

## Some Derivational Binding Effects

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A question of crucial concern to syntactic theory in recent years has been the level at which the generally accepted Binding principles, given in (1), apply.

- (1) **Binding Principles** (standard version)
- a. Anaphors must be locally bound
  - b. Pronouns must be locally free
  - c. R-expressions must be free

local domain: TP (or DP) with (accessible) subject

bound: c-commanded by something co-indexed in an A-position

Two approaches have been in favor recently, namely a *representational* approach whereby (all) Binding Principles apply at LF (in conjunction with a theory of movement allowing reconstruction or retention of higher or lower copies) favored by Pica 1991, Lebeaux 1983, Cole & Sung 1994, Hestvik 1994, Baltin 2003, Fox & Nissenbaum 2004, a.o. and a *derivational* approach, whereby Binding principles apply as their conditions are met during the course of the derivation, and not (uniquely) at LF, as argued for in Belletti & Rizzi 1988, Abe 1993, Kitahara 1997, Epstein et al 1998, Lasnik 1999, Grewendorf & Sabel 1999, Kayne 2002, Zwart 2002, Epstein & Seely 2002, 2005, Saito 2003, 2005, Sabel 2006, a.o. The possible approaches are summarized in (2):

- (2) a. **Representational binding:** Binding Principles apply only at particular *levels of representation* (SS or LF in older theories, LF only in Minimalism)
- b. **Derivational binding:** Binding Principles apply as the derivation proceeds – and can apply at (any of) various intermediate stages, not only at completed *levels* such as SS or LF.

In Part 1 of this article, I provide more evidence for the derivational approach to Principle A. In Part II, I then turn to the more difficult issue of Principle B, showing, based on Slavic data, that Principle B must also be derivational in some sense, although not in the way that is assumed by those who have recently claimed it to be derivational (Sabel 2006).

### 1. Evidence for a derivational Principle A

1.1 A-movement cases. The original proposal for a derivational approach to anaphor binding goes back at least to Belletti & Rizzi 1988, where it was argued that Principle A applies *before* some sort of raising destroys the relevant c-command conditions on anaphora. Examples from psych-verbs provided the best evidence that such an approach was warranted:

- (3)
- a. **Each other's** mother seems to please **the two boys**.
  - b. [Pictures of **himself**] worry **John**.
  - c. [The stories about **themselves**] were told \_\_\_ by **the women**

In each instance in (3), c-command relations between the antecedent and the anaphor obtain only before raising, and because the raising in question is A-movement, generally known not to reconstruct (Lasnik 1999), binding must occur before movement in such cases. Similar examples abound in Italian and other languages, as shown by Belletti & Rizzi (1988, 1991).

A well-known contrast between Raising and Control, exemplified in (4), is thus accounted for without further stipulation:

- (4) a. [Friends of **each other**<sub>i</sub>] seemed [ \_\_\_ to amuse e **the men**<sub>i</sub>].  
b. \*[Friends of **each other**<sub>i</sub>] wanted [PRO to amuse **the men**<sub>i</sub>].

In the Raising example (4)a, anaphor binding was possible before 2 instances of A-movement (one in the lower clause, one to the upper clause), whereas in the Control structure (4)b there is no stage of the derivation when *the men* c-commands *each other*. (Note that this also constitutes an argument against a movement account of control such as Hornstein 1999 unless further stipulations are added.)

Of course, the data seen thus far could simply show that Principle A applies before movement, rather than derivationally (perhaps at DS in theories that maintain such a level of representational). However, other instances of A-movement show that binding can occur *after* such movement as well:

- (5) a. **The men** seem to **each other** [ \_\_\_ to be nice].  
b. **The women** would be pleased \_\_\_ by these pictures of **themselves**

Versions of a derivational approach that would account for these preliminary data are given in (6):

- (6) Versions of derivational anaphor binding:  
a. Principle A of the Binding Theory can be satisfied at any point in the derivation (Grewendorf & Sabel 1999, p. 13)  
b. Information on the antecedent/binder of an anaphoric element is sent to semantics at any point of the derivation. (Saito 2005, p. 16)

Data from Russian, a free word order language, is well handled by a derivational approach as well. It has recently been argued (Preslar 1998, Bailyn 2004) that certain local reordering processes in Russian are A-movement, and as such should be able to feed successful binding configurations. A partial list of such constructions is given in (7) followed by relevant examples. In each case, only the (a) sentences allow anaphor binding.

- (7) Possible subject-oriented anaphor binders in Russian: (Bailyn 2004)  
a. Nominative subjects (8)  
b. Possessive PP (*u* + Poss) (9)  
c. Accusative 'subjects' (10)  
d. Dative experiencers (11)

- (8) a. [**Petrovye**<sub>i</sub>] ljubjat [svoix<sub>i</sub> detej] (Russian) SVO  
the Petrovs<sub>NOM</sub> love [self's children]<sub>ACC</sub>  
"The Petrovs love their (own) children."

- b. ??? [Svoix<sub>i</sub> detej] ljubjat [Petrovye<sub>i</sub>]
- (9) a. [U Petrovyx<sub>i</sub>] byla [svoja<sub>i</sub> komnata] PP-V-S  
 at the Petrovs was [self's room]<sub>NOM</sub>  
 "The Petrovs had their own room."
- b. ???[Svoja<sub>i</sub> komnata] byla [u Petrovyx<sub>i</sub>]
- (10) a. Menja<sub>i</sub> tošnit [ot svoej<sub>i</sub> raboty] O-V-PP  
 me<sub>ACC</sub> nauseates from self's work  
 "I am sickened by my work."
- b. ???[Ot svoej<sub>i</sub> raboty] tošnit menja<sub>i</sub>
- (11) a. ??Ivanu nravitsja [svoja rabota] Dat-V-S  
 Ivan<sub>DAT</sub> likes [self's work]<sub>NOM</sub>  
 "Ivan likes his work."
- b. \*Svoja rabota nravitsja Ivanu
- (12) a. Ivanu<sub>i</sub> nužen vrač<sub>k</sub> v svoem<sub>i/\*k</sub> dome Dat-A-S-PP  
 Ivan<sub>DAT</sub> necessary doctor<sub>NOM</sub> in self's house  
 "Ivan needs a doctor in his house."
- b. ???V svoem<sub>i</sub> dome vrač nužen Ivanu<sub>i</sub>

In (9)-(12), Russian "inversion" triggers successful anaphor binding whereas non-moved instances do not allow it.<sup>1</sup>

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<sup>1</sup>It is quite interesting to note that a closely related language, Serbo-Croatian, does not allow nearly as many derived binders as Russian, even in superficially quite similar constructions:

- (i) a. \*[Kod Jovana<sub>i</sub>] je bila svoja<sub>i</sub> kuća (SC) PP-V-S  
 at Jovan aux was [self's house]<sub>NOM</sub> (cf Russian (9)a)  
 "Jovan had my own house."
- b. \*Jovanu se svidja svoj posao Dat-V-S  
 me<sub>DAT</sub> refl like [self's work]<sub>NOM</sub> (cf Russian (11)a)  
 "Jovan likes his work."
- c. \*Jovanu<sub>i</sub> treba doktor<sub>k</sub> u svojoj<sub>i</sub> kući Dat-V-S-PP  
 Jovan<sub>DAT</sub> necessary doctor<sub>NOM</sub> in self's house (cf Russian (12)a)  
 "Jovan needs a doctor in his house." (≠ *Jovan*; *doktor* ok for some speakers)

Although exact characterization of the difference between (i) and the Russian examples above lies outside the scope of this paper, the generalized Inversion analysis of Russian in Bailyn 2004 gives us a possible approach to the problem, as developed in Bailyn 2007: for independent reasons, Russian allows many instances of local A-movement of non-Nominative arguments, whereas SC does not. Thus in the examples in (i), the fronted element in SC is in A'-position and thus we do not expect binding to obtain. The derivational approach can thus be maintained for both languages, and the micro-variation reduces to an independently motivated difference between the 2 languages, as is desirable. See Bailyn 2007 for discussion.

A similar patterns exists in another language with local A-movement of non-Nominative elements, such as Japanese (Saito 2003):

- (13) a. **Karera-ga** [ [**otagai-no** sensei]-o hihansita ] (Japanese)  
 they<sub>NOM</sub> [each other's teacher]<sub>ACC</sub> criticized SOV  
 "They criticized each other's teachers"
- b. \* [**Otagai-no** sensei]-ga [ **karera-o** hihansita ] SOV  
 [each other's teacher]<sub>NOM</sub> them<sub>ACC</sub> criticized  
 \*"Each other's teachers criticized them."
- (14) a. [**Otagai-no** sensei]-o **karera-ga** [ \_\_\_ hihansita ] OSV  
 [each other's teacher]<sub>ACC</sub> they<sub>NOM</sub> criticized  
 "They criticized each other's teachers"
- b. ?**Karera-o** [**otagai-no** sensei]-ga [ \_\_\_ hihansita ] OSV  
 them<sub>ACC</sub> [each other's teacher]<sub>NOM</sub> criticized  
 "Them, each other's teachers criticized."

If Principle A were an SS or LF phenomenon, the contrast in (13) would be the same as the contrast in (14). Derivational binding in (14)b saves (13)b. There are similar effects found in the Russian VP internal domain and elsewhere, see Bailyn 2007 for details.

Notice, however, that the facts in (3)-(14) do not in fact *force* a derivational approach, if we allow for reconstruction of A-chains (Fox & Nissenbaum 2004 and contra Lasnik 1999). Under Reconstruction approaches, Principle A applies at LF with only one of the copies (chain links) being retained at LF. Thus in the Belletti & Rizzi cases the lower copy of the Theme argument is retained, and the surface subject position is irrelevant at LF. In the Russian and Japanese scrambling cases, the higher copy is retained and the surface configuration and the LF configurations coincide for binding purposes. Thus given the possibility of A-chain reconstruction, the facts do not entail a derivational approach. (Such approaches would, of course, have to deal with Lasnik 1999's evidence against A-reconstruction to be made viable.) However, in the next section we will see that A'-movement also feeds surface binding relations, even in cases where it has been independently established that such A'-movement undergoes obligatory reconstruction.

1.2 A'-derived cases. It is well-known that a moved WH phrase containing an anaphor can be bound in any of the clauses where it passes through SpecC at some point in the derivation. This is shown in (15):

- 15) a. \*John<sub>i</sub> knows that Mary showed [the new pictures of himself<sub>i</sub>] to Susan.  
 b. John<sub>i</sub> wonders [which pictures of himself<sub>i</sub>] Mary showed \_\_\_ to Susan.

In (15)a, *John* and *himself* are in different domains. In (15)b after WH-movement, they are in the same domain, and binding by the main clause subject is possible. On the assumption that WH-movement reconstructs, (15)b

is evidence for a derivational approach to Principle A. A similar effect is found in Japanese with long-distance scrambling. This is shown in (16):

- 16) a. Taroo-ga<sub>i</sub> [CP Hanako-ga<sub>j</sub> [CP Ziroo-ga<sub>k</sub> zibunzisin-o<sub>\*i/\*j/k</sub>  
 Taroo<sub>NOM</sub> Hanako<sub>NOM</sub> Ziroo<sub>NOM</sub> self<sub>ACC</sub>  
 hihansita to] itta to] omotteiru (koto)  
 criticized that said that think fact

“Taroo<sub>i</sub> thinks [that Hanako<sub>j</sub> said [that Ziroo<sub>k</sub> criticized self<sub>\*i/\*j/k</sub>]]”  
 (local binding, by *Ziroo*, only)

- b. Taroo-ga<sub>i</sub> [CP zibunzisin-o<sub>i/j/k</sub> Hanako-ga<sub>j</sub> [CP Ziroo-ga<sub>k</sub> t  
 Taroo<sub>NOM</sub> self<sub>ACC</sub> Hanako<sub>NOM</sub> Ziroo<sub>NOM</sub>  
 hihansita to] itta to] omotteiru (koto)  
 criticized that said that think fact

“Taroo<sub>i</sub> thinks [that self<sub>i/j/k</sub> Hanako<sub>j</sub> said [that Ziroo<sub>k</sub> criticized t]]”  
 (higher subjects can bind when the anaphor undergoes LD Scrambling)

(16)b shows, even more strongly than the English WH case above, that we *must* have derivational binding. The reason for this is that it has been shown that in Japanese, LD-scrambling undergoes *Radical Reconstruction* reconstruct (Saito 1992, 2005, Bošković & Takahashi 1998, a.o).

Interestingly, it has recently been observed (Antonenko 2006) that Russian long-distance scrambling shows a similar pattern in those cases where it is possible. This is shown in (17):

- 17) a. Ty<sub>i</sub> xočeš, čtoby Saša<sub>k</sub> našel [svoego<sub>\*i/k</sub> druga]?  
 You<sub>i</sub> want that Sasha<sub>k</sub> find<sub>SUBJ</sub> self<sub>s\*/i/k</sub> friend  
 ‘Do you want that Sasha find his friend?’  
 b. Ty<sub>i</sub> [svoego<sub>?i/k</sub> druga] xočeš, čtoby Saša<sub>k</sub> našel t ?  
 You<sub>i</sub> self<sub>s\*/i/k</sub> friend want that Sasha<sub>k</sub> find<sub>SUBJ</sub>  
 ‘Do you want that Sasha find his/your friend?’

(17)b shows that Russian LD-scrambling also feeds anaphor binding. This fact alone does not argue for derivationality. Unless we can establish that the general assumption, that A'-movement reconstructs, indeed holds for Russian. This is shown in (18):

- (18) a. \* Ty<sub>i</sub> xočeš, čtoby ona<sub>k</sub> našla Mariju<sub>k</sub>?  
 You<sub>i</sub> want that she<sub>k</sub> find<sub>SUBJ</sub> Maria<sub>ACC</sub>  
 \* ‘Do you want **her** to find **Maria**?’ (bad if *her* = *Marija*)  
 b. \* Ty<sub>i</sub> Mariju<sub>k</sub> xočeš, čtoby ona<sub>k</sub> našla t ?  
 You<sub>i</sub> Maria<sub>ACC</sub> want that she<sub>k</sub> find<sub>SUBJ</sub>  
 \* ‘**Maria**, do you want **her** to find?’ (bad if *her* = *Marija*)

(18) shows Russian LD-scrambling reconstructs. In (18)a, we have a Principle C violation. (18)b, where the bound R-expression has moved out of the c-

command domain of the pronoun, is also ungrammatical. If long distance scrambling did not reconstruct, there would be no Principle C violation in (18)b. Thus long distance scrambling reconstructs.<sup>2</sup>

We now can complete the argument for derivationality of Principle A: if long distance scrambling reconstructs, then only a derivational approach to Principle A can explain the contrast in (17). In (17)b, surface movement feeds Principle A satisfaction in the course of the derivation. The phrase containing the anaphor then reconstructs at LF. On a non-derivational approach we would expect no more contrast in (17) than we find in (18).<sup>3</sup> To summarize, both the A-movement and A'-movement cases we have seen implicate a derivational approach to Principle A. I now turn to Principle B.

## 2. What about Principle B? Is it derivational?

### 2.1 Principle B is not an LF Principle

Inversion cases provide a useful testing ground for the derivationality of Principle B. If Inversion can be independently shown to be A-movement, as discussed above, then its interaction with Principle B effects should be quite telling. Let us assume that Inversion, as A-movement, does not reconstruct (see Bailyn 2004 for evidence that Inversion is A-movement). Consider the following paradigm:

- (19) a. \***Ivan** ljubiti [ego ženu] (SVO)  
           Ivan<sub>NOM</sub> loves his wife<sub>ACC</sub>  
           ‘Ivan loves his wife.’
- b. ?[**Ego žena**] ljubiti **Ivana** (SVO)  
           his wife<sub>NOM</sub> loves Ivan<sub>ACC</sub>  
           ‘His wife loves Ivan.’

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<sup>2</sup> It is generally agreed that Principle C applies at LF (Saito 2003) (although see Epstein et al 1998 for counter-arguments).

<sup>3</sup> It is again interesting to note that SC differs again from Russian to a degree. There is some derivational improvement with Principle A for some speakers (i)b, but none for Principle C (ii)b.

- (i) a. Ivana<sub>i</sub> je naredila **Jovanu**<sub>k</sub> da nacrtá [svoju<sub>\*i/k</sub> prijateljicu]  
       Ivana<sub>i</sub> aux ordered Jovan<sub>k</sub> that draw [self<sup>?</sup>s<sub>\*i/k</sub> friend]  
       ‘Ivana ordered Jovan to draw his (\*her) friend.’
- b. [Svoju<sub>??i/k</sub> prijateljicu] je Ivana<sub>i</sub> naredila **Jovanu**<sub>k</sub> da nacrtá  
       [self<sup>?</sup>s<sub>\*i/k</sub> friend] aux Ivana<sub>i</sub> ordered Jovan<sub>k</sub> that draw  
       ‘His (??her) friend Ivana ordered Jovan to draw.’
- (ii) a. \* Ivana<sub>i</sub> **mu**<sub>k</sub> je naredila da (on) nacrtá **Jovana**<sub>k</sub>  
       Ivana<sub>i</sub> him<sub>k</sub> aux ordered that draw Jovan<sub>k</sub>  
       \* ‘Ivana ordered **him** to draw **Jovan**.’ (bad if *him* = *Jovan*)
- b. \* **Jovana**<sub>k</sub> Ivana<sub>i</sub> **mu**<sub>k</sub> je naredila da nacrtá \_\_\_\_  
       Jovan<sub>k</sub> Ivana<sub>i</sub> him<sub>k</sub> aux ordered that draw \_\_\_\_  
       \* ‘**Jovan**, Ivana ordered **him** to draw.’ (bad if *him* = *Jovan*)

- (20) a. [**Ego** ženu] ljubiti **Ivan** (Inversion: OVS)  
 his wife<sub>ACC</sub> loves Ivan<sub>NOM</sub>  
 ‘His wife is loved by Ivan.’
- b. **Ivana** ljubiti [**ego** žena] (Inversion: OVS)  
 Ivan<sub>ACC</sub> loves his wife<sub>NOM</sub>  
 ‘Ivan is loved by his wife.’

(19)a shows a standard Principle B violation – *Ivan* binds *ego* in a local domain. In (19)b, we see an SVO configuration that does not violate Principle B (there is no Binding of *ego* by *Ivan*).<sup>4</sup> The difference is as expected. When we look at Inversion in both instances, we see that only one of the sentences changes its status – namely the (a) sentence. (20)a is the Inversion version of (19)a – the Binding violation is improved by Inversion, which is as expected on the assumption that Inversion is A-movement. However, the (b) sentence does not get worse, despite the A-movement involved. Thus we have an argument against a representational approach to Principle B – assuming that Inversion is A-movement, and that A-movement does not reconstruct (or that the higher copy is retained for interpretive purposes, as is commonly assumed), then we have an argument against an LF version of Principle B – if the Inversion structure bleeds a violation in (a) it should be expected to feed a violation in (b), contrary to fact. However, if Principle B is in some sense derivational, then we may have an explanation for this asymmetrical paradigm, which is reminiscent of the asymmetrical paradigms of Principle A that were also explained by a derivational approach to principle A is Part 1 of this article. I next turn to the issue of the exact nature of the derivationality involved in Principle B.

## 2.2 What kind of a derivational Principle B do we need?

Principle B (and C) are of a very different nature from that of Principle A. The former states *what cannot be the case* with a certain binding relationship; the latter states *what must be true* to have successful binding. Thus with a *what must be true* principle like Principle A, it is fairly clear how to test the difference between Representational and Derivational approaches, (in the manner applied here in Part 1) – by seeing if the condition holds at the relevant levels of representation or only in the course of the derivation. With a

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<sup>4</sup> The mild degradation associated with (19) is an effect of Backwards Pronominalization (BP), which renders any sentence with a pronoun preceding its antecedent mildly ungrammatical in Russian., See Kazanina (2005), Avrutin & Reuland & (2004) and Antoniuk (2007) for discussion. The effect is felt quite strongly by some speakers and not at all by others but is alleviated by further embedding of the pronoun, as in (iii), where coreference is basically fine, as expected.

(iii) Druz'ja ego ženy ljubjat Ivana  
 friends his wife love Ivana  
 ‘Friends of his wife love Ivan.’

I abstract away from the BP effect in what follows, though see Antoniuk (2007) for a possible analysis.

*cannot be the case* principle, such as Principle B, it is not immediately clear how to define derivationality. A Representational Approach states a level at which X *cannot be the case*. But a derivational approach of a negative principle can be stated in two very different ways -- depending on whether it is taken to rule things in (a derivational well-formedness rule) or to rule things out (a derivational filter): (i) FIL: something cannot be the case at *any* point during the derivation vs. (ii) WFR: something must not be the case at *some* point during the derivation.

(21) Versions of Principle B Derivationality:

- a. Principle B filters things **out**. If at any point in the derivation a pronoun is locally bound, the derivation is cancelled (the “be free everywhere” version) (Sabel 2006)
- b. Principle B allows things **in**. If at any point in the derivation a pronoun is locally free, then all is well (the “be free somewhere” version)

Let us look more closely at the kind of work Principle B usually does in the grammar of Russian. First, consider the fact that Russian pronouns can be bound variables so long as Principle B is not violated, in which case a reflexive pronoun is used as a bound variable, satisfying Principle A as well. This is shown in (22):

- (22) a. \*[**Každaja devočka**] ljubit [ee sobaku] (SVO)  
 [every girl]<sub>NOM</sub> loves [her dog]<sub>ACC</sub>  
 ‘Every girl loves her dog.’
- b. **Každyj student**<sub>i</sub> znaet, čto [**ego**<sub>i</sub> druž’ja] uexali.  
 every student knows that [his friends] left  
 ‘Every student knows that her friends left.’
- c. [**Každaja devočka**] ljubit [**svoju** sobaku]  
 [every girl]<sub>NOM</sub> loves [self’s dog]<sub>ACC</sub>  
 ‘Every girl loves her dog.’

Next, it is important to show that Inversion does not involve A’-movement. This can be shown using Weak Crossover (WCO). First, we need to show that WCO exists in Russian. This is shown in (23)-(24) (see also Bailyn 2004, Antoniuk 2006):

- (23) a. \*[**Ee**<sub>i</sub> sobaka] ljubit [**každuju devočku**]<sub>i</sub> (SVO)  
 [her dog]<sub>NOM</sub> loves [every girl]<sub>ACC</sub>  
 \*‘Her dog loves every girl.’
- b. \* **Kogo** [**ego**<sub>i</sub> sobaka] ljubit \_\_\_ ?  
 Who [his dog]<sub>NOM</sub> loves  
 \*‘Who does his dog love?’
- (24) a. ???[**Každuju devočku**]<sub>i</sub> [**ee**<sub>i</sub> sobaka] ljubit (OSV)  
 [every girl]<sub>ACC</sub> [her dog]<sub>NOM</sub> loves  
 ???‘Every girl, her dog loves.’

- b. [Každuju devočku<sub>i</sub>] ljubiti [ee<sub>i</sub> sobaka] (OVS)  
 [every girl]<sub>ACC</sub> loves [her dog]<sub>NOM</sub>  
 ‘Every girl is loved by her dog.’

(23) shows that covert QR (see Antoniuk 2006 for multiple arguments in favor of covert QR in Russian) triggers WCO just as overt WH-movement does. (See also fn 4 for discussion of the fact that the problem with (23)a is not related to Backwards Pronominalization.) Furthermore, (24)a shows that overt A'-scrambling of the quantifier phrase also triggers the violation (as is expected with WCO). On the other hand, the Inversion (OVS) construction does not trigger the WCO effect (as shown in (24)b) the contrast between the two is predicted if it is true that they involve quite radically different kind of movement processes. Finally, (25) shows that the WCO effect with WH-movement is also ameliorated by the possibility of Inversion (note the OVS word order):

- (25) **Kogo** ljubiti [ego sobaka] \_\_ ?  
 who<sub>ACC</sub> loves [his dog]<sub>NOM</sub>  
 ‘Who is loved by his dog?’

Thus we have good evidence that the movement involved in OVS Inversion sentences is not A'-movement. This is consistent with the claim that Inversion is in fact A-movement into the SpecTP position. However, this in turn, leads us back to the central question of this article -- why is it that this A-movement does not then trigger a principle B violation in cases such as (20)b in the same way as it is violated in (19)a (repeated here as (26)a-b):

- (26) a. \***Ivan** ljubiti [ego ženu] (SVO)  
 Ivan<sub>NOM</sub> loves his wife<sub>ACC</sub>  
 ‘Ivan loves his wife.’
- b. **Ivana** ljubiti [ego žena] (Inversion: OVS)  
 Ivan<sub>ACC</sub> loves his wife<sub>NOM</sub>  
 ‘Ivan is loved by his wife.’

There are two possibilities for the distinction between the two sentences. One possibility is that the position of the R-expression *Ivan* is different for Nominative subjects in SVO sentences such as (26)a from the position of *Ivana* in Inversion structures such as (26)b, that is, that there are several A-positions in the higher portion of the structure. As proposed (for different purposes) in Williams (2006). The other possibility involves derivationality of Principle B.

It is fairly straightforward to show that the former proposal, along the lines of Williams (2006), will not work in these instances. This can be seen in passive and raising structures, which on the Williams-style story, would pattern with the SVO structures./ The following sentences show that this is not the actual situation:

- (27) a. **Každyj student<sub>i</sub>** byl udivlen [ego<sub>i</sub> (svoimi<sub>i</sub>) druž'jami]  
 [every student]<sub>NOM</sub> was surprised [his (self's) friends]<sub>INSTR</sub>  
 ‘Every student was surprised by his friends.’

- b. **Každyj student<sub>i</sub>** kažetsja [ \_ glupym [ego<sub>i</sub> (svoimi<sub>i</sub>) druž'jam]  
 [every student]<sub>NOM</sub> seems stupid [his (self's) friends]<sub>DAT</sub>  
 'Every students seems stupid to his friends.'

In both examples in (27), there is no Principle B violation (although it should be noted that both sentences involve derivational satisfaction of principle A. This shows, first of all, that Principles A and B are not in complementary distribution. Secondly, it shows that the raised or passivized surface subject is in an A-position of the kind relevant to the Binding principles. And yet, a Principle B violation of the kind found in (26)a is not triggered.

It thus appears that the relevant difference between the two instances involves the history of the derivation. As we have seen, both (26) and (27) involve an R-expression in SpecT and a c-commanded pronoun in the same local domain. However, only in the case of (26)a, does the R-expression *Ivan* locally bind the pronoun *ego*, in violation of Principle B, *at every stage of the derivation*. On the other hand, in (26)b and in (27) there is an earlier stage of the derivation, namely before Inversion, Passive and Raising take place, when a configuration in violation of Principle B does not obtain. Thus, Principle B must be stated derivationally, and in particular, it must be stated derivationally in the sense of (21)b – as Principle that allows thing *in*.<sup>5</sup>

### 3. Conclusions.

We have seen arguments for a derivational approach to both Principle A and principle B in this article. In the case of Principle A, we have seen instances where a viable anaphor binding relation is fed by A-movement in the course of the derivation. We have also seen instances where A'-movement of an anaphor into a higher domain has allowed a higher antecedent to bind that anaphor, despite the requirement, seen from Scope and Principle C effects that such A'-moved elements reconstruct. Thus it appears impossible to maintain an LF-only version of Principle A. In the case of principle B, we have seen that the Russian Inversion construction does not feed a violation of Principle B, even when an R-expression is moved into the position from which it normally cannot allow a c-commanded coindexed pronoun to be present. In this case also, we saw arguments against all accounts other than one that takes into consideration the history of the derivation, that is a derivational approach.

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<sup>5</sup> Once again, it is interesting to see how Serbo-Croatian behaves in this regard. We saw in earlier footnotes that SC differs from Russian in principle A effects. However, with regard to Inversion and Principle B, SC and Russian behave identically, as is shown in (iv)-(v):

- (iv) a. [Svaku devojku<sub>i</sub>] voli [njen<sub>i</sub> pas] (SC) (OVS)  
 [every girl]<sub>ACC</sub> loves [her dog]<sub>NOM</sub>  
 'Every girl is loved by her dog.'
- b. [Svakoj devojci<sub>i</sub>] treba [njen<sub>i</sub> pas] (Dat-V-S)  
 [every girl]<sub>DAT</sub> needs [her dog]  
 'Every girl is pleased by her dog.'

I leave the issue of the exact nature of the micro-variation between Russian and Serbo-Croatian to further research.

Thus this article has strengthened the derivational approach to these two binding principles.<sup>6</sup>

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<sup>6</sup>Another issue that cannot fully be addressed here concerns the arguments in Sabel 2006 in favor of the *be free everywhere* version of Principle B derivationality. Sabel's argument is based on the following examples:

- (v) a. It seems to **him** [that it is likely [that **he** will lose]]. (Sabel, 2006, ex 14)  
b. \* **He** seems to **him** [ \_\_ to be likely [ \_\_ to lose ]].
- (vi) a. [pleased **himself**] **him** (Sabel, 2006, ex 15)  
b. \* **Himself** [pleased \_\_ ] **him**.

(v)-(vi) show that “it is not sufficient for a pronoun – in contrast to an anaphor – to fulfill the Binding Theory at one stage of the derivation.” The (a)-sentences are fine (before A-mvt), and yet that movement in the (b) sentences leads to a violation. Thus violating Principle B at one stage of the derivation seems to be enough to cause ungrammaticality, in contrast to what we saw above with Inversion constructions. It is beyond the scope of the article to unify all the facts from Russian with those discussed in Sabel 2006. However, several points are suggestive in this regard. First, the apparently satisfactory stage of the derivation in (v) is represented in Sabel as (vii):

- (vii) [ \_\_ seems to **him** [**he** to be likely [ \_\_ to lose]]

However, (vii) is a stage of the derivation where the relevant pronoun *he* is not yet interpretable, since it contains unsatisfied (case) features. Thus perhaps the proper formulation of a derivational version of Principle B could rule out (5) without ruling out the Russian inversion constructions, where no uninterpretable features are involved in the earlier stage of the derivation.

As for (vi), it is not clear that (vi)b is ungrammatical because of Principle B; *himself* cannot be a subject (perhaps for featural reasons as well). On the other hand, Sabel 2006 also contains evidence in favor of the kind of derivationality proposed in this article. Consider (viii):

- (viii) **He** seems to **himself** [ \_\_ to be smart]. (Sabel, 2006, ex 17)

(viii) involves an earlier stage of the derivation where the pronoun *he* appears to be bound by the coindexed anaphor *himself*. And on the original Belletti & Rizzi (1988) style analysis, the same would hold for (ix). Yet both (viii) and (ix) are grammatical.

- (ix) a. [pleased **he**] **himself** (Sabel, 2006, ex 18)  
b. **He** [pleased \_\_ ] **himself**.

As Sabel argues, (viii) and (ix) both show that “a pronoun may be bound in its local binding domain at one stage of the derivation without leading to a violation of Condition B” which is consistent with the kind of derivationality argued for in this article. Further discussion of these important issues must, however, be left for future research.

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