

ADJUNCT CONTROL DEPENDS ON VOICE

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1 Pesetskian Paradoxes¹

That David has a penchant for linguistic paradoxes is almost common knowledge, but the extent to which this feature permeates his writings is not fully recognized. Here's a random, speedy collection: Causer arguments are both structurally low and structurally high in the VP (Pesetsky 1995); VPs are simultaneously right-branching and left-branching (Pesetsky 1995); principles of pronunciation both favor and disfavor faithful matching of the input (Pesetsky 1998); prepositions are tense morphemes (Pesetsky and Torrego 2004); and certain nouns can be both masculine and feminine at the same time (Pesetsky 2014).

Paradoxes are not mere appearances for David. Often he follows them to the bitter end and embraces a dualistic ontology. Verb phrases do not just *appear* to be organized in two inconsistent ways, but in fact *are* so organized ("layered" and "cascade" structures).² Noun phrases do not just *appear* to be both masculine and feminine; in fact, they are doubly specified for both features. Less controversially, David would opt for an ambiguity analysis. Both a *dualistic* resolution and an *ambiguity-based* resolution of a paradox posit multiple grammatical representations. The difference is that the former takes them to be simultaneous and the latter does not.

In this short contribution I would like to follow the footsteps of David and indulge in one linguistic paradox. The paradox can be easily described. Nonfinite adjunct clauses display a "schizophrenic" behavior: Sometimes they are subject to Obligatory Control (OC) and sometimes to Non-Obligatory Control (NOC). The *same* adjunct, in the *same* syntactic position, may show this dual behavior, which makes it a genuine paradox. Although this duality of adjunct control has been observed before (Williams 1992), the present paper adds a curious twist to the picture: When passive applies in the adjunct, the NOC option is blocked. I will not resolve the paradox in any

¹ Or PesP, not to be confused with Pesetsky Projection (also PesP), an elusive position in the periphery of clauses and brains, home to radical hypotheses and exquisite derivations.

² For the subliteration spawned by Pesetsky's "constituency paradoxes", see Phillips 1998, 2003, Lechner 2003, Baltin 2003, 2006, Landau 2007, Phillips and Lewis 2013.

conclusive way, however I will point to certain promising ideas from other areas of control theory that support a fine-grained ambiguity-based resolution.

2 Obligatory vs. Nonobligatory Control

For the purposes of this short paper, I will focus on two properties that clearly distinguish OC from NOC.³

- (1) a. *Locality*: The controller in OC, but not in NOC, must be an argument of the clause immediately dominating the adjunct.
- b. *Humanness*: PRO in NOC, but not in OC, must be [+human].

The locality of OC reflects the local nature of the grammatical operation that associates PRO with the controller DP. Depending on one's favorite theory, this operation may be predication, anaphoric binding, A-movement, Agree or a lexicalized meaning postulate. None of these applies in NOC. On the other hand, the [+human] restriction follows from the logophoric nature of PRO in NOC. To the extent that analogous selectional restrictions on the DP controller can be factored out by a suitable choice of the matrix predicate, no [+human] interpretation is forced on PRO in OC.

To illustrate locality, consider the following examples. OC dependencies are strictly local and reject generic/pragmatic control.

- (2) a. Mary_i realized that John_j wished [PRO_{j/*i} to work by himself_j/*herself_i].
- b. * My neighbors_i planned [PRP_{arb} to pay them_i for all the hard work].
- c. * Listen, Peter will never agree [PRO to add myself to the list].

In contrast, the controller in NOC may be arbitrarily remote or embedded (3a-b), generic (3c) or pragmatically identified (3d), with no local relation to PRO.

- (3) a. Sam_i claimed that it was clear that it had turned out that it seemed likely that it would be impossible [PRO_i to prepare himself for the exam in time].
- b. [PRO_i washing his car regularly] is just the sort of thing that shows how meticulous Bill_i is.
- c. It is dangerous for babies_i [PRO_{arb} to smoke around them_i].
- d. [After PRO pitching the tents], darkness fell quickly.

To illustrate humanness, notice that quite a few OC predicates do not require a [+human] PRO (4a-c).⁴ Adjunct control can even obtain with weather-*it* (4d).

- (4) a. This key_i will serve/do [PRO_i to open the door].
- b. The accident_i is responsible [for PRO_i causing the ship to sink].
- c. The transmission problem forced the car_i [PRO_i to stop].

³ For extensive discussion of the empirical profile of each type, as well as the relevant references, see Landau 2013:28-38, 230-256.

⁴ These are all the nonattitude predicates that trigger what Landau (2015) calls "predicative control"; attitude predicates, that trigger "logophoric control", do impose the [+human] restriction.

- d. Around here, it_i always snows [before PRO_i raining].

NOC is different. When the pragmatics favors a [-human] PRO, the intrinsic [+human] restriction prevails, resulting in semantic anomaly (5a-b). NOC by weather-*it* is strictly excluded (5c).

- (5) a. # It is possible [PRO to dissolve in cold water].
 (cf. It is possible for this material to dissolve in cold water)
 b. # [After PRO being spoiled in a refrigerator], there is nothing even a good
 cook can do.
 c. * [PRO to snow all day] would be a nuisance.
 (cf. For it to snow all day would be a nuisance).

Below I will use (1a-b) as reliable criteria for diagnosing OC and NOC contexts in adjuncts.

3 Implicit agent control is NOC

Throughout the 1980s a consensus has emerged that the implicit agent of passive participates in OC just like any other overt argument. The textbook example (6) was taken to illustrate this effect with Rationale Clause (RatC) adjuncts (see Manzini 1983, Chomsky 1986, Jaeggli 1986, Roeper 1987, and Baker et al. 1989). Indeed, some authors took this example as evidence for the syntactic presence of the implicit agent, in the form of the *-en* suffix or *pro* (see also Collins 2005).

- (6) The ship was sunk to collect the insurance.

Explicitly rejecting control by implicit agents into RatC, Williams (1985) and Lasnik (1988) advocated instead “event control”, where the entire matrix event is understood as the antecedent of PRO in such examples. This proposal does not sit comfortably with the observation that events cannot normally “collect insurance”. Surveying this debate, Landau (2013:224-225) concludes that neither camp can adequately explain the entire range of control facts associated with RatCs. Nevertheless, I believe that Williams’ (1985) insight that implicit arguments cannot control adjuncts is essentially correct. *Why* this should be so is a question I return to in section 6. For now, let us consider the evidence.

The crucial observation was made by Manzini (1986): An implicit external argument must be interpreted as human when it controls the PRO subject of a temporal adjunct.

- (7) a. The avalanche_i hit the house [before PRO_i rolling down the hill].
 b. The house was hit.
 c. Mary said that the house was hit [before PRO rolling down the hill].

(7a) reconfirms (1b): there is no intrinsic [+human] restriction on OC PRO. Neither is the implicit external argument of the passive *was hit* necessarily human ((7b) can be continued with *by the avalanche*). Still, on the reading where the implicit hitter (rather than *the house*) in (7c) controls PRO (admittedly a marginal reading, for reasons to become clear), that hitter must be human and cannot be understood to be the avalanche.

Manzini interpreted these facts as an indication that PRO in (7c) is really PRO_{arb}, which is intrinsically specified as [+human]. The linking to the matrix implicit agent is thus pragmatic, not syntactic; both PRO and the implicit agent pick up the current sentence topic. The following pair makes the same point.

- (8) a. The rain_i washed the stairs [before PRO_i entering the basement].
 b. The stairs were washed [before PRO_{arb} entering the basement].

On the salient reading of (8a), PRO is controlled by the matrix external argument, *the rain*. In (8b), subject control is pragmatically excluded; “control” by the implicit washer is possible but it must be a human participant, not *the rain*.⁵ The emergence of the [+human] restriction in situations of “implicit agent control” reveals that this is a misnomer. The implicit external argument does not form a direct OC relation with PRO. Rather, as stated in (1b), these are instances of NOC, as Kawasaki (1993:169) argued.⁶

4 The Jaeggli-Roeper Generalization

The plot thickens. Alongside the well-known case of (6), Jaeggli (1986) and Roeper (1987) discussed another case, which received much less attention. Both authors observed that so-called “implicit agent control” (really NOC, assuming the conclusion of section 3) fails when the infinitive is passivized ((9) is from Jaeggli 1986 and (10) from Roeper 1987)).⁷

- (9) a. * The report was carefully prepared [PRO to be congratulated by the board of directors].
 b. * The structure of the DNA was investigated [PRO to be awarded the Nobel Prize].
- (10) a. A vote was taken [PRO_i to elect a president].
 b. * A vote was taken [PRO_i to be elected president].
 c. John_i took a vote [PRO_i to be elected president].

Lasnik (1988) observed a similar contrast.

- (11) a. John sank the ship [PRO_i to be promoted].
 b. * The ship was sunk [PRO to be promoted].

Lasnik took (10)/(10b)/(11b) as evidence for the idea of event-control, as none of the embedded predicates in these examples can apply to events. Clearly, though, this proposal undergenerates

⁵ This reading is marginal for many speakers because of the default preference for OC; see section 6.

⁶ The reason, then, why (i), the twin example of (6), is out, is not the absence of a matrix agent but rather that it is very hard (though possible under special circumstances) to construe unaccusative events as the outcome of some pre-meditated purpose or design, a fact independent of control, as (ii) shows (see Williams 1985 for discussion).

(i) * The ship sank to collect the insurance.

(ii) * The ship sank in order for the captain to collect the insurance.

⁷ The two papers were circulating in the early 1980s, around the same time. Neither author credits the other for the discovery, which I therefore assume they made independently.

(12) a. The doors were opened [PRO to enter the room].
 b. The fines were paid [(in order) PRO to avoid further complications].
 c. Many theories were proposed [(in order) PRO to understand rationale clauses].

(13) *The Jaeggli-Roeper Generalization (JRG)*
Active RatC allows OC or NOC, passive RatC imposes OC.

(14) a. This book_i was written [in order PRO_i to be read]. (Williams 1992)
 b. The house_i was emptied [(in order) PRO_i to be demolished]. (Español-Echevarría 1998)
 c. The poem_i was written by Hughes [in order PRO_i to be admired by silly girls]. (Hirschbühler 1988)
 d. A test wire chamber module was built [in order PRO_i to be inserted into the cryostat]. (from the internet)

(15) a. This cloth covers the vegetables in order to absorb all the humidity.
b. Flowers produce pollen in order to reproduce.
c. In order to catch fire from a glowing coal, tinder must be dry.

⁸ Note that local control of an active RatC by a [+human] subject (e.g., *John took a day off in order to spend some time with his kids*) is consistent either with an OC or an NOC analysis. For this reason, such examples are not informative and are not used in this paper.

5 Extending the Database

RatCs involve quite delicate and specific interpretive conditions, so one might suspect that the JRG, although puzzling, is a narrow, construction-specific phenomenon. It turns out, however, that the same pattern emerges with many other adjuncts (i.e., temporal adjuncts, *without*-adjuncts). In fact, any adjunct capable of supporting NOC is subject to the same restriction: Passivization in the adjunct blocks NOC. Given the space limitation, I will only illustrate this effect with a few representative examples.

It is a common observation that grammar-internal, "wired-in" operations take priority over grammar-external, discourse-sensitive operations. In the realm of control, this means that whenever possible, OC wins over NOC (Lebeaux 1984, Williams 1992, Kawasaki 1993, Lyngfelt 1999, Landau 2013); thus, clause-external control is impossible in **John_i excelled in order PRO_{arb} to admire him_i*. For NOC to emerge, OC must produce an anomalous (hence, "non-competitive") interpretation. While previous treatments took the primacy of grammar over pragmatics as given, I will suggest below a simple rendering of this observation in terms of structural economy.

One way of facilitating NOC, as we saw above, is passivization in the matrix clause; the promoted object is not a possible antecedent for PRO (for selectional reasons), clearing the way to NOC, misleadingly described as "implicit agent control". Another way of achieving the same result is by using matrix copular clauses.

Notice that RatC can perfectly modify stative copular clauses (Williams 1974, Farkas 1988), and a NOC reading is easily obtained. This time, there is no matrix grammatical agent; the controller is understood as an intentional causer operating in the background.

- (16) a. The door is open to greet passing neighbors.
- b. The painting was on the wall in order to check how it would be received.

As with Jaeggli's and Roeper's examples, embedded passivization renders such examples ungrammatical.

- (17) a. * The door is open to be greeted by passing neighbors.
- b. * The painting was on the wall in order to be asked how much it cost.

This is a clear indication that the true nature of the JRG is not about the interaction of embedded and matrix passivization (as Roeper and Jaeggli originally believed) but rather about the interaction of NOC and embedded passivization.

In (18)-(21), the (a) examples illustrate NOC of an active adjunct; the matrix clause is either passive or copular. The (b) examples show that a passive adjunct allows OC by the matrix subject. Finally, the (c) examples show that a passive adjunct resists the kind of NOC allowed in the (a) examples.

- (18) a. All preparations were made before inviting the senator to the hearing.
- b. The senator was warned before being invited to the hearing.
- c. * All preparations were made before being invited to the hearing.

- (19) a. The bank was robbed while masquerading as security guards.
- b. The robbers filled their bags while being caught on camera.

- c. * The bank was robbed while being caught on camera.
- (20) a. That oasis was a vision after dragging ourselves through the desert all day.
 b. We finally found water after being dragged through the desert all day.
 c.* That oasis was a vision after being dragged through the desert all day.
- (21) a. There won't be any progress without insisting on guidance from the outside.
 b. They will make no progress without being guided from the outside.
 c. * There won't be any progress without being guided from the outside.

The exact scope of the JRG remains to be determined. This involves careful study of the somewhat obscure terrain of controlled adjuncts. At this stage, however, it is already clear that the JRG is not a quirk of either specific adjuncts or implicit agents. Rather, it teaches us something deeper about passive and control in general. Does the JRG extend to complement control? A reviewer suggests it does, observing that Exhaustive Control (EC) predicates require an agentive complement, whereas Partial Control (PC) predicates do not.

- (22) Sam wanted / ??tried [PRO to be awarded a medal / to be tall].

However, the patterns are not similar. First, the “agentivity” requirement on EC complements is fully compatible with passive events which are somehow affected by the actions of the matrix agent, (23a) (see Lasnik and Fiengo 1974 for an early discussion). Crucially, these events are still excluded inside a RatC under a passive matrix verb, (10b)/(11b). Furthermore, this semantic condition does not distinguish EC from PC verbs, as many PC verbs impose it too, (23b-c).

- (23) a. Sam tried/managed to be elected/promoted.
 b. ?? Sam promised [PRO to be awarded a medal / to be tall].
 c. ?? Sam persuaded Jane [PRO to be awarded a medal / to be tall].

The reviewer's other point is that the JRG covers not only passive but also copular adjuncts. One might also test the behavior of unaccusative predicates.

- (24) a. The robbers filled their bags [while PRO being smart not to raise the alarm].
 b. * The bank was robbed [while PRO being smart not to raise the alarm].
 c. My lawyer made all the preparations [before PRO arriving to court].
 d. All the preparations were made [before PRO arriving to court].

The embedded copular clause in (24b) yields a worse result than the embedded unaccusative clause in (24d). This may have to do with the familiar flexibility of unaccusative predicates, which tolerate agentive readings, and maybe agentive syntax as well. Or maybe other factors are at play. If the examples in (24) turn out to be systematic as the contrasts documented above, the excluded configuration in (26) below would have to be modified accordingly, possibly taking into account the common features passive and copular clauses share, namely, the auxiliary *be* and A-movement from inside VP.

6 Towards an Explanation

As a first step, recall Williams' (1985) insight: Implicit agents are not visible as adjunct controllers. Why? Assume that OC into adjuncts is a form of predication (Williams 1992, Landau 2013). As is well-known, grammatical predication is contingent on syntactic visibility: Implicit arguments cannot saturate predicates (Rizzi 1986, Landau 2010). This immediately entails that both implicit agents and extra-sentential "intentional causers" will only be able to control via the NOC route.

Recall the paradox: The very same adjunct may display OC or NOC. While I proposed that adjunct OC is a form of predication, I have not said anything about the syntax of NOC. Landau (2015) proposes that OC complements divide into predicative complements and logophoric ones. The former project up to FinP, the latter embed FinP under a context-encoding C, or C_{+log} (where "context" is a tuple of the form <speaker,(addressee),time,world>). The only difference between logophoric *complement* control and logophoric NOC is that the identity of the context indexed on C is fixed by selection (as the matrix context) in the former but is free in the latter. We thus have two structural analyses of clausal adjuncts, mirroring the two types of controlled complements.

- (25) a. OC adjunct: [PP *before/in order* [FinP Fin [TP...]]]
 b. NOC adjunct: [PP *before/in order* [CP C_{+log} [FinP Fin [TP...]]]]

This is the ambiguity-based solution I offer to the paradox introduced in section 1: How can the same adjunct, in the same position, display OC in some occasions and sometimes NOC in others? As with every ambiguity-based solution, the answer revisits the question: these are *not* the same adjuncts, for they are structurally distinct.

One immediate benefit of this way of looking at the problem is that it offers a genuine syntactic explanation of the fact that OC prevails over NOC whenever both generate coherent interpretations. The clausal projection of the OC adjunct (=FinP) is a subconstituent of the clausal projection of the NOC adjunct (=CP). Following Grimshaw 1994, Bošković 1996 and Speas 2006, let us assume the principle of "Economy of Projection". Then, all else being equal, (25a) will be favored over (25b) as more minimal structurally, producing the desired asymmetry. (25b) will be chosen only when (25a) produces semantic deviance.

We are left with the JRG puzzle. Within the current terms, it translates to the impossibility of passivization under structure (25b).

- (26) JRG → * [PP *before/in order* [CP C_{+log} [FinP Fin [TP PRO_i T [VP V t_i]]]]]

At this stage I have no account of (26). One point to keep in mind is that even simple, active OC complements, in Landau's (2015) analysis, involve a predicative step: PRO moves to [Spec,FinP] and is read as a predicate abstractor at LF. The FinP predicate then either applies directly to the controller ("predicative control") or to a projected coordinate - speaker or addressee - in [Spec,CP] ("logophoric control").⁹ (26) then either implies that passive movement somehow prevents the coordinate of C_{+log} from being projected, or that passive participles are intrinsically predicative and somehow resist local saturation. Any solution would face the further challenge of distinguishing adjuncts from complements, which do not show parallel control effects when passivized.

⁹ Indeed, this is how Landau (2015) *derives* (1b): Because the PRO-derived FinP predicate applies to the speaker/addressee coordinate of the embedded context, and the speaker/addressee is necessarily human – PRO in NOC inherits the [+human] feature.

7 Conclusion

It is one of David's teachings that one should not shy away from empirical complexity. Indeed, one should actively seek it and savor it, for nothing good can come out of staring at a few, boring facts. This small investigation, I hope, proves his point. If correct in spirit (even if not in all details), it deepens our understanding that heuristic categories like "OC" and "NOC" ought to dissolve and give way to deeper grammatical concepts, such as predication and logophoricity. The latter do not restate the former but, in fact, undermine them (by cross-classifying subspecies of OC and NOC). This is a step forward, but it is no more than "a mining expedition that has discovered one or two veins of syntactic ore. Whether it has struck gold or base metal will, of course, only be known in time to come" (Pesetsky 1995:291).

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