Pronouns in a Minimalist Setting

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Introduction

This paper starts from the observation that the Binding Theory (*viz*. Chomsky 1981, 1986) is problematic from a minimalist perspective. More specifically, if one assumes that reflexives move, then principle A should be dispensed with.[1] However, if one dispenses with principle A, then principle B becomes very problematic and should be rethought. This paper considers *how* to do this. The proposal advanced returns to the approach to binding developed in the standard theory by Lees and Klima (1963). This approach to binding has one commensible feature: it analyses binding as a competitive process. In particular, the rule that licenses reflexives in some position is preferred to the one that licenses a (bound) pronoun in that position and this preference is what blocks a (bound) pronoun from sitting where a reflexive can. So understanding the complementarity of bound pronouns and reflexives reflects an economy perspective that fits well with some leading ideas in both OT and Minimalism. This paper considers what this sort of approach "means" given common minimalist assumptions. In particular, the paper proposes that many features of the Lees-Klima approach follow from basic minimalist precepts.

The paper is organized as follows. Section 1 describes the problems with principles A and B of the Binding Theory when appraised with a minimalist eye. Section 2 outlines an earlier approach to binding developed by Lees and Klima in the context of the Standard Theory. The aim is to limn the general features of this *sort* of analysis and consider how these features might be implemented in a more contemporary technology. Section 3 and 4 consider various kinds of supporting evidence. Section 3 concentrates on the interpretability of pronominal φ-features and the section 4 considers how pronoun use interacts with movement. The general thrust of the discussion is that pronouns are usable just in case movement is unavailable as a derivational option. Section 5 is a conclusion.

1 The Problem

Since Chomsky's (1986) revision of the Binding Theory (BT), it has been assumed that a reflexive moves to a position proximate to its antecedent, viz. a sentence like (1a) has a structure (roughly) like (1b) at LF.

[1] See Chomsky (1995:211) for this observation: Condition A may be dispensible if the approach based upon cliticization$_{LF}$ [movement, NH] is correct…

 University of Maryland Working Papers in Linguistics 14, ed. N. Kazanina, U. Minai, P. Monahan and H. Taylor, pp. 47-80. College Park, MD: UMWPiL.

(1) a. John likes himself
b. [$John_1$ [$himself_1$+ I^0] likes t_1]

More contemporary approaches to anaphora licensing keep to the assumption that movement is involved in this process. Chomsky (1993) crucially relies on such movement to eliminate SS. Other work on principle A has also assumed that anaphors are related to their antecedents via movement, though the details differ.[2] For example, in place of LF cliticization, Hornstein (2001), Lidz and Idsardi (1997), and Zwart (2003) have proposed that the movement occurs in overt syntax and the reflexive is a residue of this overt movement. This yields a structure like (2) for reflexives.

(2) $John_1$ likes [t_1 himself]

For what follows, let's take is as settled that anaphors move and consider what this implies for the structure of BT in a minimalist setting.

First: if correct, it urges the elimination of principle A. The reason is that it is theoretically redundant to both move anaphors and subject them to principle A. If such redundancy is to be eschewed (as of course it should be) and we assume movement occurs, then we should dump principle A.[3]

It is worth pausing a moment to consider the overlap in more detail. Principle A does two things: it fixes the antecedent of the reflexive and it imposes a locality condition on its licensing. A cursory look at (1b) and (2) indicates that both these functions are executed if one assumes that anaphors move as indicated. First, the locality effects follow from the kind of movement the anaphor executes. Both LF cliticization in (1b) and A-movement in (2) are very local movements. If either applies, the reflexive cannot be more than, roughly, an A-chain away, from its antecedent. Second, the choice of antecedent is also made evident. In (1b) it is the DP immediately next to the reflexive+I^0 complex. In (2) it is the head of the chain that bottoms out at the anaphor. In either case, which DP antecedes the reflexive is unambiguous and nothing further need relate them. In short, *if* reflexives move as indicated then principle A is redundant and should be eliminated from UG.

Second, if principle A is eliminated then principle B should be as well. Why so? The reason lies with the central empirical fact about pronouns; they, when bound, are in complementary distribution with reflexives.[4] Any theory of

[2] See, for example, Grohmann (2003), Hornstein (2001), Lidz and Idsardi (1997), and Zwart (2003). The details differ considerably, though, not in important ways for the purposes of this paper.
[3] See note 1.
[4] See Safir (1997) for a detailed review of the complementarity of bound pronouns and reflexives.

binding must account for this big fact. Principles A and B accomplish this via the imposition of opposing requirements on pronouns and anaphors in the same domain. Thus, those domains within which principle A requires that anaphors be bound, principle B requires that pronouns be free. This forces the distribution of the two morphemes to be complementary. However, consider now what happens if we eliminate principle A and adduce its effects to movement. How then do we account for the complentarity of bound pronouns and reflexives? Why should anaphors, whose properties follows from the theory of movement, block the presence of pronouns, whose distribution and interpretive properties follow from the theory of binding? The big fact noted above is rendered capricious, a colossal grammatical accident. Something must be wrong! So, *if* we decide to replace principle A with anaphor movement, then we must rethink principle B to insure that the complementary distribution of bound pronouns and reflexives follows in a principled manner.

There are a few ancillary considerations that buttress this conclusion that I would like to quickly allude to here, though I believe that they are less hefty than the one just mooted. The first concerns a conceptual infelicity in the classical BT. It's conditions are morpheme specific. This seems odd. Why should UG care about the distribution of *these* specific morphemes? In the context of theories that aim to eliminate construction specific operations, the existence of UG principles keyed exquisitely to the properties of pronouns and anaphors seems odd. Why should *these* particular lexical elements be singled out for special treatment?[5] A second concern for principle B is that it only regulates the distribution of a subset of pronouns. Put another way, pronouns come in very many varieties and principle B has nothing to say about any of these save one; the bound/referential pronouns. It is mute concerning, for example, resumptives, expletives, deictic pronouns, intrusive pronouns and cataphoric pronouns. In short, principle B is not a general theory of pronouns at all. The question that arises is whether there is anything that regulates *all* or *most* of these. One problem, is that pronouns function in a many different ways. They are a motley. This raises two questions: Is there a reason why this is so? And, Is there any general principle that regulates pronouns across all their different uses? The BT approach via principle B suggests not. It would be nice if we could find a theory that tied these more together all the while recognizing the irregularity of the grouping.

[5] See Dechaine and Wiltshko for a similar worry.

2 An Alternative: The Standard Theory and Avoid Pronoun[6]

Let's recap the main problem before proceeding: how does one account for the complementary distribution of bound pronouns and reflexives if one assumes that principle A is replaced by anaphor movement? Or, how does one replace principle B once one has dumped principle A? We will sneak up on a possible answer to this question by reviewing how an earlier generative theory, the Standard Theory (ST), dealt with reflexives and pronouns.

In ST pronouns and reflexives entered derivations via the pair of transformational rules in (3) and (4).

(3) Reflexivization: X-NP_1- Y- NP_2 - Z → X- NP_1-Y- pronoun+self-Z
(Where NP_1=NP_2, are in the same simplex sentence and pronoun has the φ-features of NP_2.)

(4) Pronominalization: X-NP_1-Y-NP_2-Z → X-NP_1-Y- pronoun-Z

Consider some features of these two rules. (a) The structural descriptions of the two rules are similar. Each looks for two identical NPs and converts the second into a reflexive or a pronoun. The identity condition (i.e. the NP_1=NP_2 condition) codes the fact that these rules are concerned with *bound* elements. This is particularly important for (4): the rule is limited to *bound* pronouns. It does not encompass deictic or referential pronouns . Simply put, in this theory, bound pronouns and referential pronouns are entirely different elements.

(b) The two rules treat bound pronouns and reflexives as by-products of grammatical operations. Put another way, according to (3) and (4) bound pronouns and reflexives are *not* lexical items but grammatical formatives. Thus, they are not introduced into derivations via lexical insertion but by post DS operations. In the context of ST this has an important implication that will be duplicated in our proposed minimalist account. In ST, Deep Structure was the locus of all semantic interpretation. As both bound pronouns and reflexives are introduced transformationally (i.e. by (3) and (4)), neither can contribute to the meaning of the sentences that contain them. In other words, the bound pronoun and reflexives morphemes *per se* are semantically inert. Note that this contrasts with the standard BT intuition where pronouns and reflexives are semantically very important. Here, they are little more than morpho-phonological housekeeping items.

(c) Both rules are obligatory in the sense of having to apply when they can apply.

(d) The rules differ in that (3) has a more limited domain of application

[6] The ideas presented here were advocated forcefully in Bouchard 1983 and much of what follows develops these views. Chomsky 1981 first proposed the Avoid Pronoun Principle.

than (4). It can apply only in simplex sentences. In a movement based account, this locality follows from the locality of the kind of movement involved (A-movement or cliticization).

(e) Last of all, within ST, (3) is strictly ordered before (4). Thus, it gets a chance to apply before (4) does and its application blocks the application of (4). In short, reflexivization trumps the application of pronominalization. The astute reader will have noted that this has the effect of putting reflexives and bound pronouns in complementary distribution (and all without mention of principle A or B!).[7]

I believe that this approach to binding is of more than historical interest. It suggests a way of handling the complementarity of bound pronouns and reflexives in the context of a theory without principle A. In fact, the features noted in (a-e) above have a natural modern interpretation in a minimalist context. If we abstract from the mechanics of ST, we find the following more general conception.

Bound pronouns and reflexives are grammatical formatives (not lexical elements). They are the morphological by-products of grammatical "binding" operations with reflexive binding preferred to pronominal binding. If reflexives are the products of movement, we can regard pronoun use as less economical than movement and so blocked where movement suffices for convergence.[8] In effect, the Lees-Klima model embedded in (3) and (4) can be re-interpreted in minimalist terms via economy with the ranking of the rules cashed out in terms of the cost of movement. Derivations then are compared in terms of the operations required to generate them. This way of looking at things extends the Merge-over Move logic familiar from Chomsky (1995) to binding by proposing that Movement is cheaper than pronoun use.[9] Those derivations that converge using movement alone (e.g. reflexivization) are ranked above those that require convergence via binding (i.e. pronominalization). Observe, a theory along these lines reduces principle A to properties of movement and principle B to an elsewhere condition on binding where movement (the preferred option) is prohibited. Bound pronouns cannot

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[7] The Lees-Klima theory is conceptually quite different from the Binding Theory approach. Principle A and B do not compete with one another. Rather, they impose complementary requirements on reflexives and anaphors in the same domain. Thus, they always both apply to a given configuration. The Lees-Klima conception is quite different. The application of Reflexivization pre-empts the application of pronominalization. Thus when reflexivization applies pronominalization cannot apply.

[8] This is similar to the logic that we find in Chomsky (1991) in the discussion of *do*-support. It is there proposed that derivations that converge without the use of *do* are preferred to those that must use *do*. The proposal here generalizes this suggestion to pronouns more generally. That this should be treated technically by excluding these items from the numeration relies on insights in Arnold (1995).

[9] These two economy conditions, however, are independent of one another.

appear where reflexives are licensed because the operations that introduce them are more costly than those that avoid them. This is the hypothesis that the rest of the paper tries to motivate.

A caveat, however. What follows is not so much a theory of binding as a prolegomenon to such a theory. What I offer are arguments suggesting that something along these lines is worth pursuing. Most details are left to one side. It is the viability of the basic conceptualization that is here explored.

3 The Interpretability of φ-Features

Assume that derivations with bound pronouns compete with those containing reflexives, viz. that (5a) competes with (5b) and that the acceptability/convergence of (5a) blocks the derivation of (5b).

(5) a. John_1 likes himself_1
b. *John_1 likes him_1
c. {John, likes}

For this to be true, (5a,b) must compete. To compete they must be comparable. Within a minimalist setting, this supports the following reasoning. If the derivations of (5a,b) compete then they must have a common numeration (as distinct numerations block derivational comparison). What distinguishes (5a) and(5b) is the reflexive in the former versus the pronoun in the latter. To be comparable, the reflexive/pronoun in (5a,b) *cannot be part of the numeration of either sentence*. The sentences must have a common numeration, roughly that in (5c). This means that reflexives and pronouns are *not* lexical elements (elements that live in the lexicon) but are grammatical formatives that are added in the course of the derivation.

Chomksy (1995) proposes that derivations should not be allowed to "add" interpretive material in the course of the derivation; i.e. the Inclusiveness Condition. He understands this to mean that semantically active material such as indices and bar levels cannot be inserted in the course of a derivation. Inclusiveness regulates the overt syntax to LF mapping. In contrast, Chomsky (1995) notes that the PF derivation widely violates Inclusiveness. Let's assume that something like Inclusiveness in this sense holds, i.e. that semantically active material cannot be inserted in the course of the derivation.

If we assume this we can frame the following deduction: if reflexives and bound pronouns are grammatical formatives added in the course of the derivation (our version of the Lees-Klima theory of binding), then inclusiveness requires that their features be semantically inert. Consequently, reflexives and pronouns must be purely morphological elements without semantic import. In short, *if* we have the derivations of sentences containing reflexives and bound pronouns compete,

then, in a minimalist context this implies that reflexives and bound pronouns are semantically inert. As pronouns and reflexives are essentially bundles of φ-features, this implies that these φ-features are without semantic import. Interestingly, there is some evidence that this conclusion is correct.[10] Consider sentences like (6) where the pronoun is bound by the operator *only John*.

(6) [Only John]$_1$ thinks that he$_1$ is smart

This sentence can be contradicted by the sentences in (7).

(7) a. Wrong! Mary thinks that she is smart too
b. Wrong! The boys over there think that they are smart too
c. Wrong! I think that I am smart and you think that you are

For the sentences in (7) to contradict (6) it must be the case that the φ-features of *he* in (6) carry no semantic import. For were they to do so, the values of this bound variable would be restricted by the φ-features of *he*, i.e. to singular, third person, male elements. However, this is incorrect. The sentences in (7) can be used to contradict (6) and they each differ from *he* in at least one feature; (7a) with respect to gender, (7b) with respect to number, and (7c) with respect to person. This indicates that the correct logical form of these sentences analyses *he, she, they, I, you*, etc. as *bare variables*, variables without φ-feature restrictions. In short, the φ-features of the bound pronoun are without semantic import. (6) and (7) have the form in (8).[11]

(8) [Only John]$_x$ [x thinks that x is smart]

Enc (1986) offers another instance of the same effect.

(9) a. John wants each of you to describe the town where **you** grew up
b. John wants each of us to describe the town where **we** grew up

As Enc noted, (9a,b) each have an interpretation where the indicated pronouns are

[10] Note that this derives the Lees-Klima idea that reflexives and bound pronouns are not lexical elements but grammatical formatives and that they do not contribute to the semantic interpretation of the sentences that contain them. Note too that if this is correct than the various semantic differences between bound reflexives and bound pronouns cannot be attributed to semantic differences between these elements. See Hornstein (2001) for a review of some of the salient differences.

[11] This observation was brought to my attention by Cedric Boeckx, who cites A. Kratzer, who in turn cites I. Heim.

interpreted as bare variables. Thus, the sentences need not presuppose that the addresses (the "yous") or the speakers (the "wes") hail from the same place. They both support *distributed* readings that, for example, can be felicitous if, say, Mary, Mike, and Sue are the addressees and hail from different regions and John wants to know where each of them grew up. This is true for (9b), as well. Put another way, for these readings, *you* and *we* loose their deictic character and function like simple bound variables.

Note that similar reasoning holds for reflexives. So, for example, (10a) can be contradicted by (10b) and the reflexive in (11) can carry a distributive reading.

(10) a. Only I believe myself to be intelligent
b. Wrong! Bill believes himself to be intelligent and you believe yourself to be intelligent.

(11) Do each of you believe yourselves to be intelligent?

So, it seems that there is some evidence that the φ-features of (A-)bound pronouns and reflexives do not contribute to the interpretation of the sentences that contain them. They must be interpreted as bare variables.

Note that the Lees-Klima picture that is here being considered distinguishes bound from referential pronouns. Only the former are grammatical formatives. If this is correct, then only the ϕ-features of bound pronouns should be uninterpretable. Those of referential/deictic pronouns should be semantically active. This too appears to be correct. Consider (12).

(12) This proposal is boring. It/*he/*she/*they/*I/*you/*we is also long

In (12) the pronoun in the second sentence is not a bound pronoun.[12] Note that only a third person singular neuter pronoun can be co-referential with *this proposal*. The standard account for this restriction is that in such cases of co-reference, the φ features of the co-referring expressions must semantically match. This supposes that the features of the pronoun are interpretable, as we would expect on a Lees-Klima account as these are not bound pronouns. Turn next to (13).

(13) Only John thinks he is smart

[12] Pronouns cannot be bound across sentences. The fact that such pronouns act rather differently from the bound ones suggests that the assimilation of cross discourse anaphora to bound pronominalization is incorrect. See Kayne (2003) for such a proposal.

We considered the reading of (13) where *he* was bound by *only John*. However, there is a second reading as well where *he* is co-referential to *John*. This sentence would be contradicted by (14).

(14) Wrong, Mary thinks he (=John) is smart too

Note that in this instance the ϕ-features of the pronoun must match those of the antecedent (John). This becomes clearer still in (15a,b) which are contradicted by (16a,b).

(15) a. Only I think that I am smart
b. Only you think that you are smart
(16) a. No, Bill thinks that you are smart too (spoken by addressee)
b. No, Bill thinks that I am smart too (spoken by speaker)

Not surprisingly, depending on who is doing the speaking, the person feature must change. Contrast these with the contradictions in (7). The differences follow once one sees that the pronouns in (15) and (16) are referential rather than bound.

The same ambiguity obtains for (9). Recall that these had a bound distributed reading. This means that the pronoun is functioning as a bare variable without φ-feature content. In particular, it does not carry the presupposition that any two people grew up in the same place. However, we can force the pronoun to function as the plural deictic first or second person pronoun by modifying it with *all*. When we do this, the distributed reding disappears and only a group reading surfaces.

(17) a. John wants each of us to describe the town where we all grew up
b. John wants each of you to describe the town where you all grew up

So, the ambiguity of these sentences can be traced to the fact that in one case the pronouns is bound and acts like a bare variable while in the other it is referential and its φ-features are semantically active. This falls into line with the Lees-Klima story.

The contrast emerges in contrasting alternates with reflexives and pronouns occupying the same position. Though, this is generally prohibited, it can occur in sentences like (18).

(18) a. Only I believe myself to be smart
b. Only I believe me to be smart
c. Only you expect yourself to win
d. Only you expect you to win

The example in (18a) has only the bound variable interpretation. It can be contradicted by (19a) but not (19b). This is similar for (18c).

(19) a. Wrong! John believes himself to be smart as well
b. Wrong! John believes you to be smart as well

In contrast, (18b) can only be contradicted by (19b) not (19a). This is similar for (18c,d). This is what we expect if the pronouns in (18b,d) are deictic while the reflexives in (18a,c) are bound (bare) variables. That the pronouns in (18b,d) cannot be bound pronouns follows from the complementary distribution of bound pronouns and reflexives and is supported by the observation that these pronouns are not c-commanded by their antecedents (i.e. they are contained within the *only* DP).

One last case before moving on. English allows A'-bound pronouns if required to ameliorate island effects. We will return to these later on. These pronouns are interpreted like wh-traces, i.e. variables. Thus, for example, they license distributed readings under binding. At any rate, their ϕ-features are also uninterpreted.

(20) a. It was six of us that Bill remembered whether **we** had passed the exam.
b. Which of you id Bill say that he met someone who admired **you**

Note that both (20a,b) support distributed readings and this requires washing out the deictic character of *we* in (20a) and of *you* in (20b).

To conclude, we noted at the outset of this section that if we interpret the Lees-Klima idea as suggesting an economy approach to pronouns and anaphors (i.e. that pronouns are what one gets if anaphors are impossible), then given current technology, this implies that neither pronouns nor anaphors are members of the numeration. Thus, they must be added in the course of a derivation. However, this then precludes them from having interpretable features given Inclusiveness. This implies that the φ-features of *bound* pronouns should be not carry semantic import and, conversely, that non-bound pronouns should. We have reviewed some evidence supporting this conclusion.[13]

[13] The semantic non-interpretability of the ϕ features of bound reflexives and pronouns suggests that more than semantic identity is required for ellipsis. For many English speakers, the following data characterize VP ellipsis.

(i) a. John shaved himself and Frank did too
b. ?John shaved himself and Mary did too
c. ?*The men shaved themselves and Mary did too

4 Bound Pronouns and Movement

Recall the main point: How does one attain the complementary distribution of (bound) pronouns and reflexives given that the latter's distribution is the province of the theory of movement? The answer suggested by the Lees-Klima approach is that refelxivization blocks pronominalization as the former is more highly ranked than the latter. If this is so, however, the question is what ranks them? In terms of what dimension are they ranked? If we assume that reflexives are the "residues" of movement, then it must be that derivations that exploit movement are superior to those that must use pronouns. If this line of reasoning is correct, we should be able to find examples where the possibility of movement and pronoun use are related. More concretely, if pronoun use is more costly than movement, then we would expect pronouns to appear where movement cannot. In other words, pronouns should be parasitic on the *impossibility* of movement. With this in mind, let's consider the use of intrusive/resumptive pronouns.

4.1 Pronoun Use When Movement is Blocked Consider the following paradigm.

(21) a. John is a person who Mary met someone who admired *(him).
b. John is a person who Mary wondered when a portrait of *(him) would appear in the NYT.

(22) John is a person who Mary heard that Frank likes (*him).

The examples in (21) illustrate the standard observation dating from Ross (196x) that island violations ((21a) is a CNPC violation while (21b) has movement from a finite subject of an embedded question) are ameliorated when the gap is plugged with a pronoun. These examples contrast with (22). Here, we have movement from a non-island. What is interesting is that use of a pronoun in this case *degrades* acceptability. One way to describe this is that using (resumptive/intrusive) pronouns when movement suffices is illicit. In other words, this is an example of what we've been looking for; pronoun use is "inversely" tied to movement, i.e. it is permitted just in case movement is not.

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d. John said that he shaved Frank and Mary did too (?? with sloppy reading)
e. The men said that they shaved Frank and Mary did too (?* with sloppy reading)

These data suggest that ellipsis is affected by morphological properties. (ia) is perfect because *himself* is elided in the conjunct. The other sentences degrade and this can be traced to the absence of morphological identity of the deleted bound elements. This suggests that ellipsis is sensitive to more than the properties of logical form. Lasnik (1999) has noted that ellipsis may require more than identity of semantic form, contra Merchant (2001), among others. These observations support this position. However, just how much morpho-phonological overlap is required is a delicate issue.

This trading relation is further illustrated by some observations by Engdahl (1985). She notes that the use of pronouns in island contexts degrades acceptability.

(23) Vilken tavla kände du faktist [killen som målat (*den)]
Which painting knew you in fact the.guy that painted it
'Which guy did you actually know the guy who painted (it)?'

This is somewhat surprising until one notes that Swedish appears to allow extraction out of complex noun phrases.[14] Given this option, the infelicity of the pronoun in (23) comports well with the idea that the use of such pronouns is depends on the inability to move in these contexts.

Another illustration of the same phenomenon is attested in fixed subject/ECP configurations. Consider the following relative clauses.

(24) The man…
a. *who$_1$ you told me that t_1 was kissing a dog
b. *who$_1$ you asked me whether t_1 was kissing a dog
c. who$_1$ you told me that he$_1$ was kissing a dog
d. who$_1$ you asked me whether he$_1$ was kissing a dog

(25) The man…
a. who$_1$ you told me t_1 was kissing a dog
b. who$_1$ you said t_1 was kissing a dog
c. *who$_1$ you told me he$_1$ was kissing a dog
d. *who$_1$ you said he$_1$ was kissing a dog

The examples in (24) illustrate that pronouns can ameliorate unacceptable fixed subject violations (i.e. *that*-t effects), compare the examples in (24a) with (24c) and (24b) with (24d). The sentences in (24) illustrate that when there is no *that*-t effect then using a pronoun degrades acceptability, compare (24a) with (24c) and (24b) with (24d). This comports with the idea that use of these pronouns is only permitted if movement is not.[15]

[14] This was first noted in Erteschik-Shir (1973) and cited in Boeckx (2003) where I found discussion of these facts.

[15] The idea that resumptive pronouns are elsewhere expressions is hardly novel. The idea is proposed in Shlonsky (1992) for resumptive pronouns. The examples here involve "intrusive" pronouns which, it has been argued, are different from resumptives. As illustrated below, essentially this proposal was advanced in Bouchard (1983).

Consider, one last example of this, this time from French.[16]

(26) a. L'homme [sur qui$_1$ tu te fies t_1]]
The.man on whom you rely yourself
b. L'homme [que 0_1 [tu as vu t_1]]
The.man that you have seen
c. L'homme [qui 0_1 [t_1 est venu]]
The.man who came

(27) a. Un gars que je me fierais sur lui
A guy that I rely myself on him
b. ?? L'homme que je l'ai vu
The man that I him have seen
c. ?? La fille qu'elle est venue
The. Girl that she came

The data in (26) and (27) are French relative clauses. In (26) a wh-relative pronoun has moved to C. In (26a) this involves pied-piping the preposition as French does not permit preposition stranding. Contrast these with (27). In (27a) the preposition is left in situ. The relative can still be formed but now a pronoun must be left behind in place of a trace. Contrast this with (27b,c). Note that the movement relatives that correspond to (27b,c) are perfectly fine, i.e. (27b,c). This degrades the acceptability of relatives in which a pronoun is used, (27b,c). Thus, once again, when movement is illicit, replacing the trace with a pronoun improves acceptability. Where movement is fine, using a pronoun degrades acceptability. This fits with the idea that where movement is ok, pronouns cannot replace traces.[17]

[16] These examples were first discussed in Bouchard (1983). His approach to the data is a little different from the one outlined here. However, the general approach is quite similar and this work is clearly in line with his basic ideas.

[17] There are other examples of this logic, that I do not review in detail here. Consider, for example, Lebanese Arabic (LA). Aoun, Choeiri and Hornstein (2001) note the following facts.

LA distinguishes apparent from true Resumptives. The latter show no reconstruction effects. The former do. The latter occur within islands. The former do not. If reconstruction is a mark of movement (as would follow from the Copy theory), then presence of this distinction between resumptives indicates a contrast between the two types, with only the former being "residues" of movement. This is expected as they are not in islands. Given this, Aoun et. al. note that one only finds strong subject pronouns with quantificational antecedents (i.e. bound pronouns) if they are TRUE resumptives. They only obtain inside islands. This Aoun et. al. argue follows if true resumptives are last resort expressions which are available only if movement is not.

4.2 Expletive Pronouns as Last Resort Elements[18] Section 3 outlines an argument that elements that are not part of the numeration cannot have semantic import due to Inclusiveness. It would be nice to strengthen this condition to a bi-conditional by holding that if an expression has no semantic content then it *cannot* be part of the numeration. If so, however, its entry into derivations could plausibly be subject to the kinds of economy considerations that we reviewed above. This section explores this logic for expletive *it*. This element, it is plausible to suppose, makes no independent contribution to the meaning of the sentences that it is part of. Given this, let's assume that the use of expletive pronouns is also regulated by economy considerations.

Consider the following Super-Raising data. Chomsky (1995) observes that sentences like (28) are unacceptable.

(28) *John$_1$ seems that it was told t_1 that Mary left

Chomsky (1995) treats this as a violation of minimality, *it* in embedded subject position blocking movement of *John*. Though this works, there are technical problems with the proposal. To see these, consider (29), the structure that would obtain were *it* (the DP blocking *John*) to move.

(29) *It seems (that) t was told John that Mary left

This sentence is not particularly felicitous. One reason might be that the case features of *it* have already been checked in the embedded clause and so *it* is no longer a candidate for movement, or, if it did move, *it* could no longer check the case of the matrix finite T^0. The problem is that it is note clear why the features of the matrix T^0 cannot be checked against those of the *John*? In the Chomsky (1995) model, the trace of movement is not relevant for minimality and there is no obvious reason why the matrix T^0 cannot seek *John* and check its case and ϕ-features against it at LF. More contemporary theories,can prevent this derivation in various ways, e.g. the Phase Impenetrability Condition could block this. Whatever the virtues of such proposals, I would here like to consider a different account for the unacceptability of these sentences in terms of derivational economy.

Assume that derivations that use pronouns are more costly than those that do not.[19] Now consider the derivation of (28) and (29). Both involve insertion of the expletive *it* at a point in the derivation where movement would have sufficed.

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[18] The observations concerning expletive-*it* in this section were independently noted in Vukic (2003).

[19] Or, to be more precise, pronouns that are not interpretable, e.g bound pronouns whose ϕ features are not interpretable and expletive *it*.

In particular, *John* can move from object to Spec T for case reasons. If this occurs, then the sentence we would derive is (30).

(30) It seems that $John_1$ was told t_1 that Mary left

Note that we insert the matrix *it* because movement of *John* would not yield a convergent derivation (for whatever reason subject raising from a finite clause never converges). On this view of things, the possibility of movement pre-empts the use of expletive–*it*.

This argument form should feel familiar. It is identical to the one that Chomsky (1995) proposes for blocking the derivation of (31).

(31) *There seems someone to be here

Chomsky (1995) assumes that Merge is cheaper than Move and that the cheapest *next* step must be taken if it will lead to convergence. When the derivation arrives at the embedded T^0 either *someone* can move or *there* can be merged. If Merge is superior to Move, then *at this point*, it is better to Merge *there* than move *someone*. This prevents the derivation of (31). The logic concerning (28) and (29) is point for point identical if we take Move to be superior to using expletive-*it*.

Consider another instance of this logic.[20] Consider the following paradigm.

(32) a. John believes that Frank is here
b. What does John believe
c. It was believed that John is here
d. *What was it believed
e. What did you persuade Bill of
f. What was Bill persuaded of
g. John was clear that Bill left
h. What was John clear about

The unacceptability of (32d) fits with movement being cheaper than use of *it*. Note that (33) is fine.[21]

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[20] I believe that the argument next presented is empirically weaker than the one above, but the logic is interesting so I present it.

[21] Cedric Boeckx observes that this kind of argument has implications for Rizzi's 1982 analysis of post verbal extraction of *wh* in Italian.Rizzi notes that *pro* in Spec TP in Italian allows for *wh* extraction from the post-verbal subject position. The reasoning outlined here would force movement to Spec TP before movement to to CP, on the reasonable assumption that expletive *pro* is a last resort expression. However, we can re-interpret Rizzi's result as follows. Assume

(32´) What was believed

On the assumption that one must mover rather than use expletive-*it* , the derivation of (32d), like the derivations of (28) and (29) are examples of premature pronominalization. As *what* can passivize before it moves to CP, inserting *it* violates economy. In cases where passive is blocked, *it* is acceptable[22]

(33) a. Why/*what was it believed
b. How/*what was it clear
c. When/where/*what was it said

The logic illustrated in the examples above differ from those in (4a) as they involve expletive (rather than bound) pronouns. However, the logic that we applied to bound pronouns carries over here *if* we assume that expletive *it* is not a lexical formative. This is not unreasonable given that expletive-*it* has no semantic import. If we assume that only semantically active elements are lexical (an assumption implicit in Chomsky's banishment of AGR projections), then - expletive-*it* should not a grammatical (not a lexical) formative. If so, it makes sense that its use should be governed by the same sorts of economy considerations that govern bound pronouns and that derivations that contain them should only be licit if their use is required.

One more observation: recall that one drawback of the principle B approach to pronouns is that it only regulates the A-bound variety. In the last two sections, we extended the economy approach (i.e. Move trumps pronominal use) to A'-bound (intrusive/resumptive) pronouns and expletive pronouns. This suggests that this sort of "Avoid Pronoun" economy approach might provide a *general* perspective on pronoun use that also sheds some light on the diverse types of pronouns. The diversity comes from pronouns only being licit when more highly valued movement based derivations fail. Because movement can fail in various ways, this leaves lots of slack for pronouns to pick up.

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following Anagastopoulo and Alexiadou that there is no Spec TP in pro drop languages. Thus pre-verbal subjects are actually Topics (c.f. Jaeggli 1980 and Barbosa 19xx). If so, it is not an inserted null expletive that blocks movement but the absence of a Spec TP position. This retains Rizzi's generalization without contradicting the logic noted in (32).

[22] Examples like (32d) might be out for case reasons. However, it is interesting to note that we cannot "add" prepositions to assign case like we can in (32f,g).

(i) a. *what was it believed of
b. *what was it clear about
c. *what was it said of

4.3 Generalizing Obviation Effects[23]

4.3.1 English Gerunds I have suggested that a revised take on the Lees-Klima view of binding (one that interprets this proposal as a competition between derivations with and without pronouns) provides a natural approach to the complementary distribution of bound pronouns and reflexives. This section expands on this idea and sees how far it might be pushed. Caveat lector! As speculative as the forgoing has been, this pushes things further yet.

To begin, let's turn to some technical concerns. Let's accept that the possibility of Reflexivization blocks Pronominalization. This amounts to saying that the derivation of (34a) blocks that of (34b). The derivation is blocked because we can converge via movement in the former. Assuming that reflexives are the residue of movement, this requires that (34c) be the numeration underlying both sentences. The derivation looks something like (34d).[24]

(34) a. John likes himself
b. John_1 likes him_1
c. {John, T^0, like}
d. [John [T^0 [John [like [John+self]]

Note that this derivation involves a *self* element. Where did it come from? Well, it is not a lexical element, as it is crucially not part of the numeration (34c). It is added to allow the movement derivation to converge. Hornstein (2001) takes it to be an expression that can check case but that has no ϕ-features, a kind of case checking affix. Say that this is so. Then the above brief account is assuming that one can add the appropriate functional material to a derivation to ensure convergence under movement. Let's make this assumption explicit.

(35) Put in as much functional material as required to license movement

In this instance Case material can be "added" to allow convergence with Move. Observe that adding this stuff is (at least for the cases at hand) costless. In other words, what is critical is that the addition of *self* has no bearing on the cost of the derivation. It does not count in considering the comparison class of derivations. This is critical: to get the Lees-Klima idea to fly, we need to be able to determine the competitors. The statement in (35) expresses the idea that derivations that differ by grammatical formatives alone, compete. With this in mind, consider some other cases of obviation.

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[23] Much of the work presented here builds on prior work by Pires (2001), San Martin (1999) and Hornstein and San Martin (2000).

[24] This assumes something like the account in Hornstein (2003) or Lidz and Idsardi (1997).

Pires (2001) proposes that Acc-ing gerunds differ from PRO headed gerunds in case marking their subject. This case marking is parasitic on the whole gerund being case marked. Thus, (36a) differs from (36b) in that the *ing*-inflection passes on case to the subject in the former, but not the latter.

(36) a. Harry hates [John kissing Mary]
b. Harry hates [PRO kissing Mary]

Now, assume that obligatory controlled PRO is actually an NP-trace residue of movement, with a structure like (37).[25]

(37) Harry_1 hated [t_1 kissing Mary]

If this is correct, and if movement blocks pronominalization, then we expect that the derivability of (36a) as in (37) should render (38) unacceptable. In particular, the derivation of (38) should be blocked because it uses a pronoun where movement suffices for convergence.

(38) *Harry_1 hates him_1 kissing Mary

Observe, for this account to go through, we are crucially assuming that the derivations of (37) and (38) are comparable. This, in turn, assumes that the fact that the subject of the Gerund is case marked in the latter but not in the former is not a difference that makes a difference in determining the comparison class. Differences in (structural) case marking in other wise identical derivations do not suffice to distinguish the derivations and so they compete.[26]

Observe that the above explanation does not rely on a "reflexive" structure blocking an analogous "bound pronoun" structure. Rather it is a *movement*

[25] See Hornstein (2001) and Pires (2001).

[26] The competition above is between Acc-ing gerunds and PRO gerunds. Interestingly, PRO-gerunds doe not block Poss-ing forms.

(i) John_1 hated his_1 having to leave the party
(ii) * John_1 hated him_1 having to leave the party

The indicted binding in (i) is acceptable in contrast with (ii). Why the contrast? Pires (2001) argues that Acc-ing gerunds are essentially clauses, while Poss-ings have an additional DP layer of structure. This is in line with the classical conception of the latter, the genitive case on the subject being taken as an indication of a nominal layer of phrasal structure. If this is correct, then we do not expect PRO gerunds to block Poss-ings as they differ from the latter by the absence of this additional nominal layer. However, this is enough to block comparison on the assumption that this nominal layer is reflected in some lexical nominal that is part of the numeration of Poss-ings but not PRO-gerunds.

derivation that blocks a non-movement one. Focusing on movement or lack thereof, rather than a reflexive versus pronoun difference is partially supported here given the degraded status of (39).[27]

(39) ?? John hates himself kissing Mary

In other words, the relative unacceptability of (39) indicates that perhaps it too is not derivable. *If* this is so, it supports our proposal that derivations be ranked with respect movement.[28] Consider another example that makes the same point.

(40) a. John left the party without PRO singing
b. ?* John$_1$ left the party without himself $_1$ singing
c. * John$_1$ left the party without him$_1$ singing

The example in (40a) is a case of adjunct control. The example in (40b), with a reflexive in place of the PRO, is quite degraded.[29] The example in (40c) with a pronoun bound to the subject is unacceptable. The unacceptability of (40b) suggests that unstressed reflexives are ungrammatical in these positions. If so, they cannot block structures with bound pronouns, i.e. (40b) should not block (40c). This would be problematic were it reflexives that blocked pronouns. However, if we assume that it is movement derivations that trump pronoun use then, if OC PRO is a residue of movement, we expect the convergence of (40a) to

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[27] This, I believe, is especially so if we destress the reflexive:. If we give the reflexive focal stress, the sentence considerably improves.

(i) ?*John hates 'imself kissing Mary
(ii) John hates HIMSELF kissing Mary

[28] Why might (38) and (i) in note 27 be relatively unacceptable while (ii) in note 23 is fine? One possibility is that this is another reflex of the Avoid Pronoun Principle. Thus, the acceptability of the PRO structure blocks that of the reflexive. To make this proposal work, however, would require explaining why cases like (i) seem fine despite the acceptability of (ii).

(i) John expects/wants himself to win
(ii) John expects/wants PRO to win

One possibility is that the case marking in these ECM constructions involves lexical information coded in the particular lexical entry. This might be part of the lexical information coded in the numeration. The case marking in gerunds is, in contrast, not lexically determined and so not present in the numeration. This will make ECM and non-ECM constructions lexically different and so not liable for competition.

[29] Again, this improves if *himself* is stressed and degrades further if distressed. See note 23.

suffice in blocking (40c).[30]

I stress this point for it is a somewhat distinctive feature of the present approach. Other competition theories pit sentences with pronouns against those with reflexives, with the latter trumping the former. The claim is that reflexives are (in some sense) less referential than pronouns (even bound ones). The competition is between morphological forms and the idea is that if there is a choice between a more dependent morpheme and a less dependent morpheme both occupying a given anaphoric position then the possibility of using the more dependent form (less referential) blocks the use of the less dependent (more referential) form. Thus, acceptable reflexives in a given position block bound pronouns from that position.[31] The examples in (35)-(39) are problematic for this approach. In these cases, reflexives are not particularly felicitous. Nonetheless, bound pronouns are also excluded. It would seem then, that the issue is not simply a competition between specific morphological forms, but between derivational alternatives.[32]

4.3.2 *Basque Obviation* Basque offers a more interesting example of this sort of logic.[33] In particular, we find evidence that the possibility of movement ties together with both binding and obviation effects. Basque is able to case mark its infinitival complement. These complements come in two flavors. One flavor is a kind of nominalization. These must be case marked. If marked with structural case they allow an overt subject. Moreover they are islands with respect to movement. If marked with an inherent case or no case at all, they require null subjects that display the characteristics of OC PRO. The other kind of non-finite complement is a kind of participial (gerund) that can bear either structural case or

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[30] A quick aside: If this line of reasoning is correct we can use the complementary distribution of OC PRO and bound pronouns as further evidence in favor of the movement theory of control. Note further that the complementarity evident in adjunct clauses supports the view that adjunct control is a form of OC derived via movement. Last of all, note that NOC PRO does not impose the complementarity with pronouns noted here. John$_1$ believes that [[for him$_1$ /PRO$_1$ to leave] would be awful.

(i) Mary$_1$ conceded that [[her$_1$ /PRO$_1$ coming in first in the 100m dash] was improbable

[31] See Burzio (198x) for a version of this idea in an OT framework. This approach has been considerably elaborated with interesting results in Safir (200x).

[32] A variation on the Burzio-Safir theme might go as follows: pronouns are blocked if less referential forms exist. PRO is less referential than pronouns. Thus, their use blocks a pronoun. The problem would then be to define the contexts relevant to evaluation given that pronouns cannot generally occur where PROs do and vice versa. Note that if we must, as suggested here, compare derivations, non derivational approaches such as OT might be hard put to track these generalizations.

[33] This section is based on San Martin (1999) and Hornstein and San Martin (2000).

no case at all. In the former instance the ec acts like an OC PRO, in the latter instance it acts like an NOC PRO.

(41) Nik_1 [anaia/$ec_{1/2}$ kartetan ibilitze]-ARI ondo dritsot
I brother-A cards play-NOM-Def-D OK I-think
"I think that it is OK to play cards/that my brother plays cards"

(42) Nik_1 $Peperi_2$ [ec_{1+2} kartetan batera jolaste]_ARI
I-E Pepe-D cards together play-Nom-Det-D
ondo deristsodala say 3A-3D-1E
OK think esan diot
"I said to pepe that I think that it is ok that we play cards"

The example in (41) shows the possibility of an empty or overt subject. The example in (42) indicates that if the subject is covert, it can take split antecedents and so is a an NOC PRO (not OC PRO).

(43) *$Nork_1$ [kartetan t_1 jolaste]-ari ondo deritsot nik?
Who-E cards play-Nom-Det-D agree 1-E
"*Who do I agree that plays cards"

(44) [Kartetan nork jakatze]-ARI ditsot nik ondo?
Cards who-E play-nom-det-D agree-I 1-E well
"Who do I agree that plays cards"

The example in (43) shows that these case marked infinitives are islands to WH extraction. To question a WH inside such a case marked infinitive requires pied-piping the entire clause as in (44).

San Martin provides evidence that participial clauses work in more or less the same fashion. The general conclusion she draws is that when the infinitival clause is case marked it blocks movement and allows split antecedents to bind the null subject. When there is no case marking (on participials) movement from the infinitive is possible and split antecedents are prohibited. Thus, we tie together the possibility of movement and the possible presence of pronominal empty categories. Basically OC PRO and NOC PRO are in complentary distribution.

As so described, Basque works more or less like English. Here too OC and NOC PRO are in complementary distribution with the latter found primarily inside islands. However, Basque has one other interesting construction that is of relevance here. It involves case marked participials whos subjects must be obviative with respect to the matrix subject.

(45) Nik [ec/John joate]-A nahi dut
I go-Nom-det-A want 3A-1E
"I want him/her/you/they/John to go"

(46) Nik [ec/*John joan] nahi dut
I go want 3A 1E
"I want to go"

In (45), we have a structurally case marked infinitive. We can get either a null pronoun there or an overt DP in subject position. What is interesting, however, is that the embedded pronoun cannot be bound by the matrix subject. The example in (47) is unacceptable with either an overt or covert pronominal form.

(47) Nik_1 [ec/$\text{hura}_{*1/2}$ joate]-A nahi dut
I pronoun go-Nom-Det-A want 3A-1E
"I want someone else to go"

The question is why? Recall, that case marked infinitives do not generally have obviative subjects (c.f. (41) and (42)). We can provide an answer if we recall that we take bound pronouns as being illicit where movement can converge. Assume for the nonce that (47) is out because (46) converges. In other words, the only difference between these two structures is the case marking on the embedded subject. If we assumed that this was not sufficient to prevent comparison, then we could attribute the unacceptability of (47) to the convergence of (46). This idea gains in plausibility when it is noted that in contrast to other case marked infinitives, the one in (45) is not an island for purposes of extraction. For example, unlike the case marked infinitives noted above, these permit extraction.

(48) Zer nahi dut nik [Mariak t eroste]-A
What-A want AUX I Mary-E t buy-Nom-Det-A
"What do I want Mary to buy"

(49) Nor nahi dut nik [t etcera etortze]-A
Who want Aux I t home come-Nom-Deet-A
"Who do I want to come home"

The questions in (48) and (49) are fine. They do not require clausal pied-piping as those in (43) and (44) do. This suggests that the only thing that the case marking does in these cases is license an overt subject. Otherwise the two structures are the same. This now makes these cases entirely on a par with the English Acc-ing and PRO gerunds discussed above and this allows us to extend

the same account to (46) as we extended to the obviation effects observed in Acc-ing constructions.

One last observation. It seems that examples like (50) are unacceptable.[34]

(50) Nik [nere burua joate]-A nahi dut
I my head go want aux(Mood-1erg-3abs)
"*I want that myself go"

This means that the obviation effect cannot be tied to the availability of a reflexive alternative. Whether or not a reflexive exists is not enough to explain the attested obviation as sentences with reflexives replacing pronouns are ill-formed. This suggests that if we wish to analyze obviation via competition then the competitors are evaluated not with respect to specific morphemes (reflexives versus pronouns) but something more abstract (movement versus pronominalization).

4.3.3 *Romance Subjunctives*[35] There is one other well know n example of pronominal obviation in an unexpected environment. In most of the Romance languages a pronoun in the subject position of an embedded subjunctive complement cannot be bound with the subject of the embedding verb. The following Spanish example illustrates this widespread phenomenon.

(51) Juan_1 espera/quiere [que $\text{pro}_{*1/2}$ vaya al cine hoy]
Juan expects/wants that pro go-subj to the movies
"Juan wants/expects that he go to the movies"

The obviation witnessed here is unexpected given conventional assumptions concerning principle B. The pronoun can be replaced with an overt DP, as in (52a), suggesting that it is analogous to a finite clause and so is a binding domain. Moreover, reflexives are barred from this position, as in (52b), as would be expected were this a minimal binding domain as regards principle A. This suggests that a bound pronoun should be acceptable here. However, as (51) illustrates, this is incorrect.

(52) a. Juan espera/quiere [que Raol vaya al cine hoy]
b. *Juan_1 espera/quiere [que se mismo_1 vaya al cine hoy]

[34] Thanks to Ricardo Etxepare for the relevant information.
[35] The proposal here tracks ideas advanced in Bouchard 1983.

The standard remedy for these apparent problems with the binding theory involves (i) extending the binding domain of the embedded clause so that it includes the matrix and (ii) assuming that (52b) is blocked by something other than Principle A. The latter is not an unreasonable conclusion in the context of a theory that assumes that reflexives must move. Chomsky (1986) assumed that (53) fails because movement of the reflexive results in an ECP violation. Thus (53) does not implicate principle A.[36] We might say something similar for (52b).

(53) *John believes that himself is tall

Though these are reasonable moves and perhaps even correct, the proposals are sufficiently involved to motivate considering other approaches. Assume that subjunctives are actually inflected infinitives. Both infinitives and subjunctives occur primarily in embedded contexts and show a tense dependency on the higher clause. If we assumed that subjunctives and infinitives are versions of the same kind of clause, distinguished by some low level functional material, then we could assume that sentences like (51) don't tolerate a bound pronoun reading because they compete with sentences like (54) where a bound reading converges by movement from the embedded to the matrix clause (assuming as I do here a movement approach to obligatory control).

(54) Juan_1 espera/quiere [$\text{PRO}_{1*/2}$ ir al cine hoy]
Juan expects/wants PRO go-infin to the movies today

Observe, that this requires that we take a somewhat abstract view of when two sentences compete. We must assume that the subjunctive morphology does not block comparison between a subjunctive and an infinitival complement. In effect, the stuff that distinguishes the two sentences is not part of their numerations, any more than pronouns and *self*s are. If we allow this, then the obviation effect witnessed in (50) can be traced to the availability of a superior competing derivation in (53). Note, again, that such an account does not block a bound pronoun from appearing in some position because a reflexive is available.

[36] This is not the place to consider this approach in detail. However, it is worth pointing out that the ECP based approach to the absence of subject reflexives in subjunctive and finite embedded clauses is not without its own problems. The main difficulty stems from the fact that it is *nominative* reflexives that are barred, not subject reflexives in general. We find quirky case subjects of embedded subjunctives in Icelandic. It is unclear why the ECP should not block these just as it would nominatively case marked reflexives.

The comparison is more abstract: derivations that converge by movement alone are superior to those that compete via use of pronouns.[37]

There are two suggestive bits of evidence in favor of this sort of approach. It predicts that the obviation effects witnessed in the subjunctive complement in (51) should disappear if there is no infinitival control complement available. We can find both intra language and inter language evidence for this.

In Spanish *dudar* (doubt) does not take infinitival complements, as in (55). In this case, the subjunctive with a bound pronoun is acceptable, as in (56).

(55) *Juan duda [PRO ir al cine hoy]
Juan doubts go-infin to the movies today
"Juan doubts that he will go to the movies today"

(56) Juan_1 duda [que $\text{pro}_{1/2}$ vaya al cine hoy]
Juan doubts that pro go-subj to the movies today
"Juan doubts that he will go to the movies today"

If the availability of a control complement is what blocks the availability of the bound pronoun interpretation in subjunctives then the *absence* of the control option should allow the binding to take place. The examples in (55) and (56) support this reasoning.

What is attested intra-linguistically in Spanish can also be found cross linguistically. Thus, it is well known that the subjunctive pattern manifest in most of Romance, fails to hold universally. Rumanian and Salentino (both Romance languages) as well as Greek allow the binding of a (null) pronominal subject in a subjunctive complement. The sentences in (57) illustrate this with Rumanian and Salentino examples.

(57) a. Maria_1 vrea [ea/$\text{ec}_{1/2}$ sa ra mina]
Maria wants she/pro subj stay
"Maria wants to stay/someone else to stay"

b. LuKarlu_1 ole ku [$\text{pro}_{1/2}$ bbene krai]
The Karl wants C-subj pro come-3sg-subj tomorrow
"Karl wants himself/him to come tomorrow"

Interestingly, neither Rumanian, Salentino nor Greek have infinitival control complements. As such, if pronominal obviation in subjunctives as due to competition with a control alternative derivation, then if infinitival control

[37] Spanish doe not license an overt reflexive in sentences like (53) as there is no ECM case marking across infinitives.

structures don't obtain, we would expect the obviation effects to disappear as well, as they appear to do.

4.3.4 *Switch Reference Languages* Let's consider one last case where the indicated logic might apply. In Switch Reference (SR) Languages, verbs in "dependent" sentences (i.e., adjuncts or embedded clauses) can be marked as either having the same subject as the embedding clause- SS marking, or as having a different subject from the embedding clause –DS marking. This marking typically comes on the verb of the dependent clause and is "similar to the familiar category of verbal concord" (Haiman and Munro 1983). In fact, as noted in a review of SR Haiman and Munro (1983) note that in many languages, SR marking looks like the typical subject verb agreement markings. More specifically: DS marking is often just the subject-predicate agreement morphology while SS marking is either Ø or an invariable fixed affix. This pattern is found in Kate and Fore as well as Lenakel and Turkish. So, a typical SR pattern is the one in (58).

(58) a. DS = V+ ϕ features (including person)
b. SS= V + Ø

As Haiman and Munro note, this pattern can vary. The SR morphemes are not limited to those found in agreement configurations. However, one thing never seems to occur: we never find that the SS marking is morphologically *more* complex than is the marking for DS. So, we find cases, as noted above, where DS is clearly more morphologically loaded than is SS and we find cases where the amount of morphology is not easy to compare but we never find cases where the SS markings are clearly more morphologically involved than is the marking for DS. This is exactly what we would expect if SS were actually a reflex of movement (i.e. control) and DS is an obviation process that results from binding being blocked by the availability of SS. If SS is due to movement then we would expect that the clauses from which the movement occurs would be morphologically "reduced," just like infinitives are reduced forms of clauses. Given the intimate connection between movement and feature checking, we would expect (and we find) that SS (i.e. movement) is tied to weak agreement and non-movement (DS) correlates with strong agreement. Once one assumes that agreement does not enter into comparing derivations, then SS and DS will compete when they share numerations and that the former will trump the latter. This results in obviation for DS structures.

This proposal is very similar to the one proposed for SR in Hermon (1984). It argues that SR in Quechua is essentially obligatory control (in SS constructions) coupled with something like an Avoid Pronoun Prinicple (in DS

structures).[38] We also take SS as an instance of control as, but now due to movement. Obviation is the result of blocking by the OC structure and is just another instance of Move over pronominalize. This approach, just like Hermon's which it closely follows, reduces SR to a combination of control plus obviation understood as economy. Let's illustrate the logic with some Quechua examples.

Hermon (1984) analyses Imbabura Quechua, a language where the DS and SS markings are not clearly distinguished with respect to morphological complexity. However, Hermon offers (to my mind) convincing evidence that shows that the SS subjects are in non-agreeing clauses while DS subjects live in agreeing clauses. Hermon (1984) uses several kinds of evidence to show this.

First, Hermon discusses the differences between "non-finites" subjunctives (i.e. *ngapaj*) that allow PRO but not overt lexical DPs and "finite" subjunctives (i.e. *chun*) that show the converse. With *munana* (want), we get subjunctive agreeing and non agreeing complements. One can get control with infinitive subjunctives (79:21).

(59) nuka-ka [PRO miku-ngapaj] muna-ni
I nom-top *eat-inf-subj* *want-1*

One cannot get PRO in "finite" *chun* clause as (80:22)

(60) *nuka-ka [PRO miku-chun] muna-ni
I *want to eat-finite-subj*

One cannot get Lexical Subjects with the infinitival *ngapaj* but can with the finite *chun* (80:23,24).

(61) *nuka-ka [Juan miku-ngapaj] muna-ni
I *Juan eat (infin)-subj* *want*

(62) nuka-ka [Juan miku-chun] muna-ni
I *Juan* *eat-finite* *want*
"I want that John eat'

The same facts are observed in adverbial clauses. The verbs in these clauses also come in non-finite and finite form but (*shpa* vs. *pti*). However, in the adverbial paradigm, there exists evidence from related Quechua languages that these forms are distinguished by agreement. In Ancash Quechua adverbial clauses, for

[38] Hermon (1984) uses a version proposed in Bouchard (1983),

example, we find no agreement markers for SS but have obligatory agreement in DS cases (107:70).

(63) Lima-chaw ka-{shpa/*shpa-a} rika-shqa-yki
Lima-in be SS DS -1 see-fut-1-2
'When I am in Lima, I will see you'

(64) Lima-chaw ka-{*pti/pti-i} rika-ma-rqu-nki
Lima-in be SS DS -1 see-1 OM-past-2
'When I was in Lima, you saw me'

Ancash Quechua *-pti* are cognate to Imbabura Quechua *–jpi*.

Consider now obviation effects. Subjunctive complements (*-chun*) and adverbial clauses (*-ipi*) with an overt pronoun or *pro* in subject position display a disjoint reference effect. In finite indicative complements there are no restrictions on coreference with a matrix subject (108:71).

(65) $Juan_1$ kri –n $[pro_1/pay_1$ llugshi-na-ta]
J believe-3 he leave-nom-acc
'J believes that he will leave'

This is not possible with subjunctives (108:72).

(66) *$Juan_1$ muna-n [$[pro_1/pay_1$ miku-chun]
J want-3 [he eat]

(67) *Juan-ga_1 $[pro_1/pay_1$ trabaja-ju-jpi-mi] puglla-n
J-nom he work-prog play-3
'While he is working,Juan plays'

The example in (65) shows no obviation effect because it is finite. Only cases where the finite subjunctive has a non-finite alternative form and so competes with it, will obviation effects surface. The characteristic feature of SR languages is that dependent clauses always come in SS/DS pairs that differ only in whether the embedded inflection is non-finite (and so permits movement) or is finite (and so supports lexical subjects). If this difference is not sufficient to block comparison, then the obviation effect noted in the finite forms can be seen as yet

another instance of the competition proposed to handle similar effects in earlier sections.[39]

5. Conclusion

This paper has tried to motivate an alternative approach to principle B effects. The impetus for this was the observation that principle A should be discarded if the widely held assumption that reflexives move is adopted. If, however, principle A is removed from the binding theory then B should be as well if we are to explain the well known complementary distribution between reflexives and pronouns. In other words, given certain currently plausible assumptions, we need to rethink how binding works within UG.

The alternative investigated here returns to the earliest approaches to these phenomena by Lees and Klima recast in a more contemporary setting; obviation as an effect of economy of derivation. We noted that an economy approach to the complementarity of reflexives and bound pronouns has some appeal in a minimalist setting, most particularly in those minimalist concretions that evaluate alternative derivations against some economy metric. The particular proposal was that derivations via movement were superior to those that required pronoun use. In this setting, I argued that the following ideas fit together rather neatly.

If principle B effects are actually the effects of derivational economy then it must be the case that sentences like (68a,b) are comparable:

(68) a. $John_1$ saw $himself_1$
b. *$John_1$ saw him_1

1. To be comparable, they must have a common numeration.
2. Thus, pronouns and reflexives are not part of a numeration.
3. But, if bound pronouns and reflexives are not elements in numerations, then, by the Inclusiveness Condition, they can have no interpretive features as otherwise they could not be added to a derivation.
4. Thus, their ϕ-features cannot be interpretable.

We saw evidence that this was so in the first section of the paper. The converse is equally plausible.

5. If the features of E are not interpretable then E is not lexical.
6. If the numeration is composed exclusively of lexical elements then such expressions are not part of a numeration.

[39] Note, that there are SR effects in both adjuncts and complements supports the view that movement can take place out of adjuncts. See (Hornstein 2001) for discussion.

7. An element not part of a numeration is not counted for purposes of derivational economy.
8. Thus, the sentences in (68) have a common numeration and so *if* derivational economy holds, their derivations should be subject to it.

All we added to this reasoning was the suggestion that what makes for economy in such cases is Movement. In particular, IF a derivation can converge without the use of pronouns, it must so converge. In short, Move trumps Pronominalize. This idea is conceptually motivated once one assumes that reflexives are formed by movement. It is empirically supported by the observation that obligatory control also functions to block pronominal binding.

Two more points before ending: First, I started this paper by noting that the GB approach to pronouns had two problems; the status of B once movement replaced A *and* the fact that GB had nothing general to say about pronouns, restricting its interest to the potentially bindable ones. This last point was related to the observation that pronouns are a motley group without a common core of properties. The present account treats pronouns as a sort of patch on the derivational system. It is what the system uses when movement fails. The fact that movement can fail in many ways suggests that we might expect many kinds of pronouns. So, pronouns can be used to "save" islands (i.e. intrusive pronouns), they can be used for binding when movement does not suffice (i.e. we get bound pronouns), they can be introduced to allow convergence when there is nothing else in the numeration (i.e. expletives). These all function differently as they all patch up different derivational difficulties. Perhaps one interesting feature of the present proposal is that it rationalizes what seems to be a general feature of pronouns, viz. that they form a varied group.

Second, the above remarks are intended to be suggestive, not definitive. As noted at the outset, I have not provided a theory of pronouns. At best, what has been sketched are some general features that such a theory might have. This essay is more in the nature of a prolegomenon to a future theory than a concrete proposal. If roughly correct, lots still remains to be done to technically implement and refine the main ideas presented. But this, as they say, is work for the future.

Appendix

A Note on One Possible Implementation

The old Lees-Klima account had one major empirical flaw. It gave the wrong semantics for examples like (69).

(69) a. Everyone admires himself
b. No one believes that he is tall

The underlying form of these sentences, the one that "reveals" its semantic import, is in (70).

(70) a. Everyone admires everyone
b. No one believes that no one is tall

It is clear that the sentences in (70) are not even near paraphrases of those in (68). Once one considers cases where reflexives have quantificational antecedents, the Lees-Klima approach looks semantically ill-conceived.

Interestingly, this problem disappears given current minimalist technology. Let's make the following rather standard technical assumptions: Move is Copy plus Merge and numerations contain the lexical items used in deriving a sentence. Let's add to this the following implementation of the Lees-Klima idea. Their rules are provided in (71) and (72).

(71) Reflexivization:
X-NP_1- Y- NP_2 - Z → X- NP_1-Y- pronoun+self-Z
(Where NP_1=NP_2, are in the same simplex sentence and pronoun has the φ-features of NP_2.)

(72) Pronominalization:
X-NP_1-Y-NP_2-Z → X-NP_1-Y- pronoun-Z
(Where NP_1=NP_2 and pronoun has the φ-features of NP_2.)

What does *NP1=NP2* mean? If we assume that NP_1 and NP_2 must be *copies*, we finesse the problem noted above. Consider a derivation of (69a). It is derived from the numeration (73a) with the indicated movements (copies of the same element are in bold).[40]

(73) a. {everyone, admires}
b. [**everyone** [admires **everyone**]]

Note here *one* expression has moved twice. There are thus three copies of the same element in the numeration. If we apply the reflexive rule (and assume some housekeeping conventions such as only case marked copies can be phonologically interpreted) then if (71a) applies to (73b) we derive (74).

(74) Everyone admires himself

[40] This assumes a theory roughly along the lines of Hornstein (2001) and Lidz and Idsardi (1997). The derivtion abstracts away from various movements that only complicate the discussion.

Note, in (73b) *everyone* has two theta roles and the reflexive plays no role in the interpretation of the sentence. Carrying two roles is what gives one the reflexive reading. This contrasts with the derivation of (70a) which stems from a numeration like (75a) and yields a derivation like (75b).

(75) a. {everyone, everyone, admires}
b. [everyone [admires everyone]]

There are no copies in (75b). Both instances of *everyone* are drawn from the numeration which consists of *two* selections of *everyone* from the lexicon. Each of these must be interpreted for convergence and each gets one theta role. Thus, the derivations of (69a) and (70a) are entirely different and given standard conventions concerning copies and interpretation there is no reason to assume that the former should mean what the latter does. The same goes for the derivations of (69b) and (70b), which I leave as an exercise for the reader.

So, once one makes use of the copy theory, it is possible to adopt the old Lees-Klima rules as essentially a phonological readjustment process. I am not suggesting that this is the *correct* way to implement their ideas, only that it is possible and that the main objection no longer holds. Just for the record, I believe that so treating bound pronouns is likely incorrect as it requires assuming that such pronouns are residues of movement. However, they show almost no hallmarks of movement.[41] However, this is not the place to get into these interesting technical matters. I leave them for another time and place.

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[41] See Hornstein 2001 for discussion. See Kayne 2003 for a movement approach to pronouns.

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