rangle \text{ is an extension of } \langle w'', t'', y \rangle \ \& \ P(z)(t''')(w''')]]$,
 where for any pair of world-time-individual triples $\langle w, t, x \rangle$ and $\langle w'', t'', y \rangle$, $\langle w'', t'', y \rangle$ is an extension of $\langle w, t, x \rangle$ iff for every α, β such that α is a coordinate of $\langle w, t, x \rangle$ and β is a coordinate of $\langle w'', t'', y \rangle$ of the same type as α , $\beta = f(\alpha)$, for $f =$ a discourse-contextual function, and $\beta \neq \alpha$ and for $Boul_{\alpha_e, \beta_s, \gamma_i} = \{ \langle \beta'_s, \gamma'_i, \alpha'_e \rangle : \text{it is compatible with the fulfillment of } \alpha \text{'s desires in } \beta \text{ at } \gamma \text{ for } \alpha \text{ to be } \alpha' \text{ in } \beta' \text{ and it is compatible with } \alpha \text{'s beliefs in } \beta \text{ at } \gamma \text{ for } \gamma \text{ to be } \gamma' \}$.

(40) $\llbracket BE-ALLOWED \rrbracket^{c,g} = \lambda P_{\langle e, \langle i, \langle s, t \rangle \rangle \rangle} \lambda x_e \lambda t_i \lambda w_s. \forall \langle w', t' \rangle [\langle w', t' \rangle \in Allowed_{x,w,t} \rightarrow P(x)(t')(w')]$ for $Allowed_{\alpha_e, \beta_s, \gamma_i} = \{ \langle \beta'_s, \gamma'_i \rangle : \alpha \text{ does what } \alpha \text{ is allowed to do in } \beta' \text{ at } \gamma' \}$

(41) $\llbracket CP_2 \rrbracket^{c,g} = \lambda x_6 \lambda t_7 \lambda w_8 [PRO_6 \text{ rallies in } w_8 \text{ at } t_7]$

(42) $\llbracket CP_1 \rrbracket^{c,g} =$

$\lambda x_3 \lambda t_4 \lambda w_5 [\forall \langle w', t' \rangle [\langle w', t' \rangle \in Allowed_{x_3, w_5, t_4} \rightarrow [PRO_3 \text{ rallies at } t' \text{ in } w']]]$

(43) $\llbracket CP_{root} \rrbracket^{c,g} = \lambda t_i \lambda w_s. \forall \langle w'', t'', y \rangle [\langle w'', t'', y \rangle \in Boul_{maria, w, t} \rightarrow \exists \langle w''', t''', z \rangle [\langle w''', t''', z \rangle \text{ is an extension of } \langle w'', t'', y \rangle \ \& \ \forall \langle w', t' \rangle [\langle w', t' \rangle \in Allowed_{z, w''', t'''} \rightarrow [z \text{ rallies at } t' \text{ in } w']]]]$, for *extension* and $Boul_{\alpha_e, \beta_s, \gamma_i}$ defined as in (39), & $Allowed_{\alpha_e, \beta_s, \gamma_i}$ as in (40).

The denotations above can be informally translated as follows. (39) treats ‘ask’ as a predicate quantifying over an enriched bouletic modal base, and presuppositionally restricts its complement to deontic predications. The latter can be seen as a selectional restriction of sorts.¹⁰ Since BE-ALLOWED is non-attitudinal (can take inanimate subjects), its deontic modal base in (40) is not a set of centered worlds but of simple world-time pairs. The extension function on individuals is only defined on centered worlds (or enriched modal bases) involving individuals, as we have seen. We thus predict that the complement of BE-ALLOWED can only yield an exhaustive OC relation from $f(i) \rightarrow f(i)$; a partial relation of the form $f(i) \rightarrow f(i)+$ or a proxy one of the form $f(i) \rightarrow f(f(i))$ is ruled out. This is confirmed, as (38) shows. (41)-(43) are the result of step-wise function-application built on Pearson’s assumption that non-exhaustively controlled PRO is an extension of a λ -abstracted (individual) variable quantified over by the immediately higher attitude-predicate (yielding OC).

The final denotation in (43) asserts that for every world, time, individual extension (of Maria’s candidates for herself and her world & time) that is compatible with Maria’s desires in the current

¹⁰ The result of this restriction is that, when ‘ask’ selects a complement that is *not* deontic, the meaning attributed to it in (39) will simply fail to obtain. At this point, such a restriction is purely extrinsic, in the sense that it has to be brute-force encoded as a presuppositional restriction into the lexical entry of ‘ask’. But it is unclear how to make it less stipulative at this point since there is a degree of non-locality involved. Informally stated, the meaning of ‘ask’ has to be decided based on what comes *after* it, in its complement.

world & time, where Maria's individual extension (or proxy) does what Maria's proxy is allowed to do, Maria's proxy rallies. This is precisely the desired reading for (37)/(38).

5.1 Summary

We have argued that proxy OC is the result of a two-step operation. In the (narrow) syntax, the controller and controllee enter into an Agree relation for some formal feature, via the C head of the control infinitive, as depicted in (31).¹¹ Like all Agree operations, this obtains under structural conditions of locality, Minimality, and c-command. The Minimality and locality restrictions on proxy OC (cf. §3.1) are thus explained. We will further assume that Agree involves feature-matching and triggers variable binding of the controllee at LF. The controller and controllee thus start out with the relation $i \rightarrow i$; the controllee is a bound variable and yields sloppy readings under ellipsis (cf. §3.2). At LF, the individual coordinate i associated with the controllee (and potentially also the time and world coordinates corresponding to these), in the scope of a proxy control predicate as in (36), is proxy-extended (as defined in (34)) to yield a *proxy*-individual (as well as proxy-time and proxy-world). The new control relation is thus no longer of the form $i \rightarrow i$, but of the form $i \rightarrow f(i)$; in other words, it is a proxy relation. Nevertheless, given that the controllee remains a bound variable, the relation continues to instantiate a species of OC.

6 Dialectal and Crosslinguistic Variation

The constellation of properties we have presented to motivate the existence of proxy OC are shared by a core group of Southern German and Grossetano Italian speakers, which includes the German-Italian author. But as we have mentioned more than once in the course of this paper, not all speakers consulted displayed this profile. Here, we discuss the nature of this variation. The data come from face-to-face grammaticality judgment tasks we conducted with native speakers of German and Italian, as well as an online questionnaire in German.

Some speakers allowed proxy control but gave judgments that indicated OC properties for some sentences, but NOC for others. Such speakers allowed strict readings under ellipsis (with exhaustive, partial, and proxy interpretations), while simultaneously allowing non-local antecedents for these same interpretations, both diagnostics for NOC. There were yet other speakers who allowed strict readings under ellipsis and non-local antecedents in general. Furthermore, such judgments could not be dismissed as noise or errors since these same speakers performed consistently reliably with other sentences, such as the grammatical and ungrammatical fillers from our online survey. Similarly, when consulted again, two Italian speakers who had previously allowed strict readings under ellipsis with the two permission-seeking verbs *pregare* 'ask, beg' and *chiedere* 'ask', clearly disallowed strict readings under ellipsis with *volere* 'want' and *cercare* 'try', just as expected. A minimal pair is given in (44):

¹¹ The identity of this formal feature will not concern us too much for the moment. Agree could be for ϕ -features (Kratzer, 2009); it could also be for a referential feature, like ID as Hicks (2009) argues for anaphora. What is relevant here is that this is a formal computational operation and that it is, as such, subject to structural wellformedness conditions.

- (44) a. Un detenuto_i ha pregato la guardia_j di EC_i poter-si lavare più di una volta
 a detainee has asked the guard C may.INF-REFL wash.INF more of one time
 al giorno e [il compagno di cella]_k EC_{k/i} lo stesso.
 at.the day and the mate of cell the same
 ‘A detainee asked the guard for permission to wash himself more than once a day, and his cell mate (asked the guard for permission to wash himself/him), too.’
- b. Un detenuto_i voleva EC_i poter-si lavare più di una volta al giorno e
 a detainee wanted may.INF-REFL wash.INF more of one time at.the day and
 [il compagno di cella]_k EC_{j/*i} lo stesso.
 the mate of cell the same
 ‘A detainee wanted to be allowed to wash himself more than once a day, and his cell mate (wanted to be allowed to wash himself), too.’

In light of such facts, we concluded that, while predicates like ‘try’ are unanimously OC, others like ‘ask’ vary (amongst speakers) with respect to whether they select an OC or NOC structure. In some instances, both options may be available and speakers may vary amongst themselves with respect to which reading they choose (based on extra-grammatical factors, like salience, processing difficulty, and the like). Finally, even among the speakers that disliked sentences that would require an NOC structure to be felicitous, there was variation with respect to how easily proxy readings were allowed. We thus concluded that there is further speaker variation for whether the semantic proxy extension in (34) is allowed in an OC structure or not.

Given these results, we describe a two-by-two variation grid; i.e., four different populations for permission-seeking and permission-granting control predicates:

- (45) a. Speakers who are reluctant to select an NOC structure, and allow the proxy extension in (34);
 b. Speakers who are reluctant to select an NOC structure, and do not allow the proxy extension in (34);
 c. Speakers who are prone to selecting an NOC structure, and allow proxy extensions;
 d. Speakers who are prone to selecting an NOC structure, and do not allow proxy extensions.

We will refer to the groups above as follows: (a) as *proxy*, (b) as *OC*, and (c) and (d) as *NOC* together (as they are indistinguishable on the surface). This subdivision of the population seems to be leading in the right direction for both German and Italian.

In the remainder of this section, we will describe the format of the surveys, provide more information on each speaker group individually, and further discuss the nature of NOC in proxy control.

6.1 Surveys

Here, we will focus on the German-speaking informants, on whom we currently have more data gathered. As mentioned above, our data are gathered from both face-to-face grammaticality judgment tasks and an online survey. A total of 37 native speakers were tested. For the online survey, a context and a sentence were given in conjunction. The participants were asked to judge the well-formedness of the sentence given the interpretation of the context. The discourse-context

was constructed so as to guide the participants toward selecting a specific reference for the implicit subject. The face-to-face judgment task was conducted by first reading out a sentence and having its well-formedness be judged out of context or “out of the blue”. Then, different discourse scenarios were read out, and the participants were asked to judge the well-formedness of the sentence again, this time against the more precise interpretation provided by the context, on a numerical scale from 1 (terrible) to 5 (perfect).

For both surveys, (a)-(c) below constituted the core sentence types, and (d)-(f) – the more peripheral ones. Types (a)-(e) had *bitten* (‘ask’) as the control predicate:

- a. A sentence with a local, c-commanding antecedent;
- b. A sentence with a non-local, c-commanding antecedent;
- c. A sentence of type (a) conjoined with a verb-phrase ellipsis;
- d. A sentence with a pronoun in the control complement which has the same feature of the controller;
- e. A sentence of type (a), but with ‘permit’ as the control complement, and with the redundant modal ‘may’ in the control complement;
- f. A sentence of type (a), but with ‘permit’ as the control complement, without the redundant modal ‘may’ in the control complement;
- g. A sentence of type (a), but with ‘promise’ as the control complement.

Each of the core sentence types in (a)-(c) above was presented under three different discourse conditions:

- (i) A context where the subject of the embedded infinitival is the subject of the control predicate, suggesting an exhaustive control reading;
- (ii) A context where the subject of the embedded infinitival is the subject of the control predicate plus other people, suggesting a partial control reading;
- (iii) A context where the subject of the embedded infinitival is some (group of) associate(s) of the subject of the control predicate (excluding the subject herself), suggesting a proxy control reading.

We gathered 27 sets of complete responses from the online survey, and interviewed 10 speakers for the elicitation tasks. Our informants were native speakers of German, predominantly from Germany; some were also from Austria and Switzerland.

6.2 Speaker groups

We predicted that a speaker that allowed proxy readings while underlyingly having an OC structure should give the following judgments: (i) sentences with local c-commanding antecedents should tend toward the maximum score of 5, and (ii) sentences with non-local c-commanding antecedents, and those with a strict reading under ellipsis, on the other hand, should tend toward the minimum score of 1. Based on our hypothesis that speakers may optionally select an NOC structure for certain proxy control predicates, we set up slightly weaker criteria to assign participants to one of the three groups discussed above, namely: PROXY SPEAKERS, OC SPEAKERS, and NOC SPEAKERS. These criteria were defined post-hoc and should be viewed as a qualitative assessment of the survey data. The categories are described below in (46).

(46) *Speaker-group criteria*

- | | | |
|----|--|---|
| a. | Speaker allows proxy extension if: | mean of the sentences with a local antecedent and a context suggesting a proxy interpretation is larger than 3; |
| b. | Speaker is reluctant to select NOC structure if: | mean of the ellipsis plus the non-local antecedent sentences is smaller than 3; |
| c. | Speaker is not reluctant to select NOC structure if: | mean of the sum of the ellipsis of the non-local antecedent sentences taken together with that of the simple sentences with a context suggesting a proxy interpretation and that of the sentence with a Condition B violating pronoun, is greater than or equal to 3. |

The criteria follow the logic that the mid-point of our five-point scale indicates mid-level acceptability or uncertainty.¹² If a speaker allows proxy extensions, the sentences with local c-commanding antecedents with contexts pushing a proxy interpretation should be judged above the mid-point overall. If a speaker generally disallows – or is reluctant to select – NOC structures for such sentences, the sentences which require an NOC structure to be felicitous (diagnosed via ellipsis with a context pushing a strict reading, and non-local antecedents), should be judged below the mid-point overall.¹³

If speakers were to easily allow NOC structures for permission-seeking control sentences, then the mean of the sentences presented just above should be in the higher half of the scale. In addition, sentences with local antecedents and contexts pushing a proxy interpretation, as well as the sentences with a Condition B violating pronoun in the control complement, were included in the criteria. The reason is that the interpretation for the former should be readily available through an NOC structure, while we have shown in §4.2.2 that the latter force an NOC structure.

6.2.1 Proxy Speakers

PROXY SPEAKERS make up the core group whose judgments have been the primary focus of this paper so far. They allow proxy interpretations of simple control sentences with permission-seeking and permission-granting predicates. For proxy interpretations, just as for exhaustive and partial readings, they give judgments which diagnose an OC structure; i.e., they have only sloppy readings under ellipsis and bound variable readings with a quantificational controller, and allow no non-local antecedent and no sub-group of a plural as the controller. They satisfy both the criteria for allowing the proxy extension in (34), and the criteria for selecting OC structures. This group includes a total of 5 speakers (13%): The German-Italian author, 2 speakers from the grammaticality judgment task, and 2 speakers from the online survey. Strikingly, all of them were speakers of the southern varieties of German (Bavarian-Swabian, Swabian, Bavarian, Austrian), as already indicated, with varying degrees of dialect spoken in their upbringing.

We have already discussed in detail how proxy OC comes about, so nothing more needs to be said on this matter here.

¹² For the online survey, the ungrammatical fillers had a mean value of 1.4, the grammatical fillers a mean value of 4.6.

¹³ A stricter criterion would have been to define the ellipsis sentences and the non-local antecedent sentences to satisfy a certain mean individually. We decided against this because it would have left roughly half of the speakers that are classified in this fashion ungrouped.

6.2.2 OC Speakers

OC SPEAKERS are the most conservative with respect to their possibilities for control under the predicates tested. They display the same hallmarks of OC as PROXY SPEAKERS when judging the sentences with permission-seeking predicates. In contrast to the latter, however, they do not accept – or only very reluctantly accept – proxy readings. They satisfy the criteria for selecting OC structures, but not those for allowing the proxy extension. The group includes a total of 8 speakers (21%): 6 speakers from the online survey, 1 speaker from the grammaticality judgment task, and 1 other speaker consulted outside the context of the two surveys.

Under the current model, the lack of proxy control for OC speakers must be because, for such speakers, the proxy-extension function defined in (34), is simply not a part of their grammar. The fact that such speakers can get OC under the *same* predicates for exhaustive and partial readings shows that the problem for such speakers does not lie in the fundamental unavailability of OC. For us, this means that the Agree relation between the controller (Goal) and controllee (Probe), which in turn triggers variable binding of the latter (cf. (31)), is, in principle, still possible under such predicates for such speakers. When nothing further happens, the controller and controllee are assigned to the same individual in the evaluation context, yielding exhaustive OC. The individual coordinate of the controllee may also undergo *part of* semantic extension (as per (33)) yielding the $i \rightarrow i+$ dependency in partial OC. However, since the (34) extension is undefined in their grammar, the $i \rightarrow f(i)$ proxy OC is unavailable.

6.2.3 NOC Speakers

In direct contrast to OC SPEAKERS, NOC SPEAKERS are the most permissive. They allow proxy readings in general, but the controllee does not behave like a bound variable. The proxy controller may be non-local and strict readings may obtain under ellipsis. Under our analysis, the unavailability of proxy OC entails that the controller and controllee are *unable* to enter into an Agree relation in syntax. This immediately explains the lack of structural restrictions on the controller. Given our assumption that Agree triggers variable binding of the controllee at LF, it also explains the availability of strict readings under ellipsis.

But our analysis makes another testable prediction. If the controller and controllee are unable to Agree with each other, as discussed, then we do not just predict the unavailability of proxy OC; we also predict the unavailability of exhaustive OC, and partial OC. After all, these other types of OC are also built on the same Agree relation; the differences between them arise only later, at LF. Thus, our NOC speakers must also have NOC readings for exhaustive control and partial control.

This prediction is fulfilled. In contrast to PROXY SPEAKERS, NOC SPEAKERS also readily accept strict readings under ellipsis for exhaustive and partial readings of *ask*-sentences. Similarly, they readily accept non-local antecedents for exhaustive, partial, and proxy readings alike for these predicates. In other words, they satisfy the criteria for NOC speakers defined in (46). This group constitutes nearly half the speakers tested so far and includes a total of 17 speakers (44%): 12 from the online survey, and 5 from the elicitation task.

We take this as strong evidence in favor of our current model, in particular of the idea that the different species of OC all start out identical in syntax and are distinguished only later, at LF, as illustrated in (31)-(32) for proxy control.

6.3 Making Sense of the OC vs. NOC Distinction

We observed earlier that, even NOC SPEAKERS – i.e., speakers who disallow OC readings under the proxy control predicates (and, as we have noted above, also disallow OC with partial and exhaustive readings, as predicted by our model) – *do* require OC under verbs like ‘try’.¹⁴

This is, of course, hardly a surprising result. Predicates like ‘try’ tend to fall more on the strict end of the spectrum of control predicates, while those that have a more modal flavor, precisely like the kinds of proxy control predicate we have been considering, allow more flexibility for finiteness ingredients, such as partially independent temporal, modal, and referential interpretation (see Landau, 2004; Grano, 2012; Wurmbrand, 2001, 2014 and the references therein). Under our current analysis, this distinction would have the following outcome. ‘Try’-class complements do not constitute a phase for any speakers, and complements of predicates like ‘ask’ constitute a phase for some, but not for others. Under the right structural conditions, Agree between the controller and controllee in a ‘try’-class structure is not only possible; it is actually forced, yielding OC obligatorily.

6.3.1 Deriving OC: OC Speakers and Proxy Speakers

For OC SPEAKERS and PROXY SPEAKERS, the complement of a proxy control predicate like ‘ask’ has the same phasal status as a ‘try’-class complement: It does not constitute a phase.¹⁵ As such, given again the right structural conditions of c-command and Minimality, Agree between the controller and controllee is forced, yielding OC obligatorily. PROXY SPEAKERS and OC SPEAKERS additionally vary with respect to whether they have the proxy extension condition given in (34) in their grammar, as discussed: The former have it; the latter do not.

6.3.2 Deriving NOC: NOC Speakers

It is a fairly standard idea that NOC can obtain only when OC is impossible (Hornstein, 1999; Landau, 2013, a.o.). More recently, McFadden and Sundaresan (2016, 2017); Fischer (2017) have formalized this intuition in syntactic terms by proposing that NOC is the Elsewhere that obtains when the Agree relation that OC depends on, fails, adopting the notion of fallible Agree from Preminger (2014). Here, we will propose that this is precisely what happens with our NOC speakers. For them, the complement of a proxy control predicate must always count as a (strong) phase. The Agree relation between the controller and controllee is thus blocked by the PIC and fails, yielding NOC as an Elsewhere.

6.3.3 Deriving Optional NOC Parses

The majority of speakers in the three groups above accepted sentences that violated Condition B, as in (b), repeated here as (47):

¹⁴ OC is, of course, available under such verbs for speakers from the other groups as well.

¹⁵ Alternatively, we might propose that it constitutes a “weak phase” as proposed in Boeckx et al. (2010). We will remain agnostic as to the choice between these options; what matters is that the Phase Impenetrability Condition (PIC) does not hold for purposes of Agree.

- (47) Die Eltern_i haben den Rektor_j gebeten, [EC_{f(i)} % (auch) ohne sie_i ins Ausland
 the parents have the principal asked also without them in.the abroad
 fahren zu dürfen].
 travel.INF to may.INF
 ‘The parents asked the principal for permission (for their kids) to go abroad without
 themselves.’ (Literal)

This was initially surprising, but made sense once we realized that a number of these same speakers also allowed strict readings under ellipsis with this sentence. This was the case even if they disallowed strict readings under ellipsis elsewhere (in other words, seemed to belong to the group of proxy speakers described above). We thus concluded that an NOC structure must be selected by the matrix predicate in such cases (recall the discussion in §4.2.2).

But this in turn raises two questions. First, how may two different structures be attributed to this string, i.e., what is the source of ambiguity? Second, what forces an NOC parse in this context for speakers who do not allow NOC in the simple sentence without the pronoun? Starting with the second question, we speculate that, at least for the more conservative speakers, it requires overt syntactic evidence to exclude the preferred OC parse of a permission-seeking control sentence. The pronoun which would cause a Condition B violation, as well as a nonsensical meaning, in (47), and the overt non-matching agreement on the floating quantifier in Italian, are the two cases we have tested. It is possible that speakers vary with respect to how much evidence they need to select an NOC parse of permission-seeking control sentences.

Turning to the first question, we conjecture that the modal may be parsed in different ways. The reason to suspect the modal to play this role is the following. At least in the sample of the informal survey, there was a preference to include the redundant modal in the control complement of *erlauben* ‘allow’ to yield a proxy interpretation. This was true even for speakers who seemed to freely allow strict readings under ellipsis, as well as non-local antecedents, in permission-seeking control sentences. The contrast under discussion is provided in (48):

- (48) a. Die Verantwortliche_j hat Tillmann_i erlaubt, EC_{f(i)} die Aula nutzen zu dürfen.
 the responsible has Tillmann allowed the auditorium use.INF to may.INF
 ‘The person in charge allowed Tillmann to be allowed to use the auditorium.’ (Literal)
- b. Die Verantwortliche_j hat Tillmann_i erlaubt, EC_{f(i)} die Aula zu nutzen.
 the responsible has Tillmann allowed the auditorium to use.INF
 ‘The person in charge allowed Tillmann to use the auditorium.’

6 out of 10 speakers exhibited such a preference. One speaker, though he disliked the sentence with a proxy interpretation, found the modal less redundant with the context than out of context. The other five gave a numerical preference. On a scale from 1 (bad) to 5 (good), where the first number refers to (48a) and the second to (48b), there was a one-time incidence of 5 vs. 1, a one-time incidence of 5 vs. 3, a two-time incidence of 4 vs. 3, and a one-time incidence of 3 vs. 2; 3 out of the remaining 4 speakers rated the two examples the same.

Assuming that what we have said about the modal is true, this could also explain what is behind the variation in the phasal status of the control complement across the speakers tested. It is possible, for instance, that the overt modal diagnoses additional functional structure in the control complement which closes off the phase. Further research must be undertaken to test this hypothesis.

6.4 Hindi: A Case of Parametric Variation

Here, we provide preliminary evidence from Hindi, another language that displays proxy control, but with an NOC, not an OC, reading:¹⁶

(49) HINDI

- a. **Scenario:** *Ram is an auto-rickshaw driver whose vehicle is being repaired at the moment. But he has agreed to take on a negotiating role on behalf of the rickshaw drivers union to make some extra money. The city government has forbidden auto-rickshaws from plying in the central business district. Ram is negotiating a lifting of this ban for his fellow union-members, even though he himself can't drive currently.*
- b. Ram-ne ministry-se sheher-mē taxi calaane kii anumatii maanḡii.
Ram-ERG ministry-from city-in taxi drive.INF GEN permission ask
'Ram asked the ministry for permission to drive taxi(s) in the city.'

Although (49) superficially looks indistinguishable from proxy OC, a closer look reveals that the sentence itself indicates a *generalized* permission for one to drive in the city, though it can, of course, be inferred from the discourse-context that the intended drivers are Ram's union colleagues. This is, in other words, nothing other than proxy NOC. Further evidence to this end comes from the fact that it does not yield obligatory sloppy readings under ellipsis.

The availability of NOC would be diagnosed in precisely the same way as NOC in the German and Italian sentences above; i.e., it would be taken to indicate the impossibility of a successful Agree relation between the controller and controllee. The failure of Agree would yield NOC as an Elsewhere. However, languages like Hindi provide another potential reason for the unavailability of this Agree relation. The relevant proxy construction in Hindi involves a control infinitive dependent on a nominal that means (something like) 'permission'. It is thus plausible to think that the DP structure involved is the one responsible for creating a phasal opacity effect in cases like these.

7 Conclusion: Implications and Extensions

The goal of this paper has been to show that, in addition to the exhaustive $i \rightarrow i$ and the non-exhaustive $i \rightarrow i+$ relations, control dependencies in grammar may also be encoded in terms of a more abstract $i \rightarrow f(i)$ relation. While the fundamental possibility of an $i \rightarrow f(i)$ dependency may already be familiar from metonymic extension scenarios (Nunberg, 1979; Postal, 2004; Landau, 2013), we have here zoomed in on one potential sub-instance of this relation, which obtains only under highly restricted grammatical circumstances, and is thus restricted crosslinguistically, unlike the more general cases of metonymic extension seen earlier. This control dependency, which we call proxy control, involves a set of individuals i asking for permission on behalf of another set of individuals j (to do x); $j = f(i)$, with f being a discourse-contextually defined function. The controller i is the seeker of permission, and the controllee $f(i)$ – the intended receiver/target of said permission. Structurally, proxy control thus obtains only when there is a composite structure of bouletic + deontic modality made available. We have presented evidence showing that proxy control instantiates a species of OC, but that the $i \rightarrow f(i)$ controller-controllee relation is nevertheless not syntactically established. Rather, we have argued, based on evidence from FQ in Grossetano

¹⁶ Thanks to Rajesh Bhatt (p.c.) for providing this data and further discussing these examples with us.

and Condition B obviation patterns in southern standard German, that while an $i \rightarrow i$ dependency is syntactically encoded, via Agree, the individual i coordinate of the controllee is semantically extended at LF to $f(i)$. We have proposed a formal mechanics for this extension based on a modification of the extension semantics proposed for partial control in Pearson (2016) within a centered worlds model.

At the same time, we have identified that, for almost half the tested speakers, proxy control actually obtains as a species of NOC. We have proposed that, for such speakers, the Agree relation yielding $i \rightarrow i$ is disallowed because the control complement of the proxy control predicate constitutes a (strong) phase. This in turn predicts that, not only proxy OC, but also exhaustive and partial OC, should be disallowed for such speakers. This prediction was shown to be fulfilled. We have further assumed the proposals in McFadden and Sundaresan (2016, 2017); Fischer (2017) that, when Agree for OC fails, NOC is the result. This then explains why such speakers have NOC in these instances (instead of, e.g., ungrammaticality). For speakers who have OC under proxy control predicates, variation may nevertheless obtain with respect to what kinds of semantic extensions are allowed at LF. For our OC SPEAKERS, only exhaustive and partial control is licit; thus Agree for OC is licit for such speakers and the part-of extension (cf. (33)) is also a part of their grammar, yielding partial control. However, the $i \rightarrow f(i)$ extension defined in (34) is unavailable for them; thus proxy OC fails. For PROXY SPEAKERS, Agree for OC is licit and both the part-of extension in (33) and the proxy extension in (34) are defined, yielding both partial and proxy control.

The data and surrounding discussed here represent only the beginning of what is a much larger research enterprise. Before we conclude, we briefly single out two open questions that these issues raise for us, below.

7.1 Partial Control vs. Proxy Control Revisited

In recent work (Landau, 2016b, 2017), Landau argues against the centered worlds approach to partial control in Pearson (2016), arguing instead that “the PC [partial control] reading is available by default and calls for no special ‘extension’” (p. 8). This conclusion rests on the thesis that PRO is underlyingly indexical – i.e., that it is a featurally minimal pronoun in the sense of Kratzer (2009) with an indexical (*Speaker* or *Addressee*) presupposition (which is added post-syntactically by the controlled C head). Crucial to Landau’s assumption is the idea that personal indexicals have the following obligatorily associative semantics:

- (i) $\llbracket \textit{Speaker} \rrbracket^{c,g} = \lambda x_e : x$ includes the Speaker/Thinker in $c.x$
- (ii) $\llbracket \textit{Addressee} \rrbracket^{c,g} = \lambda x_e : x$ includes the Addressee in $c.x$

This has the welcome result that “the group reading [in partial control] is always available and could be selected by a collective predicate” (p. 8). If Landau is right, this would be a significant simplification over the extension semantics for partial control proposed in Pearson (2016).

The problem is that, while it works excellently for partial control, the basic $i \rightarrow f(i)$ mapping relation of proxy OC presents an undeniable challenge. The main issue remains one that we have encountered before: The proxy control relation does not encode a relationship of containment. Under the indexical model of PRO endorsed by Landau, this would concretely mean that, while the *Speaker* (or *Addressee*) is involved (as the controller), it is not necessarily included in the extension denoted by the controllee. So, while there is an associative relationship of sorts, it is more nuanced: We get a group of individuals associated with the antecedent, but with the antecedent explicitly not

included. It is unclear at this juncture how these facts could be accommodated by the recent Landau proposal.

7.2 Proxy Control vs. Proxy Anaphora

Proxy control bears a clear connection to proxy relations in another domain of referential dependency, namely in the realm of (nominal) anaphora. Nevertheless, there are clear differences between the two. Speaking generally for the moment, the nature of the proxy relation in the control structures above seems more loosely defined than proxy dependencies of another kind, namely in the realm of anaphora.

The sentence in (50a) illustrates the famous Madame Tussaud example from Jackendoff (1992). The Basque example in (50b) (from Schladt, 2000, via Reuland and Winter, 2009) shows an example of “near reflexives” (Lidz, 2004; Reuland, 2011) involving the local binding of an anaphor attached to a ‘self’ or (other) body-part morpheme. Both instantiate proxy anaphora:

- (50) a. (Upon a visit in a wax museum:) All of a sudden Ringo_i started undressing himself_{f(i)}.
 b. Aitak_i bere burua_{f(i)} hil du.
 father.ERG 3SG.POSS head.NOM.DEF kill have.3SG:3SG
 ‘The father_i killed himself_{f(i)}.’

In (50a), we have the real Ringo Starr entering the Madame Tussaud museum and starting to undress the wax statue of himself. So the anaphor and the antecedent pick out different individuals in the discourse that are nevertheless related to one another, yielding a relation between i (the real Ringo, Beatles drummer) and $f(i)$ (the wax statue of Ringo). Reuland and Winter (2009) argue that the same logic may be applied to a sentence like that in (50b). So the ‘self’ morpheme is a body-part morpheme that creates a complex anaphor denoting an individual that is related, but not exactly identical to, the antecedent, yielding again a relationship of the form $i \rightarrow f(i)$.

To this basic extent, the proxy relations in anaphora and control seem identical. Both involve a referential dependency of the form $i \rightarrow f(i)$. However, the nature of the proxy relation in each is very different. To see why, observe that a proxy control reading is impossible in a control structure like that in (51b) below, even though a proxy anaphor is still possible:

- (51) a. **Discourse Scenario:** *Ringo Starr, Beatles drummer extraordinaire, decides to amuse himself of an evening by attending a theater performance about the Beatles in London. So we have two Ringos – the real Ringo Starr and the actor playing Ringo Starr in the theater performance. In the course of the evening, the real Ringo gets a wee bit drunk.*
 b. All of a sudden Ringo_i tipsily asked [EC_{i,*f(i)} to undress himself_{i,f(i)}].

The sentence in (51b) can only mean that the real Ringo asked permission for the *real* Ringo to undress the real Ringo, or that the real Ringo asked permission for the real Ringo to undress the actor Ringo. I.e., it cannot mean that the real Ringo asked the *actor* Ringo to perform said undressing. In other words, even though a proxy anaphor reading seems possible (i.e., ‘himself’ may denote the actor Ringo), a proxy control reading of the same kind is ruled out; only an exhaustive control reading is licit, as illustrated above.

This is a very interesting and potentially significant difference that speaks to the nature and possible structural representation of the proxy dependency in language, to fundamental oppositions between control and anaphora – two types of grammatical phenomena that otherwise have at their

core the identical property that they both instantiate replication for reference across nominals, and to the interaction of these phenomena with the semantics of *de se* and *de re*. For now, we simply note the existence of this difference and defer further discussion pending further research.

References

- Boeckx, Cedric, Norbert Hornstein, and Jairo Nunes. 2010. *Control as movement*, Vol. 126 of *Cambridge studies in linguistics*. Cambridge: Cambridge University Press.
- Chierchia, Gennaro. 1989. Structured meanings, thematic roles, and control. In *Properties, types, and meaning*, ed. Gennaro Chierchia, Barbara Partee, and Raymond Turner, Vol. II: *Semantic Issues of Studies in linguistics and philosophy*, 131–166. Dordrecht: Kluwer Academic Publishers.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.
- Fischer, Silke. 2017. On the locality of control and islands in German: Exploring a hybrid theory of control. Ms. Universität Stuttgart.
- Grano, Thomas. 2012. Control and restructuring at the syntax-semantics interface. Doctoral Dissertation, University of Chicago.
- Hicks, Glyn. 2009. *The derivation of anaphoric relations*. Linguistik Aktuell. John Benjamins.
- Hornstein, Norbert. 1999. Movement and control. *Linguistic Inquiry* 30:69–96.
- Hornstein, Norbert. 2003. On control. In *Minimalist syntax*, ed. Randall Hendrick, 6–81. Oxford: Blackwell Publishing.
- Jackendoff, Ray. 1992. Mme. Tussaud meets the binding theory. *Natural Language and Linguistic Theory* 10:1–31.
- Kratzer, Angelika. 2009. Making a pronoun: fake indexicals as windows into the properties of pronouns. *Linguistic Inquiry* 40:187–237.
- Landau, Idan. 2004. The scale of finiteness and the calculus of control. *Natural Language and Linguistic Theory* 22:811–877.
- Landau, Idan. 2008. Two routes of control: Evidence from case transmission in Russian. *Natural Language and Linguistic Theory* 26:877–924.
- Landau, Idan. 2013. *Control in generative grammar*. Cambridge: Cambridge University Press.
- Landau, Idan. 2016a. Against the null comitative analysis of partial control. *Linguistic Inquiry* 47:572–580.
- Landau, Idan. 2016b. The underlying indexicality of PRO. Talk at the Control Workshop, Humboldt Universität, Berlin, October 2016.
- Landau, Idan. 2017. Speech Act Control: an unrecognized type. Ms. Ben Gurion University.
- Lewis, D. 1979. Attitudes de dicto and de se. *Philosophical Review* 88:513–43.
- Lidz, Jeffrey. 2004. Causation and reflexivity in Kannada. In *Clause structure in South Asian languages*, ed. Veneeta Dayal, and Anoop Mahajan, 93–130. Springer.
- McFadden, Thomas, and Sandhya Sundaresan. 2016. Failure to control is not a failure: it's *pro*. In *Proceedings of NELS 46*, ed. Christopher Hammerly, and Brandon Prickett, Vol. III, 1–10. GLSA.
- McFadden, Thomas, and Sandhya Sundaresan. 2017. Reducing pro and PRO to a single source. Ms. ZAS and University of Leipzig.

- Nunberg, Geoffrey. 1979. The non-uniqueness of semantic solutions: polysemy. *Linguistics and Philosophy* 3:143–184.
- Pearson, Hazel. 2016. The semantics of partial control. *Natural Language and Linguistic Theory* 34:691–738.
- Petter, Marga. 1998. *Getting PRO under control*, Vol. 8 of *LOT International Series*. The Hague: HIL, Holland Academic Graphics.
- Pitteroff, Marcel, Artemis Alexiadou, and Silke Fischer. 2017. Two mechanisms to derive partial control — evidence from German. In *University of Pennsylvania working papers in linguistics*, Vol. 23, 201–210. Philadelphia, PA.
- Postal, Paul. 2004. *Skeptical linguistic essays*. New York: OUP.
- Preminger, Omer. 2014. *Agreement and its failures*. Cambridge, MA: MIT Press.
- Reinhart, Tanya. 1983. *Anaphora and semantic interpretation*. Croon Helm linguistics series: Anaphora. Croon Helm.
- Reuland, Eric. 2011. *Anaphora and language design*. Cambridge, Mass.: MIT Press.
- Reuland, Eric, and Yoad Winter. 2009. Binding without identity: Towards a unified semantics for bound and exempt anaphors. In *Proceedings of 7th discourse anaphora and anaphor resolution colloquium on anaphora processing and applications*, ed. Sobha Lalitha Devi, António Branco, and Ruslan Mitkov, 69–79. Heidelberg: Springer.
- Rodrigues, Cilene. 2007. Agreement and flotation in Partial and Inverse Partial Control configurations. In *New horizons in the analysis of control and raising*, ed. William D. Davies, and Stanley Dubinsky, 213–229. Dordrecht: Springer.
- Sag, Ivan, and Carl Pollard. 1991. An integrated theory of complement control. *Language* 67:63–113.
- Schladt, Mathias. 2000. The typology and grammaticalization of reflexives. In *Reflexives: Forms and functions*, ed. Zygmunt Frajzyngier, and Traci Curl, 103–124. Amsterdam: Benjamins.
- Sheehan, Michelle. 2012. A new take on Partial Control: An overview. *Cambridge occasional papers in linguistics* 6:1–47.
- Sheehan, Michelle. 2014. Partial Control in the Romance languages: The covert comitative analysis. In *Romance languages and linguistic theory 2012: Papers from 'going romance' leuven 2012*, ed. Karen Lahousse, and Stefania Marzo, 181–198. Amsterdam: John Benjamins.
- Słodowicz, Szymon. 2008. *Control in Polish complement clauses*. Munich: Verlag Otto Sagner.
- Stiebels, Barbara. 2007. Towards a typology of complement control. *ZAS Papers in Linguistics* 47:1–80.
- Williams, Edwin. 1980. Predication. *Linguistic Inquiry* 11:203–238.
- Wurmbrand, Susi. 2001. *Infinitives: restructuring and clause structure*. Berlin: Mouton de Gruyter.
- Wurmbrand, Susi. 2014. Tense and aspect in English infinitives. *Linguistic Inquiry* 45:403–447.

