TO CONTROL WOULD BE SUPER(-EQUI)!

A discussion of

Landau, I. 2001. Control and Extraposition: The Case of Super-Equi. *NLLT* 19: 109-152.

1. INTRODUCTION

The postulation of a phonetically null anaphoric pronominal, or PRO, has given rise an entire body of research within the Government and Binding and Minimalist programs. There are many concerns with PRO: its syntactic distribution and relevance to government, its status as an argument and whether it receives thematic roles, whether it receives abstract Case marking, and its relation to phenomena such as movement, raising, and passivization. Perhaps the most work, though, has sought to explain the semantic interpretation of PRO in terms of coreference; that is, its *control* status, where it is either obligatorily coreferential with another argument in the sentence, or whether it is interpreted as having arbitrary reference, *not* identical with any sentential antecedent.

The problem of controlled or arbitrary PRO has been approached in different ways, such as through quantification or more recently as movement/raising. Although the element PRO is limited in its distribution to nonfinite IPs within CPs, phrases that *contain* PRO (what I call here PRO-S) occur in a variety of syntactic positions. A challenge, then, is to explain control phenomena - phenomena of PRO's coreferential interpretation or lack thereof - in each of these positions. Of particular interest is the status of control in English *extraposition* constructions, where the S containing PRO occurs sentence-finally, as below:

(1) It would please me [PRO to see you]

Of less treatment are cases of *intraposition*, where the PRO-S serves as a sentential subject:

(2) [PRO to see you] would please me

These two structures are in complementary distribution, with an expletive *it* occurring as subject in extraposed constructions.

In attempt to reconcile the disparate control properties of both types of constructions, Landau (2001) claims to adequately account for the entire "Super-Equi" paradigm involving extraposition and intraposition, with both psychological and non-psychological predicates. In this paper, I provide an explication of the main components of Landau's argument, focusing on his presentation and explanation of the extraposition/intraposition paradigm with regards to syntactic structure. I then provide points of critique for the article, suggesting that Landau's case suffers from a lack of clarity about motivations for extraposition and intraposition, LF/PF interpretability, and a failure to consider theta-role, Case, and c-command relations.

2. LANDAU'S PAPER

2.1 The Data

Landau's paper begins with a reaction to Grinder (1970), who attempted to formulate a theory of control that explained apparent locality restrictions on obligatory control (OC) in extraposition with psychological predicates. The paradigm Landau gives, after Grinder, is below in (3) (adapted from Landau's [3]).

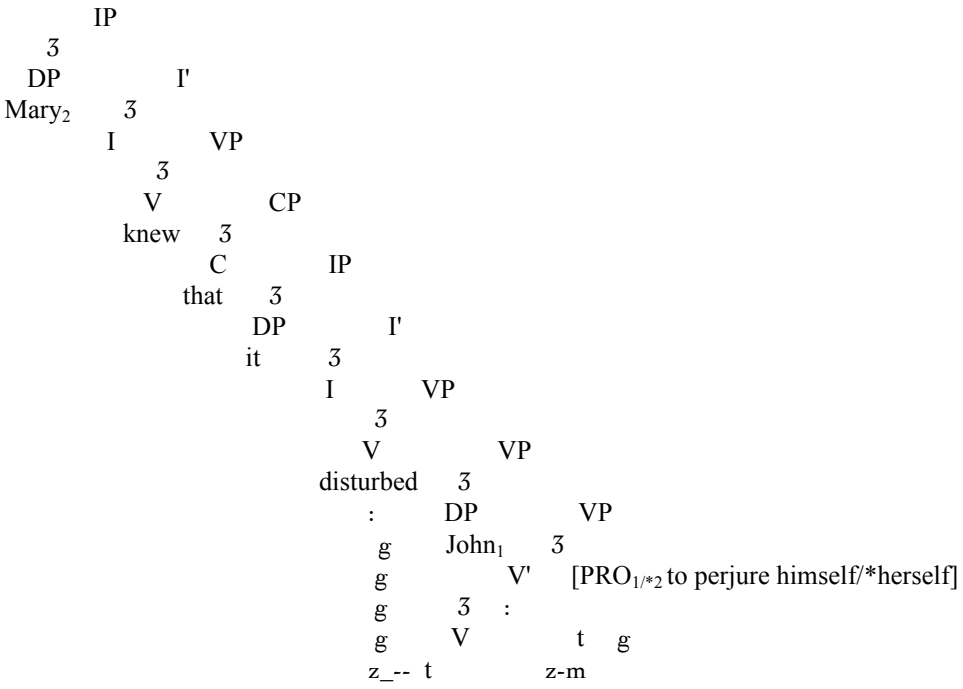
(3)
a. John said that it disturbed Sue [PRO to make a fool of herself in public].
b. *John said that it disturbed Sue [PRO to make a fool of himself in public].
c. John said that [PRO making a fool of herself in public] disturbed Sue.
d. John said that [PRO making a fool of himself in public] disturbed Sue.

(3a) and (3b) represent extraposition, and PRO is obligatorily coreferential with *Sue.* Coreferential readings with *John* are excluded, shown by the ungrammaticality of (3b), where *himself* should be licit if bound by PRO, coreferent with *John*. By contrast, in (3c) and (3d), the intraposition cases, PRO can refer to either *John* or *Mary*. What makes the ungrammatical (3b)

stand out is that PRO can only be controlled by a *local* controller, *Sue*. There thus seems to be some locality condition on control.

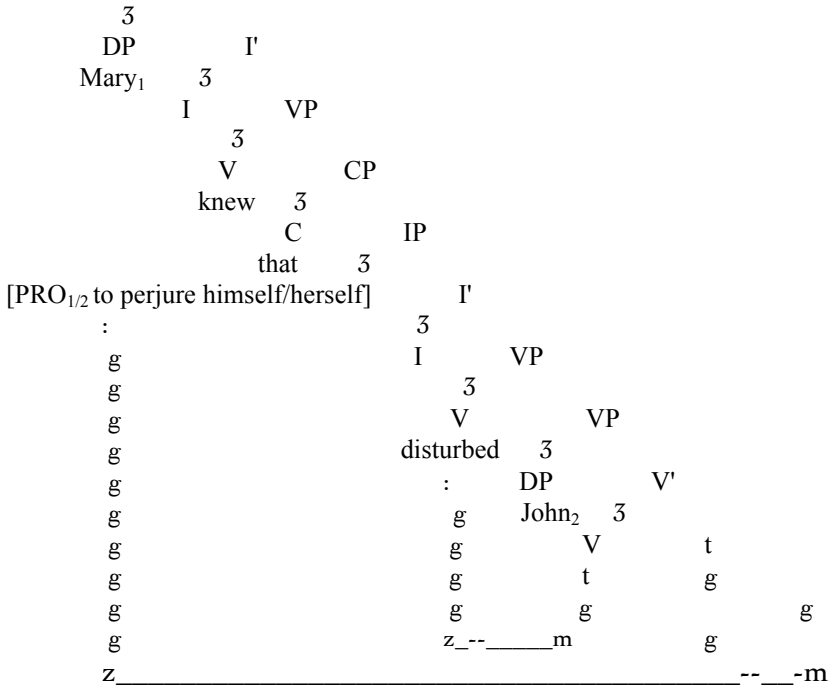
According to Landau, Grinder's analysis was rather simplistic: he claimed that when a local controller is available (that is, when there is an NP in the immediately dominating phrase), it is obligatory in extraposition but optional in intraposition; this is shown below

(4a) Obligatory control in extraposition:
$Mary_2$ knew that it disturbed $John_1$ [$PRO_{1/*2}$ to perjure himself/*herself]



(4b) Nonobligatory control in intraposition:
$Mary_2$ knew that [$PRO_{1/2}$ to perjure himself/herself] disturbed $John_1$

IP



Landau claims that this solution is unsatisfactory, and namely that it fails to include the relevant facts about types of predicate as influencing control properties, as well as position of predicate. Note that all sentences in (3) and (4) include the psychological verb *disturbed*. Landau observes that the full paradigm involves different control behavior not only depending on the position of PRO-S, but also depending on whether the predicate is psychological or non-psychological. Landau's extended paradigm is reproduced below.

(5) a. Mary knew that it was painful to John [PRO to perjure himself/*herself].
b. Mary knew that it was harmful to John [PRO to perjure himself/herself].
c. Mary knew that [PRO to perjure himself/herself] would be painful to John.
d. Mary knew that [PRO to perjure himself/herself] would be harmful to John.

(6) a. Mary thought that it pleased John [PRO to speak his/*her mind].
b. Mary thought that it helped John [PRO to speak his/her mind].
c. Mary thought that [PRO to speak his/her mind] would please John.
d. Mary thought that [PRO to speak his/her mind] would help John.

(7) a. Mary thought that it was a relief to John [PRO to take care of himself/*herself].
b. Mary thought that it was a help to John [PRO to take care of himself/herself].
c. Mary thought that [PRO to take care of himself/herself] would be a relief to John.
d. Mary thought that [PRO to take care of himself/herself] would be a help to John.

I will leave aside here questions about these judgments, and for the purposes of this paper, accept what Landau has presented as grammatical. What seems the case is that controlled readings for PRO are licensed differently with psychological predicates (5a, 5c, 6a, 6c, 7a, 7c). In these examples, locality is more strictly enforced, so that long-distance control is not an option (PRO cannot be controlled by the subject of the matrix clause).

According to Landau, Grinder's paradigm failed to include the effects on locality of semantic class of predicates. In intraposition, any control is possible; in extraposition, any control is possible with non-psychological verbs but local control is required with psychological verbs. Landau provides the following generalization as what needs to be explained, then, for the full Super-Equi paradigm:

(8) a. In a structure [. . . X . . . [it Aux Pred Y [S PRO to VP]]], where Y and S are arguments of Pred:
(i) If Pred is psychological, Y must control PRO.
(ii) If Pred is non-psychological, either X or Y may control PRO.

b. In a structure [. . . X . . . [S [S PRO to VP] Pred . . . Y]], either X or Y may control PRO.

In other words, in extraposition, psychological predicates force obligatory control by an NP sharing the same VP shell, whereas non-psychological predicates license either local or long-distance control by an NP either inside or outside the PRO-S's VP. In intraposition, both local and long-distance control are licensed regardless of the predicate's semantic status. With these assumptions, Landau proceeds to try to explain why psychological predicates are forcing a different behavior in the same structures.

2.2 The Analysis: Theoretical Components

The explanation that Landau provides for the Super-Equi paradigm involves four distinct components of the grammar, which interact to either license or prohibit long-distance control in

extraposition constructions. I first explain each individual component, then I discuss how Landau puts them together.

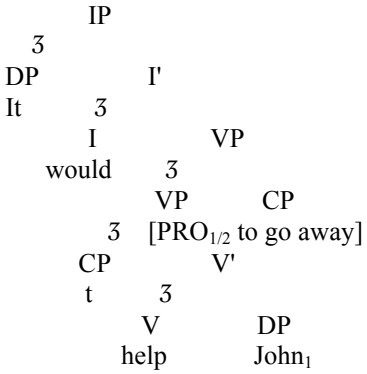
2.2.1 The OC Generalization

The first component is what Landau calls "The OC Generalization":

(9) *The OC Generalization*
In a configuration [. . . DP$_1$ . . . Pred . . . [$_S$PRO$_1$ . . .] . . .], where DP controls PRO:
If at LF, S occupies a complement/specifier position in the VP-shell of Pred, then DP (or its trace) also occupies a complement/specifier position in that VP-shell.

This amounts to claiming that obligatory control (OC) is always local, where the controlling element (DP) and controlled element (PRO) are dominated by the same VP. According to Landau, the OC Generalization makes two main predictions: that OC obtains when PRO-S is in the same VP as its controlling DP, and that non-obligatory control (NOC) obtains otherwise. This assumes that extraposition is structurally manifest as VP-adjunction, as shown below, and that PRO-S in extraposition is not dominated by VP. As below, then, this predicts that PRO in extraposition will not be subject to OC, since PRO-S and *John* are not in the same VP-shell.

(10) OC Generalization: It would help John$_1$ [PRO$_{1/2}$ to go away]



Note also that the OC Generalization is an observation about the level of LF, making no mention of PF, and that Landau thus seems to assume that control is a relation established at LF.

2.2.2 Extraposition

Landau's second component concerns the motivation for extraposition:

(11) *Extraposition*
VP-internal clauses must be peripheral at PF.

The motivation for extraposed elements (e.g., PRO-S) thus has to do with PF, though it's not explained why this should be. Landau also does not explain precisely what is meant by "peripheral," so I work here with the understanding that the constraint specifies that if clauses are VP-internal in base position, they will move at PF to a position where they are not dominated by that VP. Landau equates extraposition, the movement to adjunction, to A-bar movement: movement to a non-theta position that is presumably a non-Case position as well.

It is unclear from just Landau's explanation why VP-internal *clauses* should be different from VP-internal *arguments*, and the stipulation implies that clauses are *not* arguments, or at least in terms of some syntactic operations are subject to a different set of constraints. This needs to be elucidated, since clauses do receive thematic roles (discussed below) in their base position, and they do serve as subjects in intraposition: they share these properties with argument NP/DPs. Landau does say that his assumption is based on cross-linguistic evidence that shows that VP-internal clauses don't exhibit intervention effects between predicates and other arguments; however, he does not give examples, and he does not entertain the idea that theta-marked clauses can function as arguments strictly speaking.

Although he explicitly states the reason for extraposition, Landau does not provide the motivation for intraposition as one of his explanatory components. I infer that the motivation for intraposition, where PRO-S moves from a VP-internal position to the subject position in the matrix clause, also must be a result of the application of (11), yet Landau does not make this explicit. Rather, he claims later in the paper that intraposition happens to satisfy the Extended Projection Principle (EPP), whereas in extraposition, the expletive *it* satisfies this requirement.

Yet it could equally be that PRO-S moves to satisfy VP-peripherality at PF, thus making the EPP possibly partially redundant (except that it is still needed to explain the expletives' occurrence in extraposition). He also considers intraposition to be A-movement (125) rather than A-bar movement, so the operations are fundamentally different. This point will be further discussed in section 3.

2.2.3 Chain Interpretation

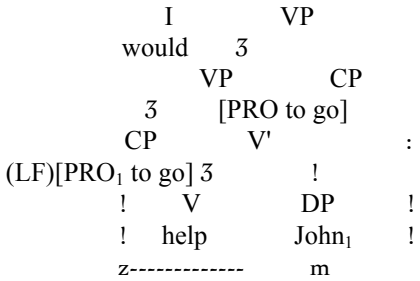
The third component relates to the assumption that extraposition and intraposition are both forms of *movement*:

(12) *Chain Interpretation*
Any link in a chain may be the LF-visible link.

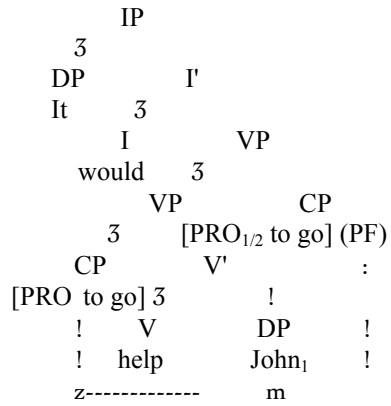
This means that both traces of movement (the base-generated element) and PF-copies (PF representations) can be interpreted at LF; LF can "see" either the base position or the PF position (and presumably also the LF position, if a sentence has LF movement). Landau assumes here that moved elements can, but need not necessarily, be "reconstructed" at LF, so that all features are potentially present in either the trace or the PF element. This gets Landau the prediction that in extraposition, OC is the result of LF interpretation of the base position reconstruction (where PRO-S is VP-internal, thus the controller is local), and NOC is the result of LF interpretation of the PF copy (where PRO-S is VP-external, having moved to VP-adjoin, thus the controller and PRO are not dominated by the same VP). This is shown schematically in (13), where the base structure is that for non-psychological verbs, for illustration's sake.

(13a) OC with base interpretation: It would help John$_1$ [PRO$_1$ to go]

IP
3
DP I'
It 3



(13b) NOC with PF interpretation: It would help John$_1$ [PRO$_{1/2}$ to go]



In (13b), *John* does not obligatorily control PRO, because *John* and PRO, interpreted in its PF position, are not dominated by the same VP-shell. In (13a), on the other hand, PRO is interpreted in its LF position, which is within the same VP-shell as *John*. Note that this means that c-command cannot be the required configuration for control, since *John* does not c-command PRO in (13a). It does, however, m-command PRO (the minimal XP dominating *John* also dominates PRO); thus, m-command may be the required configuration for OC, though Landau does not explicitly state this.

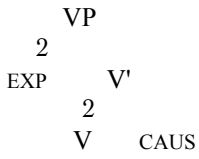
2.2.4 Argument Projection

The fourth component is an assumption about the syntactic positions of psychological and non-psychological predicates:

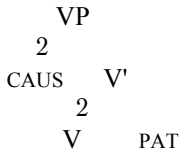
(14) *Argument Projection*
a. EXPERIENCER is generated above CAUSER.
b. CAUSER is generated above GOAL/PATIENT/THEME.

This assumption comes from other work on psychological verbs, and also from an assumption that PRO-S receives a CAUSER theta-role rather than an AGENT role. I will return to the issue of theta-role assumptions and assignment in section 3. The claims in (14) generate structures with base representations such as those shown below in (15).

(15a) Psychological predicate



(15b) Non-psychological predicate



2.3 The Analysis: Application of theoretical components to data

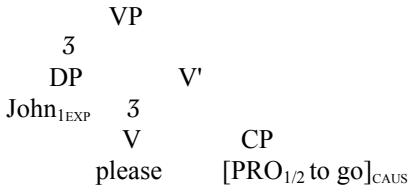
Each of the four components sketched above is crucial for Landau's argument, as it hinges on the collaboration of them as facts about English grammar. Crucially, if any one of them is vulnerable, his entire analysis will need to be reconfigured. Landau claims that the four aspects discussed in (9)-(15) equip him to fully explain the Super-Equi paradigm, and more precisely the fact that long-distance control seems to be blocked in constructions that have both extraposed PRO-S *and* psychological predicates (henceforth "psych-verbs"). He goes through construction by construction, explaining first the extraposition structures with psych-verbs, then extraposition with non-psych verbs. He then moves on to intraposition. His goal throughout is to explain the control readings in terms of the above four assumptions. In the interest of clarity, I am going to work backwards from Landau's order, explaining intraposition first and working

toward extraposition. This gives a clearer picture of his argument, since psych-verb extraposition is the outlier.

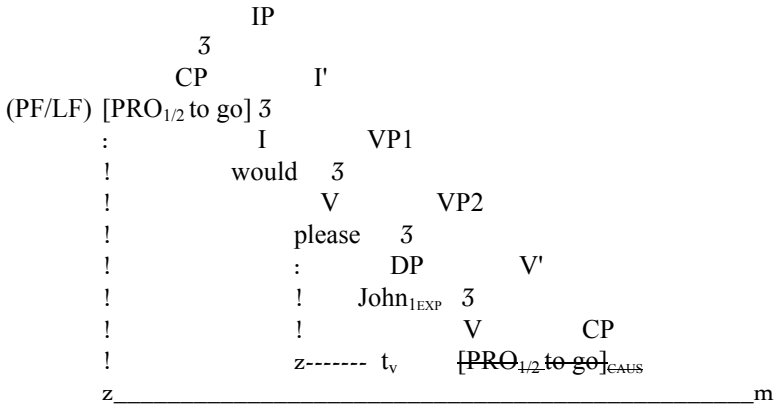
In both psych-verb and non-psych-verb intraposition cases, Landau assumes that the PF copy is what is interpreted, rather than the LF reconstruction of the trace:

(16) Psychological predicate: [$PRO_{1/2}$ to go] would please $John_1$

BASE GENERATION



PHONOLOGICAL FORM



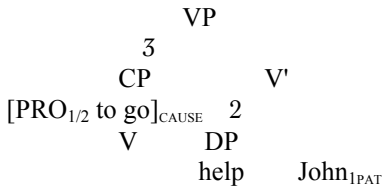
Landau gets both long-distance and arbitrary control in these structures, where PRO is either controlled by John in the embedded DP or interpreted arbitrarily. The verb moves to a higher Spec VP, leaving a trace (note that Landau's tree on 124 is incorrect; for consistency with his other trees and with the PF he is explaining, I assume that he means that V has moved out of its original VP-shell). PRO-S originates in Comp V', where it receives the CAUSER theta role from the V trace; *John* receives EXPERIENCER as Spec V'. PRO-S moves out of VP, and moves to

Spec IP at PF to satisfy the EPP, at the same time satisfying the VP-peripherality requirement (it is still unclear which of these might best be considered the *motivation* for PRO-S movement). Because *John* and PRO (interpreted in PF position) are not dominated by the same VP, control by *John* is possible but not obligatory.

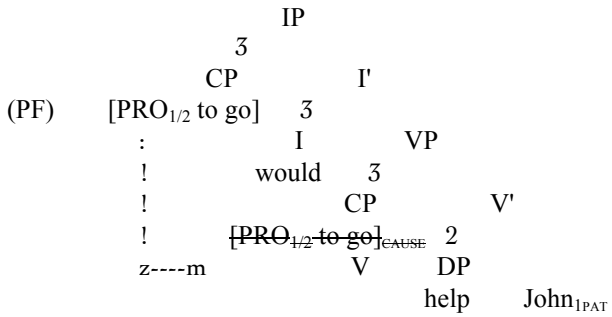
The structure for intraposition with non-psych verbs is shown below.

(17) Non-psychological predicate: [$PRO_{1/2}$ to go] would help $John_1$

BASE GENERATION



PHONOLOGICAL FORM



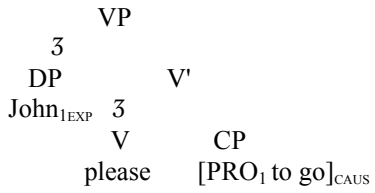
As compared with the psych-verb construction in (16), here PRO-S moves from a position higher in the tree (Spec VP) to Spec IP. PRO-S receives CAUSER from the V and *John* receives EXPERIENCER as Comp V'. The verb does not raise to a higher VP. Control is again optional because John and PRO are not in the same VP at the level of interpretation.

Turning now to extraposition structures, Landau's primary claim is that there is a difference between psych-verbs and non-psych verbs with regard to the base position of PRO-S, given by the Argument Projection principle. This argument structure is ultimately what causes a

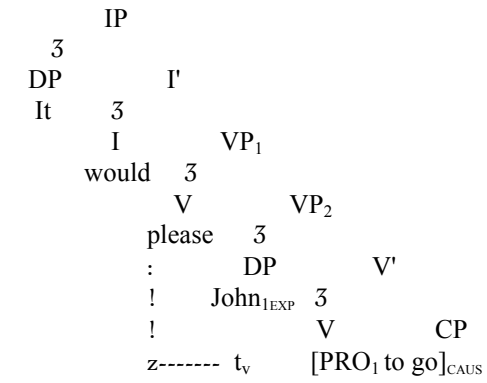
difference in control readings, via different interpretations at LF, depending on whether the interpretation function interprets PRO in its PF or its LF reconstruction position.

(18) Psychological predicate: It would please John$_1$ [PRO$_{1/*2}$ to go]

BASE GENERATION



PHONOLOGICAL FORM



As with the intraposition structures, the verb raises to a higher VP, and theta roles are assigned to PRO-S in Comp VP and DP *John* in Spec VP. Here, arbitrary control is taken to be ungrammatical, and it is because PRO-S is interpreted in its base position, which means that it shares a VP with a controller, the DP *John*. By the OC Generalization, PRO is locally controlled obligatorily. The impossibility of arbitrary control is thus necessitated by base structural relations between the DP and PRO: PRO and *John* are dominated by the same VP.

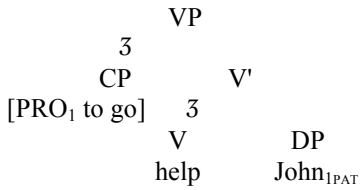
Note that this structure does not *actually* involve extraposition in the way Landau has been using the term: Landau claims that because PRO-S originates as Comp VP, it is already peripheral to the matrix VP (why peripherality only applies to the matrix VP is a bit mysterious),

thus it *does not extrapose*. In other words, it is not just that LF interprets a different link in the chain, but that there is a different link structure altogether; PRO-S does not undergo movement. Thus, we have even more of a different structure on our hands than Landau's classification would lead us to believe. It is here that the definition of "peripheral" should be clarified, if Landau's case is to hold: it cannot mean that PRO-S (or any VP-internal clause) must become peripheral to the VP it originated in, because the LF structure for psych-verbs has a PRO-S in the same VP in which it originated (tree (18)). What (18) seems to show, in fact, is that "peripheral" means something like "not dominated by the highest VP in the tree," for if Landau claims that PRO-S *is* peripheral to VP in (18), this is the only configuration he could be referring to.

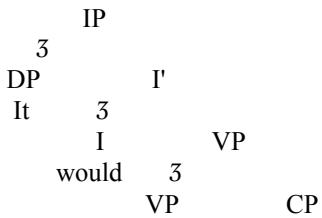
The analysis for extraposition with non-psych verbs hinges on the Chain Interpretation condition:

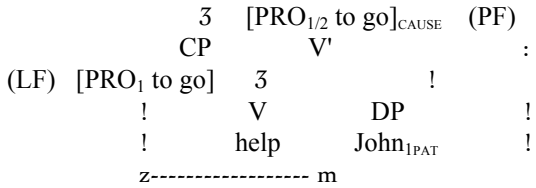
(19) Non-psychological predicate: It would help John$_1$ [PRO$_{1/2}$ to go]

BASE GENERATION



PHONOLOGICAL FORM





First, unlike with psych verbs, the non-psych verb does not raise but instead assigns theta to PRO-S in Spec VP and DP *John* in Comp VP, and it remains *in situ* at PF. The extraposition here is motivated by VP-peripherality, where PRO-S moves to adjoin to the VP it originates in, rather than remain internal to it; adjunction satisfies the requirement because PRO-S is not dominated by every segment of VP. In the process of movement, PRO-S leaves a copy that can be optionally reconstructed at LF. Landau claims that it is this copy that is interpreted when OC obtains, where PRO-S and *John* share a VP. When NOC obtains, the LF interpretation of PRO-S is the PF copy. Long-distance control is thus licensed but not required when NOC obtains, and PRO-S and *John* do not share a VP.

3. DISCUSSION

I turn now to a discussion of Landau's analysis, paying particular attention to the four explanatory components put forth in (9), (11), (12), and (14). I begin with Landau's use of the term "extraposition" to describe PRO-S's appearance to the right of the predicate. Although he notes that his use of this term is "strictly descriptive" (113), his ultimate explanation for the control differences relies on a distinction between "extraposition" and "intraposition" - one that he does not employ consistently.

As the trees in (15) show, Landau is claiming that in psychological predicate constructions, PRO-S is base-generated as the complement of the verb, which means that the VP-peripherality condition is not applicable, thus it does not motivate extraposition. PRO-S remains

in situ at PF and is interpreted at LF in this same position. In this scheme, there is no movement, thus no trace or copy of PRO-S, and this is presumably because the clause is already peripheral to the matrix VP, since it is in a lower VP shell than the V eventually ends up occupying at PF/LF. But importantly, the clause does not end up adjoined to VP, which is Landau's chosen structural description of the *extraposition* phenomenon. Thus, these structures - psychological predicates with sentence-final PRO-S - are *not* extraposition structures. And, these are the very predicates that do not allow NOC (or arbitrary control), which Landau characterizes as a product of having a psychological predicate *and* extraposed PRO-S.

But since these are not extraposed structures, the explanation is perhaps actually simpler: rather than a difference between extraposition and intraposition, the difference is *just* between psychological and non-psychological predicates. One can explain the difference this way: Extraposed structures allow NOC, because the PRO-S will always be adjoined to the VP, having left a copy in its base position. Either the base position or the PF position may be interpreted in the structure (given Chain Interpretation), thus either locally or arbitrarily controlled PRO is possible. But since psychological predicates do not motivate extraposition, there can be no NOC, as PRO will always share a VP with a local controller (given the OC Generalization). Extraposition thus does not even *apply* to psychological predicates. It would be worthwhile to identify counterexamples that show true extraposition *with* psychological predicates if it occurs, but Landau fails to do so here.

In addition to a seemingly problematic treatment of *extraposition* in both description and analysis, the paper fails to adequately characterize *intraposition* and its possible motivation. Unlike that for extraposition, there is no principle setting forth the structural motivation for PRO-S to move to the subject of the matrix clause. Landau claims separately that PRO-S moves to

satisfy the VP-peripherality condition by exiting its original VP, and to satisfy the EPP (where in extraposed constructions, expletive *it* does so). At the point in his paper where he describes trees of the various structures, he seems to motivate intraposition solely by the EPP, yet given the Argument Projection principle he's given in (14), psychological and non-psychological predicates again must behave differently in terms of *intraposition*, as they did with *extraposition*.

In particular, as before, the VP-peripheral requirement is inapplicable to psychological predicates, so the motivation must be the EPP for PRO-S movement with psych-verbs. On the other hand, in non-psychological predicates PRO-S originates in a non-peripheral position, thus VP-peripherality can be a motivation for movement. If VP-peripherality is already a motivation for intraposition, then the EPP may be superfluous, yet it seems necessary to motivate intraposition for psychological predicates. However, neither satisfaction of the EPP nor the VP-peripherality condition *require* PRO-S to move to subject position; EPP could be satisfied by expletive insertion, and VP-peripherality could be satisfied by extraposition. Thus, no real motivation for the movement of intraposition versus extraposition seems to be identifiable, given Landau's explanations.

Furthermore, Landau does not explain why VP-peripherality should obtain at PF rather than LF, and why VP-internal clauses ought to be treated differently from VP-internal arguments that aren't clausal in structure. This seems to be just a stipulation, not unlike the EPP, meant to explain why PRO-S never occurs at PF in its base-generated position for non-psychological predicates:

(20) *It would [PRO to go] help John

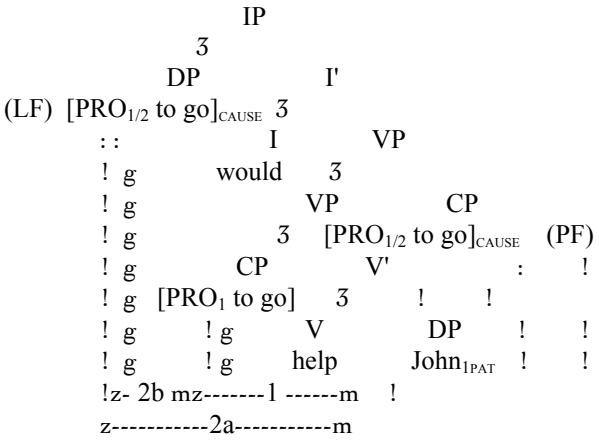
If the VP-peripheral requirement is not deducible from other aspects of the grammar, then *both* motivations for intraposition (either EPP or VP-peripherality) are stipulative in nature. This is

theoretically undesirable, and perhaps further inquiry should be pursued with regards to the relation of the expletive *it* and PRO-S, since they are in complementary distribution: when the expletive occurs, PRO-S is sentence-final, and when the expletive does not occur, PRO-S is in subject position. This could again be called an EPP effect, but that itself is no more explanatory than the VP-peripherality requirement.

Note that one issue Landau does not discuss is that of possible expletive replacement at LF. Assuming that it is semantically vacuous, the expletive *it* should be uninterpretable at LF. Presumably, PRO-S can move up to subject position at LF even if, like in extraposition, it does not move before PF. This analysis poses a problem, however: it is not clear what path of movement is possible for the adjunct PRO-S to move *from the extraposed position* to the subject position, *crossing* its base-generated or copy position along the way. Is it possible that the LF-copy moves from the base position to the subject position at LF? I illustrate the possibilities below: 1 represents extraposition at PF; 2a represents expletive replacement from the PF position, and 2b represents expletive replacement from the LF copy position.

(21) LF Movement: Expletive Replacement

(PF): It would help John$_1$ [PRO$_{1/2}$ to go]



Landau doesn't discuss the possibility of expletive replacement or LF movement at all, claiming instead that at LF, the PRO-S is either interpreted in the PF form or the LF copy (the base position). Presuming that *it* is deleted at LF, though, this should constitute an EPP violation for extraposed structures.

Furthermore, Landau claims that control is established at LF (hence the applicability of the Chain Interpretation condition). Thus, if there is expletive replacement at LF, the analysis of control in extraposition (and with psychological predicates) must also change. Chain Interpretation will also have to apply to psychological predicates, where Landau has said that PRO-S is interpreted *in situ*, thus in a locally controlled relationship with the DP *John*. For this to obtain, it must be obligatory that LF interprets the LF-copy of PRO-S, in the base position, *not* the moved PRO-S in subject position at LF (otherwise control would not be obligatory, by Landau's explanation). But there is nothing in the Chain Interpretation condition that makes interpretation of one link vs. another obligatory, or in fact that motivates one interpretation over another at all. Thus the analysis suffers with LF-movement left unrecognized (but arguably necessary, for EPP satisfaction at LF in extraposition structures).

There is another question about Chain Interpretation, which Landau employs to explain that NOC obtains when the PF position is interpreted, and OC obtains when the LF position (the reconstructed base position) is interpreted. As stated above, there is no mention of LF expletive replacement, in which case the LF interpretation site would be higher than either the PF or LF copies; it would be in the position of the expletive, same as the position occupied at PF in intraposed structures. But Chain Interpretation can also potentially explain control in another way, namely by enabling optional control readings precisely *because* of multiple interpretation sites. That is, rather than imposing a *locality* constraint, one could claim that different control

readings are the product of different link interpretation, not that different link interpretations somehow *force* different control readings. Extraposition simply generates NOC, where local control readings are allowed by the LF-copy interpretation, and LD control readings are allowed by the PF-copy interpretation. In fact, given what Landau has claimed, there is no way to get an always-obligatory control reading with truly extraposed structures, given the ever-present possibility of PF-copy interpretation. Thus it is never truly *OC*.

Given this, I want to suggest that if the Chain Interpretation condition is employed, there is no theoretical motivation for a distinction between "obligatory" and "non-obligatory" (or arbitrary) control at all. Rather, control readings simply become explicable by the availability of multiple link interpretation possibilities, but control readings will never be predictable by structural means. With the Chain Interpretation condition, one can freely turn control readings entirely over to the LF interpretation function, which starts to look like bringing control readings out of the domain of syntax and more squarely into that of semantics.

I also want to discuss the relation between control and binding in Landau's scheme. It is usually accepted that control requires a c-commanding relation between the antecedent (controller) and PRO. Yet nowhere in Landau's paper does *c-command* enter into the picture. In the structures Landau puts forth, at the level of interpretation (means whatever LF is interpreting, the PF or LF copy), *John* c-commands PRO in the psych-verb non-intraposition structure (tree in (18)), in which case there is OC; though he doesn't call it "c-command," the fact that *John* and PRO share a domain is supposedly driving OC. In the psych-verb intraposition construction (tree in (16)), *John* c-commands PRO in the base position but not at PF or LF, in either case where interpretation happens and control reading is possible. In the non-psychological constructions - both intraposition (tree (17)) and extraposition (tree (20)) - *John* never c-

commands PRO, yet Landau claims that OC is a possibility, depending on the link that is interpreted at LF. Because control readings are possible (though not obligatory) even when *John* does not c-command PRO, this suggests that c-command is not the relevant relation for control, or at least not for all control. It seems possible that m-command is the relevant relation, as noted above in 2.2.1, and given Landau's formulation of the phenomenon in (8), it seems likely that control is enabled by mutual domination of the two elements by a the same XP.

Finally, Landau claims that intraposition is A-movement and extraposition is A-bar movement; I want to talk about the implications of this claim for theta assignment and Case relations. In both A- and A-bar movement, the element moves to a non-theta position, but there is one main difference. In A-movement (intraposition), PRO-S is moving to a Case position, in Spec IP where IP is finite; this isn't the case for A-bar movement to adjunction to VP (extraposition). This raises two interesting questions. First, does this mean that PRO-S receives Case assignment, just as a canonical subject DP would? If so, what are the implications for Case theory? Second, if PRO-S does receive Case, is Case a *requirement* for it to be interpreted at LF? If so, this produces yet another structural motivation for intraposition, *and* it poses a problem for Landau's description of extraposition. Namely, PRO-S cannot get Case in an adjunct position, nor is it in a Case position at any other time in any derivation discussed here. If PRO-S does need Case, then, it provides further support for its obligatory movement to Spec IP at LF.

The issue of Case leads to one final point of discussion for Landau's paper, which is more generally the issue of theta and Case assignment in Landau's scheme. Taking the four structures in the paradigm together (psychological intraposition, psychological non-intraposition, non-psychological intraposition, non-psychological extraposition), the facts emerge as such: CAUSER

is assigned from V-trace to a DP in Comp V', and CAUSER is also assigned from V to a DP in Spec VP. PATIENT is assigned from V to a DP in Comp V', and EXPERIENCER is assigned from V-trace to a DP in Spec VP (see trees (15a) and (15b)). Though the different structural relations for PATIENT and EXPERIENCER are not at all surprising, the fact that CAUSER is assigned in two different relations raises questions about the necessary or unnecessary consistency of theta-role assignment. The same sort of question emerges about Case: Accusative is assigned from V-trace or V to an occupant of Spec VP, and it is also assigned from V to Comp V' (see trees (16-19)). These very different relations make for an inconsistent theory in terms of both theta and Case assignment, neither of which Landau addresses in this paper.

4. CONCLUSION

I have discussed the Super-Equi paradigm as presented by Landau (2001), with careful attention to the independent theoretical components of his argument for control relations. I have argued that rather than the difference between extraposition and intraposition, Landau's analysis points to a more straightforward structural difference between psychological and non-psychological predicates and the base-generated relations between PRO-S and VP in these respective cases. I have also considered the lack of clarity regarding motivations for intraposition and extraposition movement, including both VP-peripherality at PF and EPP satisfaction. Finally, I have questioned Landau's description of control as a function of LF interpretation in terms of the following: the Chain Interpretation condition; potential expletive replacement involving LF movement of PRO-S; and the full scope of differences between A-

movement (intraposition) and A-bar movement (extraposition) of PRO-S, which include but are not nearly limited to the properties of control.