In Defense of the Classical Binding Theory
Combining Precede-and-Command with the Presuppositional Approach to Binding Condition A

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1 Introduction

The classical binding theory (e.g., Chomsky 1981) proposed that NPs fall into three classes—anaphors, pronouns, and R-expressions—each of which is subject to a different condition on its anaphoric potential. These three classes are stipulated as primitives in the model of syntax, as are the binding conditions (Binding Condition A, Condition B, and Condition C). In addition, the classical binding theory did not distinguish between *binding* and *coreference*. The classical binding conditions regulate both (by imposing conditions on coindexing).

In the decades since the classical binding theory was developed, it has been challenged in numerous ways. First, Reinhart (1983a,b) proposed that the binding theory should only regulate syntactic binding, not coreference. Coreference is in principle free but is subject to pragmatic principles that compare the effects of coreference with binding. Nearly all alternatives to the classical binding theory that have been proposed have followed Reinhart in this (e.g., Safir 2004, Reuland 2011). Second is an empirical challenge: some cross-linguistic work has claimed that not all NPs in all languages fit the three classes in the model of the classical binding theory (e.g., Reinhart and Reuland 1993, Cole *et al.* 2015). Third, numerous researchers have pointed out that it would be nice if the classes that NPs fall into, and the conditions they are subject to, could be derived rather than stipulated. Many *reductionist* approaches have attempted to do just that (e.g., Reuland 2011).

In this paper, I defend the classical binding theory against these challenges. First, I show that the binding theory must regulate both binding and coreference, contrary to all work that has followed Reinhart. Second, I show that the empirical challenges regarding NP types are not telling. In fact it appears that the NPs that have been claimed to be a problem in various languages can be fit into the classical model quite readily. Third, I show that existing attempts to reduce the binding conditions to other principles have failed. I argue that, given our current state of understanding, the simplest theory that achieves the most empirical coverage is a version of the classical binding theory. I propose a new version of the classical binding theory that combines the Precede-and-Command approach of Bruening (2014) with the presuppositional approach to Binding Condition A of Sauerland (2013). The presuppositional approach has the advantage that it explains the behavior of anaphors in ellipsis and under focus, but it has the disadvantage that it is only about Condition A and in existing formalisms it relies on syntactic movement. The precede-and-command approach can extend the presuppositional analysis to Conditions B and C and can do so without syntactic movement, which is an important desideratum of the binding theory, as I will show.

I begin in section 2 by showing that the binding principles must regulate both binding and coreference. Section 3 addresses the empirical challenge of NPs that do not seem to fit into the classical model. Section 4 shows that existing reductionist accounts have failed. Section 5 then shows, prior to building an account,

that syntactic movement could not be involved in the binding theory. The new binding theory that I propose is developed in section 6. There I outline the presuppositional approach to Condition A and the precede-and-command approach to binding in general, and then combine them into a single theory, which I will call the *PPC binding theory* (for "Presuppositional Precede-and-Command"). Section 7 shows that various other phenomena, like the effects of focus, strong crossover, and the behavior of epithets, simply fall out from the current account.

2   The Binding Principles Regulate Both Binding and Coreference

As described in the introduction, the classical binding theory did not distinguish between binding and coreference. It considered both of them to use the same mechanism, coindexing, and imposed conditions on coindexing. Reinhart (1983a,b) argued that the binding conditions should only regulate syntactic binding, viewed as binding of a variable by a lambda operator:

(1)   Goofy knows that he is an idiot.
      Goofy λx.x knows that x is an idiot.

Coreference, in contrast, involves no syntactic relation at all. In the same example, the pronoun can simply be unrelated to the name *Goofy*, but in the model of discourse, it happens to refer to the same individual (indicated with parentheses):

(2)   Goofy knows that he is an idiot.
      Goofy λx.x knows that he is an idiot. (he=Goofy)

   Coreference is in principle free, but some sort of pragmatic obviation principle bars coreference when binding would be possible and indistinguishable in interpretation. This is what rules out coreference in a standard Condition C configuration as in (3a):

(3)   a.   * He knows that Goofy is an idiot. (he=Goofy)
               identical to: Goofy λx.x knows that x is an idiot
      b.   Even HE knows that Goofy is an idiot. (he=Goofy)
               not identical to: Goofy λx.x knows that x is an idiot

But when binding and coreference would give rise to two different interpretations, as in the focus case in (3b), coreference is permitted. In the focus alternatives to (3b), alternatives to Goofy do not know that they themselves are idiots (the bound interpretation), they know that Goofy is an idiot. This approach therefore has the nice consequence that it explains why principles like Binding Condition C can be violated in certain circumstances.

   The view that the binding principles should regulate only binding and not coreference has been adopted by, among others, Grodzinsky and Reinhart (1993), Heim (1998), Fox (2000), Safir (2004), Büring (2005b), Reinhart (2006), Roelofsen (2010). It also forms a cornerstone of the most prominent reductionist account, that of Reuland (Reuland 2001, 2011, 2017, Volkova and Reuland 2014).

   Contra Reinhart and all of the references just cited, I argue that the binding conditions must in fact regulate something that subsumes both binding and coreference, exactly as the classical binding theory had it (cf. Heim 2007). The argument relies on strict and sloppy readings in ellipsis, the distinction between which is a further motivation for distinguishing binding from coreference. Consider a simple example of the ambiguity:

(4) Samantha called her mother. The teacher did too.
sloppy reading: 'The teacher called the teacher's mother.'
strict reading: 'The teacher called Samantha's mother.'

The standard analysis of the strict/sloppy ambiguity is that sloppy readings arise from variable binding, while strict readings instead involve coreference (Sag 1976, Reinhart 1983b, Heim and Kratzer 1998):

(5) Samantha called her mother. The teacher did too.

    a.   Samantha λx.x called x's mother.
            The teacher λx. x called x's mother.

    b.   Samantha called her mother. (her=Samantha)
            The teacher called her mother. (her=Samantha)

In the sloppy reading in (5a), the possessive pronoun is a variable bound by the same lambda operator that binds the subject, resulting in the mother being the mother of the subject in the elided clause as well as in the antecedent clause. In (5b), in contrast, the possessive pronoun is unrelated to the subject, and happens to refer to Samantha. It continues to do so in the elided clause, resulting in the strict reading.

The argument here arises from the fact that reflexives may have strict readings in ellipsis and under focus, as in the following examples:

(6)   a.   The judge questioned the man who defended himself about why his lawyer couldn't. ('defend him') (McKillen 2016: 27, (31))

       b.   Mary did something really terrible. Everyone hates her now. Even SHE hates herself. (modified from McKillen 2016: 57, (15))

It has often been claimed in the literature that reflexives can only have sloppy readings (Keenan 1971, Williams 1977, Partee and Bach 1984, Heim and Kratzer 1998), but others have noted that they can in fact have strict readings (Dahl 1973, Sag 1976, Fiengo and May 1994, Hestvik 1995, Büring 2005a). Importantly, recent experimental work has shown that strict readings are readily available for reflexives and that they are not limited to certain syntactic contexts as works like Hestvik (1995) have claimed. This experimental work includes Frazier and Clifton (2006), Kim and Runner (2009), Ong and Brasoveanu (2014), and especially McKillen (2016).[1]

The next important fact is that the reflexive is required even in cases of strict identity in ellipsis, and a pronoun is not allowed:[2]

(7)   a.   * The judge questioned the man who$_1$ defended him$_1$ about why his lawyer couldn't. ('defend him')

       b.   She$_1$ blames herself$_1$/*her$_1$. Her boss does too, and is likely to fire her. ('blame her')

(Under focus as in (6b) Condition B is often claimed to be violable; see more on this in section 7.1.)

Given the ellipsis, coreference and binding give rise to two different interpretations (sloppy versus strict interpretations). In approaches following Reinhart, then, nothing should block the use of a coreferential pronoun, as in *Samantha blames her (her=Samantha)*. The fact that this *is* blocked indicates that Condition B does not distinguish between binding and coreference.

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[1]McKillen's example in (6a) has been constructed so that the reflexive is inside a complex NP. In the analysis of Hestvik (1995), it would have to cross an island boundary in order to c-command the ellipsis site. Such examples, as well as the availability of the strict reading in cross-sentential examples like (6b) and in simple coordination (see the works cited for numerous examples), show that a movement approach like Hestvik's is not correct.

[2]Here and throughout, I use indices only for convenience, to indicate covaluation. Indices have no status in the theory developed here, as will become obvious in section 6.

This is a fundamental problem with accounts that follow Reinhart (1983a,b), and cannot be reconciled with them, as far as I can see. Since all existing reductionist accounts of the binding conditions follow Reinhart (1983a,b) in this respect, they are all fundamentally flawed. It is not correct that coreference is in principle free, in fact coreference is strictly regulated by the binding conditions. Note also that this is not a peculiarity of English: Lidz (2001) shows that reflexives in other languages (Dutch and Kannada) also allow strict readings in ellipsis (see also Rooryck and Vanden Wyngaerd 2011 on Dutch). The classical binding theory was therefore correct in this respect.

3 Challenges from Non-Conforming NPs

I turn now to challenges from NPs that have been claimed to be problematic for the classical binding theory. There are two primary cases, "SE anaphors" like Dutch *zich* (Reinhart and Reuland 1993), and "indeterminate" forms like Peranakan Javanese *awake dheen* (Cole *et al.* 2015).

3.1 SE Anaphors

Reinhart and Reuland (1993) point out that Dutch *zich* appears to be problematic for the classical binding theory. It cannot be locally bound with most predicates:

(8) (Reinhart and Reuland 1993: 665, (17))

    a.   * Max haat zich.
        Max hates SE

    b.   * Max praat met zich.
        Max speaks with SE

This makes it look like a pronoun, and not like an anaphor. This also seems to be true in (9a), but then with the same verb used as an ECM or raising to object verb, *zich* is allowed (9b):

(9) (Reinhart and Reuland 1993: 691, (75))

    a.   * Jan hoorde zich/hem.
        Jan heard SE/him

    b.   Jan hoorde zich/*hem zingen.
        Jan heard SE/*him sing

In (9b), *zich* acts like it is an anaphor, not a pronoun (a pronoun is not allowed, as indicated). In addition, with certain predicates, those that Reinhart and Reuland characterize as "lexical reflexives," *zich* is also permitted with a local antecedent:

(10) (Reinhart and Reuland 1993: 666, (19))

    a.   Max wast zich.
        Max washes SE

    b.   Max schaamt zich.
        Max is ashamed.

Most difficult for the classical binding theory is the behavior of *zich* in three-place predicates. As (11a) and (11c) show, *zich* does not seem to permit a local antecedent in this case. However, in (11b,d), *zich* does permit a local antecedent, just in case there is also a SELF reflexive in addition:

(11) (Reinhart and Reuland 1993: 668, (21))

    a.   * Henk$_1$ wees mij aan zich$_1$ toe.
        Henk assigned me to SE

    b.   Henk$_1$ wees zichzelf$_1$ aan zich$_1$ toe.
        Henk assigned himself to SE

    c.   * Henk$_1$ wees zich$_1$ aan mij toe.
        Henk assigned SE to me

    d.   Henk$_1$ wees zich$_1$ aan zichzelf$_1$ toe.
        Henk assigned SE to himself

    e.   ? Henk$_1$ wees zichzelf$_1$ aan zichzelf$_1$ toe.
        Henk assigned himself to himself

This is the most problematic set of data for the classical binding theory: it is impossible to identify a condition on *zich* that will rule it out in (11a,c) that will not also rule it out in (11b,d).

Work subsequent to Reinhart and Reuland (1993), however, has disputed some of these judgments and has shown that *zich* is not one single thing. In fact it has different properties in different configurations. First, regarding the three-place predicates in (11), Veraart (1996) disputes the judgments. According to her, (11a) and (11c) are actually grammatical if an NP other than *zich* is focused.

Second, Rooryck and Vanden Wyngaerd (2011: 168–169) argue that *zich* has different properties in four different configurations. In lexical reflexives and with causative 'let', they claim that the antecedent can be a quantifier and only sloppy readings are allowed. They further argue that in these two configurations, the clause has an unaccusative syntax. (Note that SE expressions in other languages, like the Romance languages, have also often been associated with unaccusatives and middles.) In PPs, in contrast, *zich* allows strict readings in addition to sloppy readings, according to Rooryck and Vanden Wyngaerd (2011). There are two sub-cases of PPs: with a local antecedent and a spatial P, *zich* permits a quantificational antecedent, but with a longer distance antecedent, it does not. If Rooryck and Vanden Wyngaerd (2011) are correct, *zich* has very different properties in different configurations.

According to Veraart (1996), *zich* is an anaphor when it is an object, just like the SELF anaphor *zichzelf*. However, the two are used differently: *zich* is used for presupposed reflexivity (as with "lexical reflexives") and *zichzelf* is used for asserted reflexivity. There is also a role for focus, according to Veraart. In other configurations, *zich* and *zichzelf* may be the same thing, because there is a *zelf*-deletion rule, and in addition *zelf* can be added to *zich* for emphasis.

It is not my goal here to evaluate these claims or to propose an analysis of Dutch *zich*. What we can conclude, though, is that Reinhart and Reuland's characterization of *zich* was not correct. It rather appears that *zich* is not one single thing. It has different properties depending on the configuration it occurs in. To date, then, *zich* (and other SE anaphors) has not been shown to be problematic for the classical binding theory. It appears at this point that it should be possible to fit the different uses of *zich* into the theory. In some cases it is in the class of anaphors and requires a local antecedent; in other cases it may be a pronoun (albeit one that requires syntactic binding, which is not something that is precluded by the classical binding theory). I conclude that the classical binding theory is just as viable as it always was in the face of elements like Dutch *zich*.

3.2 Indeterminate Forms

A second challenge for the classical binding theory is presented by Cole *et al.* (2015), in the form of data from Peranakan Javanese. This language has a well-behaved local anaphor, *awake dheen dhewe*, and it also has a well-behaved pronoun that is in complementary distribution with it, *dheen*. However, there is a third form that can be used in any of the contexts where either the anaphor or the pronoun could be used. This

is *awake dheen*. Cole *et al.* (2015) argue that this form could not simply be ambiguous between an anaphor and a pronoun, and it is therefore problematic for the classical binding theory.

However, Cole *et al.* (2015) offer only one argument against an ambiguity account. This is that this indeterminate form can have strict readings in ellipsis:[3]

(12)   Tono ketok awake dheen nggon kaca, Sita yaya.
             Tono see   body.3 3Sg   in   mirror Siti also

            'Tono saw himself in the mirror, and Siti did too (either: saw Siti [sloppy], or saw Tono [strict]).'
            (Cole *et al.* 2015: 144, (19))

According to Cole *et al.* (2015), *awake dheen* must be a reflexive in the first clause in this example in order to be locally bound; but then in the elliptical clause it it would have to be a reflexive, too. According to them, it should then have only the sloppy reading, contrary to fact.

Cole *et al.* (2015) are assuming that reflexives only have sloppy readings. As we have already seen, however, this is false.[4] In fact there is no problem at all for an ambiguity analysis. All we have to say is that *awake dheen* is systematically ambiguous between an anaphor and a pronoun. In (12), it is an anaphor, since it has a local antecedent in the clause it occurs in. Anaphors can have strict readings under ellipsis, explaining why (12) can have either a strict or sloppy reading (for the analysis, see section 6).

In addition, it is not the case that binding theory is just irrelevant in Peranakan Javanese. The following example is ungrammatical because of Binding Condition C (or B, see section 7):

(13)   * Awake dheen$_1$ nendhang Siti$_1$
         body.3 3Sg   NSPF.kick Siti

        'She$_1$ kicked Siti$_1$.' (Cole *et al.* 2008: 583, (9a))

Cole *et al.* (2015) propose as an alternative to the classical binding theory that there are no binding principles, only preferences that may become "grammaticalized." This could not be correct, because if it were, we would expect all kinds of systems that do not exist. There would be no explanation for why "grammaticalization" would always lead to the same binding principles. As just shown, Peranakan Javanese clearly has Binding Condition C, and it also has Binding Condition A and Binding Condition B. If *awake dheen* is simply ambiguous between an anaphor and a pronoun, then the facts of Peranakan Javanese fit the classical binding theory perfectly. There are certainly no grounds for jettisoning the binding theory entirely, and doing so seems like a terrible mistake.

Before moving on, I would also like to point out what data like this show about competition models. In competition accounts (e.g., Safir 2004), if a more specified, more locally bound form exists and can be used in a given configuration, then it precludes other forms from appearing there. Typically, a morphologically complex, necessarily locally bound SELF anaphor will beat out a pronoun in a configuration of local binding. However, if there is no such form, then a pronoun can appear. This type of account readily explains why pronouns can be locally bound just when there is no local reflexive. For instance, English lacks reflexive possessors and possessive pronouns can be bound by a local subject; Old English lacked reflexives altogether and used pronouns even with a local antecedent (e.g., van Gelderen 2000); and German and French first and second person object pronouns can be locally bound, because there is no dedicated reflexive for these persons.

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[3]Cole *et al.* (2015) refer to this as "VP ellipsis," but it is actually stripping.

[4]Cole *et al.* (2007: 25) claim that the anaphor *awake dheen dhewe* cannot have sloppy readings. Even if this is true, it does not mean that *awake dheen* as an anaphor cannot, since anaphors in general can have sloppy readings. Moreover, I would guess that even *awake dheen dhewe* will be able to have strict readings in the right contexts. It is true that in many languages anaphors prefer sloppy readings, and it takes setting up a facilitating context to bring out the strict reading.

Languages like Peranakan Javanese are deadly problems for such accounts. Peranakan Javanese has a local anaphor, and the existence of this form should preclude the ambiguous form from appearing in any configuration where the local anaphor is allowed. This is not the case, however; they are not in complementary distribution. A similar situation obtains in Khanty, as described by Volkova and Reuland (2014), who also point out the problem this situation raises for competition accounts.

I conclude that competition accounts are on the wrong track. In all cases where a form can be either locally bound or not (e.g., English possessive pronouns), that form is ambiguous between an anaphor and a pronoun. Ambiguity is then widespread in languages: all pronouns in Old English were ambiguous, and German and French first and second person object pronouns are ambiguous.

An argument frequently given against this type of approach is that it just seems like a bad analysis to posit massive ambiguity (e.g., Reuland 2011). This is not an argument. In fact languages are full of ambiguity, or cases where one form does double duty. For instance, *any* NPs in English are systematically ambiguous between an NPI and a free-choice use, and these uses have very different properties. In many languages (like Mandarin Chinese and Passamaquoddy), wh-words are ambiguous between a question and an indefinite use, and they have very different properties again. Ambiguity just seems to be a common property of languages, and so finding that certain NPs have to be ambiguous between the classes proposed in the classical binding theory is expected, and is not an argument against that theory.

4 Problems with Reductionist Accounts

So far we have seen that the binding theory must regulate both binding and coreference, as the classical binding theory had it, and we have seen that arguments that have been given against the classical binding theory are not telling. In this section I show that the most prominent reductionist account, that of Reuland (Reuland 2001, 2011, 2017, Volkova and Reuland 2014), is unsuccessful. (I do not address other reductionist accounts here. I have already mentioned that competition-based accounts like that of Safir 2004 are flawed, as are all accounts in which only syntactic binding and not coreference is regulated by the theory.)

4.1 Case and Feature Deficiency

In Reuland's system, covaluation of a pronoun with a local antecedent is ruled out partially because the antecedent and the pronoun cannot form a syntactic chain. This is because the pronoun is specified for features. SE anaphors like Dutch *zich* can take a local antecedent (in some circumstances) because they are "deficient" in features, or underspecified for certain features. This permits them to form a syntactic chain with their antecedent, via Agree.

Now, certain languages do permit locally anteceded pronouns, as we have already seen. For instance, Frisian allows featurally specified pronouns where Dutch has *zich*. Old English lacked reflexives and used pronouns where Modern English has reflexives. Peranakan Javanese has a form that can be locally bound or not. Reuland has to make various claims about these elements in order to permit them with a local antecedent in his system. For instance, he claims, following van Gelderen (2000), that Old English pronouns received inherent case rather than structural case, as do the pronouns in Frisian. In other cases, the pronoun is part of a larger structure with a null head, as Reuland (2011) claims for Fijian and Volkova and Reuland (2014) claim for Khanty. In yet another case, Traditional Jambi Malay (much like Peranakan Javanese), Reuland claims that the relevant pronoun is underspecified for features (Reuland 2017).

All of these claims are dubious and appear to be motivated only by the desire to make the facts fit the theory. The arguments regarding Old English in van Gelderen (2000) are very weak. I can see no basis there for claiming that pronouns received inherent case rather than structural case. The Frisian case is similarly weak; see Rooryck and Vanden Wyngaerd (2011). The same is true of the claims regarding Fijian and

Khanty: there is no evidence for the proposed more complicated structure. In Khanty, an object pronoun with a local antecedent requires otherwise optional object agreement on the verb. However, it is a jump from that fact to positing additional null structure for the pronoun. Even with object agreement, the pronoun is still ambiguous and does not have to be locally bound; there is no reason to think that the locally bound and the non-locally bound pronoun have very different structures, as Volkova and Reuland (2014) claim. In fact the pronoun can have a local antecedent or not in various different syntactic positions, including with dative case and as the object of a postposition, and there is no difference in behavior in these positions. Positing distinct structures for the pronoun itself is therefore unjustified, and a uniform analysis would be much more desirable.

Similarly dubious are some of Reuland's claims of underspecification, which is something that is directly observable. Reuland's claims about underspecified features in Traditional Jambi Malay are shown to be false by Yanti *et al.* (2017).

I conclude that there is no convincing case for the claim that simple pronouns with local antecedents have very different structures or different features from when they do not. It is a deficiency of Reuland's system that it has to make ad hoc claims in order to make the facts of various languages fit the theory.

4.2 Inadequate First Principles

As mentioned, the work of Reuland (e.g., Reuland 2011) attempts to reduce the binding conditions to other first principles. If this were successful, it would be an achievement. Unfortunately, the reduction does not work. The previous subsection pointed out some of the empirical problems with this approach. Here I address the first principle that Reuland attempts to reduce the binding conditions *to*.

According to Reuland, what is stipulated as Binding Conditions A and B in the classical theory derives from a deeper principle, the Inability to Distinguish Indistinguishables (IDI) constraint. According to Reuland, if a predicate has two identical arguments (x V x, for some verb V), the two arguments x become indistinguishable if there is not sufficient structure between them to keep them apart at the mapping to the semantics. This is why languages have to use special mechanisms to mark reflexive predicates. In the case of SELF anaphors, the additional morphological structure makes them non-identical to their antecedent. That is, the object is not "x," but is a function on x, "f(x)."

First, it is not at all clear why the grammar would have any problem with two identical arguments. In traditional semantic analyses, argument composition simply takes place in a specified order, and it is order of composition that distinguishes them. It is not clear why order could not distinguish two arguments of a verb, even if they are identical. There is no reason why "x V x" could not combine to say that x is both the patient and the agent of V (for instance).

Second, if the problem with reflexive predicates is that there is not enough structure to keep the two arguments apart, then we should expect that the presence of additional structure would obviate the need for special marking. As reviewers of Yanti *et al.* (2017: note 6) note, this makes the wrong prediction for coordinated direct objects:

(14)   She$_1$ washed [herself$_1$/*her$_1$ and him].

The extra structure of the coordination should be able to keep the subject and part of the coordinated argument distinct. Yet in this case, a reflexive is still required with a local antecedent, and a pronoun is not allowed (see Reinhart and Reuland 1993, Bruening 2014).

The IDI also seems to stumble on cases where the covalued argument is not an argument of the same predicate as its antecedent directly, but is instead buried within a PP, as in the following:

(15)   a.   The elephants$_1$ fell all over each other$_1$/*them$_1$.
        b.   The dude$_1$ puked all over himself$_1$/*him$_1$ on the couch.

    c.   The two lovers$_1$ can't live with or without each other$_1$/*them$_1$.

    d.   Some people have the experience that they$_1$ are standing next to or beside themselves$_1$/*them$_1$.

Some of these also add additional structure in the form of modifiers and coordination. Again, the presence of extra structure ought to render special marking superfluous and therefore unnecessary, but it never does.

    Consider also cases where a local reflexive can be modified by an expressive adjective:

(16)   a.   He's going to hurt his fool self.

          b.   That crackhead is about to kill his damn self!

Such expressives add a speaker evaluation, as discussed in Potts (2005). In the (a) example, the speaker expresses the opinion that the person who will hurt himself is a fool. In the (b) example, some kind of attitude is added. At the same time, however, local reflexivity is still expressed. One might expect that the additional syntax and semantics of this modification would make the two arguments of the verb distinguishable, without the need for *self* to keep them apart. But still a Condition B violation occurs with a pronoun or an R-expression:

(17)   a.   * He$_1$'s going to hurt the fool him$_1$/ him$_1$ the fool.

          b.   * That crackhead$_1$ is about to kill damn him$_1$/the damn bastard$_1$!

    All of these kinds of examples indicate that the binding conditions that govern local covaluation cannot be reduced to anything like the IDI. The need for special marking of local antecedence is not about the lack of structure between the two arguments involved.

    Additionally, a reduction is only truly successful if it reduces one thing to something else that is *independently motivated and necessary*. Nowhere does Reuland show that syntax needs an Inability to Distinguish Indistinguishables constraint. He does not list a single other thing that such a constraint would rule out in syntax. He does cite Abels (2003) and Richards (2001), but all of the phenomena they discuss have independent explanations. For instance, the anti-locality constraint on movement posited by Abels (2003) is unnecessary. The cases that best fall under this constraint are the immobility of IP (stranding C) and VP (stranding a head v or Voice). There are (at least) two alternative analyses of the inability of these categories to move. One is a constraint limiting movement to phases, as in Chomsky (2008). IP and VP are not phases, only CP and vP/VoiceP are. If there is such a constraint, then only CP and vP/VoiceP can move, IP and VP cannot. The second alternative is the A-over-A condition (Bresnan 1976). If IP and CP are always non-distinct in the features relevant to movement, then any movement operation will always target CP and will never be able to target IP, since CP dominates IP. Ditto for VP within a dominating vP/VoiceP. Since there are alternative analyses of the inability of these categories to move, there is no need for an anti-locality condition on movement. The existence of such a condition is then not an argument for the need for an IDI constraint operative in syntax more generally, as Reuland seems to have in mind.

    As for the data in Richards (2001), none of it shows convincingly that we need some kind of constraint like the IDI. Many of the phenomena Richards discusses have been analyzed in ways that require no reference to an IDI constraint. For instance, the restriction on stylistic inversion in French is analyzed in terms of case in Alexiadou and Anagnostopoulou (2001, 2007). There are numerous approaches to differential object marking. One of the configurations Richards rules out, a C head dominating another CP, has been argued to be instantiated in many cases (e.g., Reinhart 1981, Bhatt and Yoon 1991, Culicover 1991, Authier 1992, McCloskey 2006, Bruening 2016). In other words, none of the data discussed by Richards (2001) shows unequivocally that we need some kind of distinctness constraint.

    Given this, Reuland's IDI constraint is not well-motivated at all. His reduction is therefore unsuccessful. There is no independent justification for an IDI constraint, and even if there is such a constraint, the binding conditions cannot be reduced to it.

5   There is No Movement Involved

To summarize to this point, existing reductionist accounts are unsuccessful; elements that have been presented as problematic for the classical binding theory are not; and the classical binding theory was correct not to distinguish binding from coreference. Prior to proposing a new version of the classical binding theory that shares its core tenets, I wish to examine one other claim that is frequently made about the binding conditions. This is that syntactic movement is crucially involved in anaphora.

These sorts of claims have come in various forms. Kayne (2002), Hornstein (2001), Zwart (2002) posited a movement relation between an anaphor and its antecedent. This sort of approach was shown to be unsuccessful by Safir (2008), and I will not address it further here. An analysis that has been more widely adopted says that some component of a local reflexive moves as a head to incorporate into the predicate of its clause. This is proposed by Lebeaux (1983), Chomsky (1986), Reuland (2001, 2011). Even Sauerland (2013), whose presuppositional approach I will adopt, posits this kind of movement. In a variation, Hestvik (1995) and Rooryck and Vanden Wyngaerd (2011) propose that a SELF anaphor moves to a position adjoined to VP (or vP).

All accounts that propose movement as a crucial part of the binding conditions are doomed to failure. Local reflexives can occur in positions from which movement is banned. The most important such case is coordinated objects, already mentioned above:

(18)   a.   She$_1$ washed herself$_1$/*her$_1$ and him.
       b.   The Queen$_1$ invited the baron and herself$_1$/*her$_1$ to tea.

As discussed in Bruening (2014), coordinated NPs like this involve a canonical Condition B effect: a pronoun is not allowed with a local antecedent, and a reflexive is required. It is true, as Reinhart and Reuland (1993) showed, that reflexives can be exempt from Binding Condition A in this environment and can have a non-local and non-commanding antecedent, but this is irrelevant to the local coreference cases illustrated here. When a local antecedent is present, a pronoun is not allowed and a local reflexive is required. This is therefore a canonical case of local anaphora covered by Conditions A and B.

In movement theories, then, (some part of) *herself* in such examples must move. However, coordinate structures constitute islands to movement. Movement should not be possible from just one conjunct of a coordinate structure. Note that proponents of head movement to a predicate often point to compounds like *self-invited* and *self-washed* to lend plausibility to the head movement analysis; but incorporation of this type from a coordinate structure is never possible:[5]

(19)   a.   self-washed, self-invited
       b.   * self-washed and him, *self-invited the baron and

There are other cases where anaphors occur in positions from which movement is generally not possible. One such case is the subject of an embedded infinitive introduced by *for*, which can never undergo A-movement and can never incorporate:

(20)   a.   They$_1$ are hoping for themselves$_1$/*them$_1$ to win.
       b.   * They are hoped for to win.
       c.   * self-hoped-for to win

This is perhaps not the clearest case, as it is sometimes claimed that this is a position for exempt anaphors and that many speakers allow pronouns (e.g., Reinhart and Reuland 1993).

Another case is reciprocals (and in some languages, reflexives) occurring as subjects of finite clauses, with their antecedents in the higher clause:

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[5]Note that incorporation of an entire coordinated object is possible: *she is a dog and cat washer.*

(21)   We$_1$ didn't know what each other$_1$ wanted.

See Lebeaux (1983) on these in English. At least some such cases involve truly local anaphors and not exempt anaphors (Yang 1983, Sung 1990, Haddad 2007). The kind of head movement envisioned by some of the movement approaches to anaphora is incapable of crossing a finite clause boundary, as it would have to here.

I conclude that analyses that propose movement of anaphors or parts of anaphors are on the wrong track. Nominal anaphors do not need to undergo movement at all. The right theory of the binding conditions should not have movement as a component. This was indeed a feature of the classical binding theory: it did not involve syntactic movement at all.

6   An Update to the Classical Binding Theory

Given what we have seen, the desiderata of an adequate binding theory are the following:

(22)   *Desiderata of a binding theory:*
   a.   The binding conditions regulate something that subsumes both variable binding and coreference.
   b.   It does not have a pragmatic obviation principle that rules out coreference when it would be indistinguishable from binding.
   c.   It does not involve competition.
   d.   It does not involve movement.

I will propose a new version of the classical binding theory that will meet these desiderata. It will combine the presuppositional approach to Condition A of Sauerland (2013) with the precede-and-command approach of Bruening (2014). I will accordingly call it the *PPC binding theory*, for "presuppositional precede-and-command."

6.1   The Presuppositional Approach

Sauerland (2013) proposes that Binding Condition A is actually a presupposition of SELF anaphors. SELF anaphors have no at-issue content (they are basically just pronouns), but they add a presupposition to the effect that the predicate of the clause they occur in has two identical arguments. Two arguments being identical subsumes binding and coreference; both satisfy the presupposition. McKillen (2016) proposes a slightly different version of this presuppositional approach.

The presuppositional analysis has two advantages that I want to maintain here. The first is that it has the desired effect of subsuming both binding and coreference. The second is that it will allow apparent violations of the binding conditions in focus and ellipsis contexts, without the need for mechanisms like vehicle change (Fiengo and May 1994). It does this by treating violations of Condition A as a case of weakened presupposition projection, something that is independently attested. Basically, certain presuppositions are missing from focus alternatives. McKillen (2016) states the generalization as follows:

(23)   The presuppositions of F-marked NPs or NPs linked to an F-marked NP can be absent in focus alternatives. (McKillen 2016: 146, (104))

Because "linked to" is very imprecise, I will instead state the generalization as follows:

(24)   The presuppositions of F-marked NPs or NPs whose denotations are identical to them can be absent in focus alternatives.

Above we saw that reflexives can have strict readings in ellipsis and focus. This is allowed in the presuppositional approach because the presupposition of argument identity can be absent from focus alternatives, as stated in (24). This simplest case to explain is one like the following:

(25)   Only Tatiana hates herself. (strict reading: 'no one else hates Tatiana')
       focus alternatives: {x hates herself (herself=Tatiana)}

In an alternative semantics for focus (Rooth 1992), F-marked NPs are replaced with variables in the focus semantic value of the sentence. Since *Tatiana* is F-marked in this example, the focus alternatives are those shown, *{x hates herself}*. If we take *herself* to be coreferential with *Tatiana* rather than bound by the subject, this is the set of alternatives where x hates Tatiana. The sentence then asserts that Tatiana hates Tatiana, and none of the alternatives to Tatiana hates Tatiana. This is exactly the meaning of the sentence on the strict reading. In the focus alternatives, *herself* is allowed to be disjoint from the subject *x*, because its presupposition of argument identity is allowed to be absent from the focus alternatives since it is identical in denotation to an F-marked NP (*Tatiana*).

As for strict readings in ellipsis, they are allowed under the ellipsis licensing condition in Merchant (1999: 34). This condition permits a clause to elide if it is focus-matched by its antecedent:

(26)   A VP in constituent C_E can be elided if there is a constituent C_A, where:
       a. $[\![C_A]\!]^{g,o} \in [\![C_E]\!]^{g,f}$, and
       b. $[\![C_E]\!]^{g,o} \in [\![C_A]\!]^{g,f}$.

"$[\![C]\!]^{g,o}$" is the ordinary semantic value of C under some assignment function *g*, while "$[\![C]\!]^{g,f}$" is the focus semantic value of C under *g*. Merchant's licensing condition says that the ordinary semantic value of the antecedent clause must be a member of the focus semantic value of the elided clause, and the ordinary semantic value of the elided clause must be a member of the focus semantic value of the antecedent clause.

For a case of a strict reading in ellipsis like the following, the elided clause is then allowed to have a pronoun in it rather than a reflexive and still be elided:

(27)   The accused defended himself before his lawyer did.

       a.   *antecedent clause:* the accused defended himself (himself=the accused)
            alternatives: {x defended himself (himself=the accused)}
       b.   *elided clause:* his lawyer did [defend him] (him=the accused)
            alternatives: {x defended him (him=the accused)}

Under the coreferential interpretation of *himself*, the ordinary semantic value of the antecedent clause, *the accused defended the accused*, is a member of the focus semantic value of the elided clause, *x defended the accused*. The ordinary semantic value of the elided clause, *his lawyer did defend the accused*, is also a member of the focus semantic value of the antecedent clause, *x defended the accused*, if the presupposition of Condition A is absent from the focus alternatives. The bracketed part of the elided clause, *[defend him]*, is therefore allowed to elide, even though it is not strictly identical to its antecedent. Note that there is no need to have a mechanism of vehicle change (Fiengo and May 1994) in the theory; the fact that the elided clause can have a pronoun rather than an anaphor just follows from the licensing condition on ellipsis.

The presuppositional approach not only permits strict readings of reflexives, it does so in a way that is independently necessary. It relates the absence of the presupposition to other cases of weakened presupposition projection. von Heusinger (2007), Sauerland (2013), McKillen (2016) discuss a variety of cases of this, like the following:

(28)   a.   Only I did my homework. (other people did not do their homework)

b. *Scenario: One German professor attended the party, three Japanese professors, five English professors, and also two office workers.*
Sam only talked to the GERMAN professor.

c. *Scenario: John, Mary, and Bill all worked as waiters. But John and Bill moved on to different jobs.*
Only Mary is still a waitress.

In (28a), the first person presupposition of the pronoun *my* is absent from focus alternatives. In (28b), the alternatives to *Sam talked to the GERMAN professor*, with F-marking on *German*, are *Sam talked to the Japanese professor* and *Sam talked to the English professor*. But in the scenario given, there is no unique Japanese professor and there is no unique English professor. The fact that the sentence is felicitous in this context indicates that the uniqueness presupposition of the definite article does not need to be satisfied in the focus alternatives. Similarly, in (28c), the female presupposition of the suffix *-ess* does not need to be met in the focus alternatives.

As can be seen, the presuppositional approach nicely captures the availability of strict readings for reflexives in ellipsis and in focus contexts, and it does so by treating them as an instance of an independently attested phenomenon. It also subsumes coreference and variable binding under a single cover, identity. These are two advantages that I would like to maintain by adopting these aspects of the analysis.

There are also two drawbacks of this analysis as it has been formulated so far. First, both Sauerland (2013) and McKillen (2016) posit syntactic movement to get the analysis to work. For Sauerland 2013, SELF moves and adjoins to the predicate. For McKillen 2016, SELF combines first with a pronoun and then with the predicate, without the need for movement. However, movement is still necessary with ECM predicates for McKillen. This is not good, because coordination shows that there could be no movement even with ECM predicates:

(29) The president$_1$ considers both himself$_1$/*him$_1$ and his advisors to be above the law.

The second drawback is that the presuppositional approach has only been formulated for Condition A. It would be desirable to extend it to Conditions B and C, too, since they exhibit similar behavior under focus and ellipsis:

(30) *Condition B*
a. Trump$_1$ and his campaign manager have very different opinions. Only the campaign manager actually considers him$_1$ worth voting for.
b. Brandon is proud of her$_1$ and she$_1$ is too.

(31) *Condition C*
a. Melissa and her husband have very different views of what she has done. Only he thinks that Melissa's accomplishments have been significant.
b. Brandon is proud of what Melissa$_1$ has accomplished and she$_1$ is too.

For instance, in the discourse in (30a), the only referents are Trump and the campaign manager. The only alternative to the manager is therefore Trump. In the alternatives, then, Condition B appears to be violated (*{x actually considers him worth voting for (him=Trump)}*). Similarly for the other examples: Conditions B and C appear to be violated in the focus alternatives and in the elided clauses.

It is not clear that Sauerland's and McKillen's particular analyses can be extended to pronouns and R-expressions. Both analyses require a very local relation, basically co-argumenthood, which will not work for long-distance Binding Condition C. Since they also consider SELF reflexives to be a combination of

SELF with a pronoun, where the SELF part has the identity presupposition, it will not be possible to impose a non-identity presupposition on pronouns without a conflict.

I will therefore not adopt the particular analyses proposed by Sauerland (2013) and McKillen (2016). Instead, I will adapt the spirit of their proposal to a very different analysis of the binding conditions, that proposed by Bruening (2014).

6.2 The Analysis in Bruening 2014

The main point of Bruening (2014) is to show that the binding conditions do not refer to c-command, as in the classical binding theory, but to *precede-and-command*. Precede-and-command is the conjunction of precedence and a looser notion of command, *phase-command*, defined as follows:

(32) Phase-Command: X phase-commands Y iff there is no ZP, ZP a phasal node, such that ZP dominates X but does not dominate Y. (Bruening 2014: 343, (2))

(33) Phasal nodes: CP, vP, NP (Bruening 2014: 343, (3))

However, Bruening (2014) also proposes a very different way of looking at the binding conditions that explains this particular conjunction of precedence and command. First, syntactic structures are processed and built syntactically in a left-to-right fashion. This is why precedence matters: syntax proceeds in linear order. Second, as structures are built and processed, the grammar/processor keeps track of discourse referents through three sets of referents, as follows:

(34) Discourse Sets (Bruening 2014: 376, (125))

    a.   Discourse Set D: Consists of all referents in the current discourse.

    b.   Discourse Set C (the *active* set): Consists of referents represented by NPs in the sentence currently being processed.

    c.   Discourse Set A (the *local* set): Consists of referents represented by NPs in the local argument domain currently being processed.

There are then principles that regulate when a referent is moved from one set to another (Bruening 2014: 377, (126–128)):

(35) Processing Principle 1:
Move discourse referent R denoted by NP N out of local set A and into the active set C *at the left edge of an argument domain that does not include N*.

(36) An argument domain is the set of elements that includes a predicate P and all the arguments of P.

(37) Processing Principle 2:
Move discourse referent R denoted by NP N out of sets A and C and into set D at the right edge of a phasal node that dominates N.

The italicized part of Processing Principle 1 is the locality condition on Binding Condition A. NPs are moved out of the local set A when the syntax moves from one argument domain to another. Processing Principle 2 captures the relevance of phase-command: at the right edge of a phase boundary, the referents of NPs that were contained within that phase are moved out of sets A and C, meaning they are no longer active. They can therefore not be referred to with a reflexive, and they *can* be referred to with an R-expression.

The binding conditions are then defined as follows:

(38) Binding Condition A:
If a newly processed NP N has the form of a local anaphor, it must denote a discourse referent in set A. (Bruening 2014: 377, (130))

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(39) Binding Condition B:
If a newly processed NP N is to be interpreted as denoting a discourse referent R already in set A, then N must have the form of a local anaphor. (Bruening 2014: 377, (129))

(40) Condition C (Minimize Restrictors):
A definite description of the form *the A* may not refer to a discourse referent in active set C if A could be dropped without affecting either (i) the denotation of the description or (ii) its various pragmatic effects. (Bruening 2014: 372, (109))

Condition C is a modified version of the Minimize Restrictors! analysis of Schlenker (2005a). The result of dropping the restriction *A* in *the A* is a pronoun. *The A* is assumed to be the form of all R-expressions, including proper names (viewed as having a hidden definite article).

An obvious issue with this formulation is that it only refers to referential NPs. Since the binding conditions regulate non-referential elements like quantifiers as well as referential NPs, we obviously want to reformulate them.

6.3   The New Analysis: The PPC Binding Theory

In the following, I will refer to the new binding theory I develop as the PPC binding theory, and I will label the final version of all principles and constraints as "PPC *condition*."

To cover both referential NPs and non-referential NPs, I will follow Heim (2007) and assume that all quantifiers raise out of argument position and leave behind a trace of type e. All NPs in argument position are then of type e. I reformulate the discourse sets to refer to denotations of NPs of type e, as follows:

(41) PPC Discourse Sets:

    a.   PPC Discourse Set D: Consists of all denotations of NPs of type e in the current discourse.

    b.   PPC Discourse Set C (the *active* set): Consists of denotations of NPs of type e in the sentence currently being processed.

    c.   PPC Discourse Set A (the *local* set): Consists of denotations of NPs of type e in the local argument domain currently being processed.

This then necessitates the following reformulations of the processing principles:

(42) PPC Processing Principle 1:
Move denotation of NP N out of local set A and into the active set C *at the left edge of an argument domain that does not include N.*

(43) PPC Argument Domain:
An argument domain is the set of elements that includes a predicate P and all the arguments of P.

(44) PPC Processing Principle 2:
Move denotation of NP N out of sets A and C and into set D at the right edge of a phasal node that dominates N.

I further assume that NPs can be specified as being local anaphors. This is a primitive of the theory: UG simply has a class of elements that are local anaphors. Other NPs have the form Det R, with a determiner and a restriction; they are R-expressions. If the restriction R is dropped, the result is a pronoun, but there is no actual class of pronouns.[6]

The binding principles are then formulated as presuppositions on these NPs, as follows (note that I will revise Condition B in section 7):

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[6]Note that a given NP could also be subject to other conditions, for instance that it must be syntactically bound.

(45) PPC Binding Condition A:
      If a newly processed NP N is a local anaphor, its denotation is presupposed to be identical to a denotation already in set A.

(46) PPC Binding Condition B (to be revised):
      The denotation of any NP that is not a local anaphor is presupposed not to be identical to a denotation in set A.

(47) PPC Binding Condition C (Minimize Restrictors):
      The denotation of an NP of the form *Det R* is presupposed not to be identical to the denotation of an NP in active set C if R could have been dropped without affecting either (i) the denotation of the description or (ii) its various pragmatic effects.

Identity of denotation subsumes both binding and coreference. The binding conditions refer to neither directly. There is also no need for syntactic movement in this account: the binding conditions refer to denotations collected in the discourse sets.

6.4 Examples

Let me now go through some examples, including some of the crucial ones from above. I begin with the case of a coordinated object:

(48) a. The bear washed itself and its cub.

 b. The bear washed it and its cub.

As stated above, I view possessive pronouns as ambiguous between an anaphor and a pronoun (where a pronoun is just *Det R* with *R* dropped). If *its* in the above examples is to refer to the bear, it must be a local anaphor, as we will see.

The syntax begins building the examples from the left. The denotation of *the bear* is put in Set A. Before the end of the sentence, no new argument domain is encountered, nor is the right edge of a phase boundary. Therefore the denotation of *the bear* is never moved out of Set A. In (48a), *itself* has the form of a local anaphor. It is therefore presupposed to be identical in denotation to a denotation already in Set A. If it refers to the same bear, then the presupposition is satisfied. Moving on, the possessive pronoun is encountered. If it is a local anaphor, then again it must be identical in denotation to an NP in Set A. Since only the denotation of *the bear* is in Set A, it must again refer to the same bear. On the other hand, if *its* is not a local anaphor, then it is presupposed not to be identical to the denotation of *the bear*. If it refers to something else, then this presupposition is satisfied. As for *its cub*, it is presupposed not to be identical in denotation to any NP in Set A or Set C. In this sentence, this is only *the bear*.

In (48b), *it* is not a local anaphor. It is therefore presupposed not to be identical in denotation to any denotation in Set A. If it is disjoint in reference from *the bear*, then this presupposition is satisfied; if it is not, then the presupposition is violated. This correctly accounts for the fact that if one conjunct of a coordinated object is to be covalued with a local antecedent, it must be a local anaphor and may not be a pronoun.

Consider now a case of a Condition A violation, like the following:

(49) * The bear thinks the man will feed itself.

Here the denotation of *the bear* is put in Set A. However, at the embedded clause boundary, the syntax begins a new argument domain. The denotation of *the bear* is therefore moved out of Set A and into Set C. The denotation of *the man* is then put in Set A. In the same argument domain, *itself* is merged into the structure. It is a local anaphor. It is therefore presupposed to be identical in denotation to an NP already in

Set A. This is only *the man*. *Itself* also has a non-human presupposition. One of these presuppositions has to be violated, since *the man* is human. Hence the deviance of the example.

Consider now examples involving Condition C:

(50)   a.   She thinks this woman will be successful.

   b.   Her former employer thinks this woman will be very successful.

In (50a), the denotation of *she* is moved out of Set A and into Set C at the clause boundary. The R-expression *this woman* is then presupposed not to be identical to it. In contrast, in (50b), the denotation of *her* is moved out of set A and into set D at the right edge of the phase boundary delimited by the right edge of the NP *her former employer*. The denotation of this larger NP is put into Set A, and then moved into Set C upon crossing the clause boundary. *This woman* is then presupposed not to be identical to *her former employer*, but it is free to be identical to *her*.

Let us now turn to the focus and ellipsis cases discussed above. They receive the same analysis as outlined above. In (51), the presupposition of identity of reference can be absent in the alternatives. In the alternatives, *x* is put into Set A, and then *herself* is encountered. The presupposition can be absent, and so *herself* does not need to be identical in reference to *x*.

(51)   Mary did something really terrible. Everyone hates her now. Even SHE hates herself. (modified from McKillen 2016: 57, (15))
   alternatives: {x hates herself (herself = Mary)}

As for ellipsis examples like (52), I again assume the ellipsis licensing condition of Merchant (1999), stated in (26). As explained above, if presuppositions can be absent from focus alternatives, then the ordinary semantic value of the elided clause with a pronoun can be a member of the focus semantic value of the antecedent clause with a local anaphor, and vice versa.

(52)   The accused defended himself before his lawyer did.

   a.   *antecedent clause:* the accused defended himself (himself=the accused)
       alternatives: {x defended himself (himself=the accused)}

   b.   *elided clause:* his lawyer did [defend him] (him=the accused)
       alternatives: {x defended him (him=the accused)}

This analysis also extends to violations of Condition B in focus and ellipsis. Consider first a focus example:

(53)   Trump$_1$ and his campaign manager have very different opinions. Only the campaign manager actually considers him$_1$ worth voting for.
   alternatives: {x actually considers him worth voting for (him=Trump)}

In the discourse, the only referents are Trump and the campaign manager. The only alternative to the manager is therefore Trump. In the alternative, then, Condition B appears to be violated. In the presuppositional analysis, however, the presupposition of the pronoun (really, any NP that is not a local anaphor) does not need to be met in the alternatives, and so the sentence is felicitous.

Condition B can apparently also be violated in ellipsis. Assume *her* and *she* refer to Melissa in the following:

(54)   Brandon is proud of her and she is too.

   a.   *antecedent clause:* Brandon is proud of her (her=Melissa)
       alternatives: {x is proud of her (her=Melissa)}

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b. *elided clause:* she is [proud of herself] (herself=Melissa)
   alternatives: {x is proud of herself (herself=Melissa)}

Once again, if presuppositions can be absent from focus alternatives, then the ordinary semantic value of the elided clause with a local anaphor can be a member of the focus semantic value of the antecedent clause with a pronoun, and vice versa. The clause with the anaphor can therefore be elided, even though its antecedent has a pronoun and not an anaphor.

   Consider now a Condition C example:

(55)   Melissa and her husband have very different views of her abilities. Only he thinks that Melissa's accomplishments have been significant.
   alternatives: {x thinks that Melissa's accomplishments have been significant}

In the discourse, the only referents are Melissa and her husband. The only alternative to the husband is therefore Melissa. In the alternative, then, Condition C appears to be violated. In the presuppositional analysis, however, the presupposition of the R-expression does not need to be met in the alternatives, and so the sentence is felicitous.

   As with Conditions A and B, Condition C can also appear to be violated in ellipsis:

(56)   Brandon is proud of what Melissa has accomplished and she is too.
   a.   *antecedent clause:* Brandon is proud of what Melissa has accomplished
      alternatives: {x is proud of what Melissa has accomplished}
   b.   *elided clause:* she is [proud of what she has accomplished] (she=Melissa)
      alternatives: {x is proud of what she has accomplished (she=Melissa)}

Once again, ellipsis can be licensed even though the antecedent and the elided clauses do not strictly match. If presuppositions can be absent from focus alternatives, then the ordinary semantic value of the elided clause is a member of the focus semantic value of the antecedent clause, and vice versa. There is no need for an operation of vehicle change (Fiengo and May 1994); the fact that the elided clause and the antecedent clause can differ simply follows from the licensing condition on ellipsis.

   As can be seen, the PPC binding theory accounts for all of the data that has been discussed here. It also meets all of the desiderata of a binding theory listed above.

6.5   Reciprocals

Another advantage of the PPC binding theory is that it can readily account for reciprocals. Reciprocals also fall into the class of local anaphors in the classical binding theory, but they have typically been ignored in alternatives to it.

   Reciprocals might initially seem to raise a problem for the PPC binding theory. They permit strict readings just like reflexives do:

(57)   a.   They hate each other almost as much as their enemies do. ('hate them')
   b.   We blamed each other. The boss did, too, and fired us both. ('blamed us')

However, the semantics of reciprocals is at-issue, not presuppositional. We might therefore expect strict readings to be unacceptable in ellipsis.

   To account for reciprocals, we simply have to break them down into distinct at-issue and presuppositional meaning components. First, I follow Heim *et al.* (1991) and many others in breaking their at-issue meaning down into two parts, a distributor and a disjointness operator ('other'):

(58) At-issue meaning of reciprocals

    a.   Distributor that distributes over antecedent

    b.   Disjointness operator

(59) *paraphrase:* each one_1 of $ANTECEDENT_2$ Vs each one of those of $them_2$ that is different from him/her_1

I will keep this very informal here. In the paraphrase, the 'each one' part at the beginning corresponds to the distributor, distributing over the antecedent. The disjointness operator creates for each member of the antecedent the set of the antecedent minus that individual ('that is different from him/her').

The presuppositional meaning of a reciprocal is exactly Condition A: it presupposes identity of denotation within discourse set A. It is only this presupposition that can be missing from focus alternatives.

Consider now how an ellipsis example will work. Once again the elided clause can have a pronoun rather than a local anaphor:

(60) We_2 blamed each other. The boss did, too. ('blame us')

    a.   *antecedent clause:* each one_1 of us_2 blamed each of those of $them_2$ that is distinct from him/her_1
        alternatives: {x blamed each of those of $them_2$ that is distinct from x}

    b.   *elided clause:* the boss did [blame us_2]
        alternatives: {x blamed us_2}

The ordinary semantic value of the elided clause is a member of the focus semantic value of the antecedent clause, if the presupposition is not part of it. If the boss blamed us, understood distributively (which I assume nothing blocks), then he did blame each of those of $them_2$ (=us) that is distinct from him. The ordinary semantic value of the antecedent clause is also a member of the focus semantic value of the elided clause, since it is distributive: in the ordinary semantic value of the antecedent clause, A blames B and B blames A. Collectively, A and B are 'us'. A and B fill in for *x* in the focus semantic value of the elided clause. Adding up what A and B do, A and B are both blamed. This means that 'us' is blamed in the ordinary semantic value of the antecedent. This in turn means that the ordinary semantic value of the antecedent clause is a member of the focus semantic value of the elided clause. Hence the licensing condition on ellipsis is met, and ellipsis of *blame us* is licensed by the existence of an antecedent *blame each other*.

One might then expect that licensing could go the other way, and ellipsis of a clause with a reciprocal could be licensed by an antecedent with a pronoun. This does not seem to be possible:

(61) a.   The boss blamed us. We did, too. (*'blamed each other')

    b.   The police beat the suspects. Once they were in prison together, they did too. (*'beat each other')

I suggest that this is not a problem of licensing, but of recoverability. In general, it is not easy to recover the semantics of an elided item if the antecedent is lacking that semantics. It is relatively easy to go from the more complex item as part of the antecedent (e.g., a reciprocal) to a simpler item in the elided clause (e.g., a pronoun), but it is very difficult to go the other way. This is not a matter of the grammar, however, it is due to processing heuristics. The parser will never attempt to posit material that is not justified by the antecedent, because in principle there is an infinite number of possibilities. So it will simply never consider it. The same goes for production: a speaker will assume that a listener cannot recover a missing more complex item, and so will not attempt to elide anything on this pattern.

Given this, the PPC binding theory is able to account for reciprocals, just like the classical binding theory. As in the classical binding theory, reciprocals belong to the class of local anaphors. This class has

a presupposition of local covaluation. However, the semantics of reciprocals is completely different. It is not clear that alternative theories can deal with reciprocals. As mentioned above, most of them simply ignore them. Reinhart and Reuland (1993) only discuss reflexives, and in fact their whole theory is bound up inextricably with the semantics of reflexives (in fact they call their theory "Reflexivity"). Reuland (2011) also ignores reciprocals, and again it is not clear that the theory there can be extended to them. It is an advantage of the current account that the presupposition on local anaphors has nothing to do with their semantics. Reflexives and reciprocals differ markedly in their semantics, but what they have in common is the need for a local antecedent. (For more discussion of reciprocals in the presuppositional account see Sauerland 2013.)

6.6 Summary

In this section, I have proposed a new binding theory, the PPC binding theory, which combines the precede-and-command approach of Bruening (2014) with the presuppositional approach to Condition A in Sauerland (2013). The PPC binding theory can account for all of the basic binding facts, including the facts of coordinated objects that Reuland's account struggles with. It also accounts for strict readings of reflexives (and reciprocals), and it extends easily to cover reciprocals. Because it is based on precede-and-command rather than c-command, it also covers all of the data discussed in Bruening (2014). See that paper for details.

7 Some Further Issues

In this section I discuss some further issues related to the binding theory. Some of them are discussed by Nediger (2017), who tries to extend the analysis of Safir (2004) to account for them. I show here that they receive a natural account in the PPC binding theory, although they do necessitate a slight reworking of Condition B.

7.1 Epithets Versus Disambiguation

Nediger (2017) discusses epithets and notes a problem for the formulation of Binding Condition C as Minimize Restrictors as in Schlenker (2005a) and the PPC binding theory here. They will necessitate a slight reformulation of Condition B. First, epithets can appear to violate Condition C:

(62) John$_1$ is so careless that the idiot$_1$ will get killed in an accident one of these days. (Nediger 2017: (23a))

This is straightforwardly allowed by Condition C (Minimize Restrictors): Dropping the restriction (to use a pronoun) would lose the denotation of *idiot*, and so it is allowed not to drop.[7]

The issue raised by Nediger (2017) is that epithets cannot take a local antecedent:

(63) a. * John$_1$ is so careless that he$_1$ will kill the idiot$_1$ in an accident one of these days. (Nediger 2017: 112, (23))

  b. John$_1$ is the stupidest realtor ever. *He$_1$ accidentally sold the idiot$_1$'s own house.

Nediger seems to be assuming that Condition C is what rules out an R-expression in a case of local anaphora. This is not the case in the current account. Condition B is what rules it out:

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[7]There is an additional restriction on epithets which I will not discuss here: epithets are anti-logophoric, which means that they cannot refer to the author of the attitude report they are embedded within (Dubinsky and Hamilton 1998).

(64)   PPC Binding Condition B (to be revised):
       The denotation of any NP that is not a local anaphor is presupposed not to be identical to a denotation
       in set A.

Epithets are not local anaphors, therefore they are always presupposed not to be identical to the denotation of
any NP in the local domain. They can appear to violate Condition C, but never Condition B. Their behavior
is therefore exactly as expected in the PPC binding theory.

   A problem arises, though, because we then expect that Condition B can never be violated. This is not
correct. Under certain conditions it can be, for instance with focus. This is true both when the antecedent is
focused (65), and when the repeated name is focused (66):

(65)   a.   Only BERTRAND likes Bertrand.
       b.   Even BERTRAND hates Bertrand.
       c.   A: Nobody likes Bertrand. B: BERTRAND likes Bertrand.
(66)   a.   Bertrand only likes BERTRAND.
       b.   Bertrand even likes BERTRAND.
       c.   A: Bertrand doesn't like anybody. B: Bertrand likes BERTRAND.

In (65a), the alternatives are *{x likes Bertrand}*, where *x* is alternatives to Bertrand. The presupposition of
non-identity is met here. It is in the assertion ('Bertrand likes Bertrand') that it is not. So having presuppo-
sitions be absent from focus alternatives does not help with these kinds of examples.

   With long-distance cases, the formulation of Condition C as Minimize Restrictors straightforwardly
allows exceptions for focus. I repeat the definition of Condition C:

(67)   PPC Condition C (Minimize Restrictors):
       The denotation of an NP of the form *Det R* is presupposed not to be identical to the denotation of
       an NP in active set C if R could have been dropped without affecting either (i) the denotation of the
       description or (ii) its various pragmatic effects.
(68)   Even BERTRAND thinks Bertrand is a fool.

Clause (i) permits epithets as in (62). Clause (ii) is what permits examples like (68). Basically, the restriction
does not have to be dropped (to yield a pronoun) if not dropping it has some sort of pragmatic effect. Here
it does. It has the pragmatic effect of disambiguating to the coreferential interpretation. (68) could also
have been expressed as *Even BERTRAND thinks he is a fool*, with a pronoun in the embedded clause. This
sentence, however, is ambiguous between the strict (coreferential) and sloppy (bound) reading. Repeating
the name disambiguates to the strict (coreferential) reading. The predicate that is asserted to hold of Bertrand
in addition to others is the property of thinking Bertrand is a fool, as opposed to the property of considering
oneself a fool.

   It appears that we should want the same sort of account for the local cases, since the violation appears
to be permitted for the exact same reason. For instance, in (66a), the sentence could have been expressed
as *Bertrand only likes HIMSELF*, but again this is ambiguous between the strict and the sloppy reading.
Repeating the name resolves the ambiguity to the strict reading, and it is therefore permitted. The problem
is that if we allow violations like those in (65–66) via Minimize Restrictors, then we ought to allow epithets
with local antecedents too, as in (63).

   It is often claimed that focus also permits violations of Condition B with pronouns (see the references
in Roelofsen 2010):

(69)   (Roelofsen 2010: 118, (9–11))

a. Only Max himself voted for him.

b. I know what John and Mary have in common. John hates Mary and Mary hates her too.

c. If everyone voted for Oscar, then certainly Oscar voted for him.

However, some researchers have noted that sentences of this form are not fully acceptable, and in fact many speakers reject them (Schlenker 2005b, Jacobson 2007, Heim 2007). In the experiments in McKillen (2016), subjects uniformly reject them. However, it is also true, as McKillen (2016: 160) notes, that attested examples exist. They almost all involve first and second person, though, not third:

(70)   (all examples cited in McKillen 2016: 160)

a. Even I laughed at me when I built this alien cross-species genetic analyser. (Futurama S05E05)

b. Mycroft: I got you out. Sherlock: No, *I* got me out. (Sherlock S03E01)

It therefore appears that Condition B is much less violable than Condition C is. Condition C can be violated by epithets, for the reason of adding a denotation, and by repeated R-expressions, for various pragmatic reasons, including disambiguation. Condition B can only be violated by repeated R-expressions and repeated first and second person pronouns. I should also point out that repetition of the exact same R-expression as the antecedent is not required:

(71)   A: Who did the suspect call? B: The suspect, who we are calling Person X, called Person X.

It also does not appear that focus is particularly important, although most examples of this do involve focus:

(72)   OK, here's what I think happened: Prisoner 1 stabbed prisoners 2 and 4, then prisoner 3 stabbed prisoner 1 and prisoner 3.

It appears that the motivation for violations of Condition B is uniformly disambiguation.
      I therefore suggest amending Condition B to the following:

(73)   PPC Binding Condition B (final version):
      Unless NP N that is not a local anaphor is being used specifically to refer unambiguously to a referent in the discourse, the denotation of N is presupposed not to be identical to a denotation in set A.

This reformulation says that when an NP is being used specifically for the purpose of unambiguously picking out a discourse referent, then the presupposition of Condition B does not hold. This makes sense, since an NP being used for that purpose should have no presuppositions about who it refers to. The presupposition only holds of NPs not being used for this purpose.
      Note that this predicts that non-referential NPs can never violate Condition B, and this appears to be correct:

(74)   a. A: Who did every suspect call? B: Every suspect called every suspect. (*'Every suspect called him/herself.')

b. NO ONE got no one out. (*'No one got him/her self out.')

In contrast, epithets can be quantificational, as in (75):

(75)   Every one of my captors$_1$ was so cruel that I am convinced the evil bastard$_1$ has a special place reserved for them in hell.

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Going back to the data above, the reformulated Condition B still rules out epithets with a local antecedent as in (63). Epithets are not used to unambiguously refer, they are used to add expressive content. They are therefore always presupposed not to be identical to a denotation in Set A. The revised Condition B does permit the examples in (65–66), because the R-expressions in those examples are being used to unambiguously refer to an individual (which then disambiguates to the coreferential or strict interpretation).

As for pronouns, only first and second person appear to be able to violate Condition B easily. This is because third person pronouns are generally not used to unambiguously refer, at least not without an accompanying pointing gesture. A repeated R-expression always serves that purpose much better. It is therefore always better to repeat a name or an R-expression than it is to use a pronoun with a local antecedent. (The other option is to use a local reflexive, but then that is ambiguous between the strict and the sloppy reading under focus.) With first and second person, however, there is no R-expression that can be used to refer unambiguously to the speaker or the hearer. The only lexical items that do that are first and second person pronouns. Therefore these pronouns *can* be used to unambiguously refer, and so they can violate Condition B.

To summarize, Condition C and Condition B differ in the exceptions they allow. Condition C allows exceptions for many different reasons, while Condition B allows exceptions only for unambiguous reference. This is why epithets can appear to violate Condition C but not Condition B, while repeated R-expressions can violate both.

7.2 Epithet Possessors

Nediger (2017) notes that epithets as possessors also cannot be locally bound:

(76) (Nediger 2017: 112–113, (24–25))
    a.   Every bastard$_1$'s mother thinks the bastard$_1$ is crazy.
    b. * Every bastard$_1$ raised the bastard$_1$'s hand.
    c. * He$_1$ raised the bastard$_1$'s hand.
    d. * Jacob$_1$ raised the bastard$_1$'s hand.
    e. * The bastard$_1$ raised the bastard$_1$'s hand.

Nediger suggests that there is an additional restriction on epithets when they are possessors. This is that they have an antisubject orientation. Nediger claims that this constraint is supported by the following pair, where the possessive epithet cannot refer to the local subject but can (marginally) refer to a local object:

(77) (Nediger 2017: 113, (27))
    a. * Raisa$_1$ showed Olga the idiot$_1$'s house.
    b. ? Raisa showed Olga$_1$ the idiot$_1$'s house.

The above example seems exceptional in its (very marginal) acceptability, however. No other example that I have been able to construct permits an epithet to refer to a local object:

(78) a. * He's so stupid, I was able to sell him$_1$ the idiot$_1$'s own pants.
         (cf. I was able to sell the idiot$_1$ his$_1$ own pants.)
      b. * The hostess placed him$_1$ next to the poor bastard$_1$'s ex-wife.
         (cf. The hostess placed the poor bastard$_1$ next to his$_1$ ex-wife.)
      c. * They finally told him$_1$ about the poor bastard$_1$'s children.
         (cf. They finally told the poor bastard$_1$ about his$_1$ children.)

Above I analyzed locally bound possessive pronouns in English as local anaphors. That is, I claimed that possessive pronouns in English are ambiguous between pronouns and local anaphors. Epithets as possessors do not have the option of being local anaphors. They are always R-expressions. This means that they are always ruled out by Condition B if they have a local antecedent. There is no need to posit a special condition on possessive epithets, their behavior simply follows from Condition B. Note that this predicts that epithet possessors can take a non-local subject as antecedent, which is correct:

(79) a. John$_1$ is so careless that the idiot$_1$'s poor driving is going to kill someone one of these days.

b. John$_1$ was devastated when his own advisor accidentally destroyed the poor bastard$_1$'s research notes.

This is not expected by the anti-subject-orientation analysis, unless that analysis is amended to exclude specifically the most local subject.

To summarize, epithets behave exactly as expected in the current analysis. They are always ruled out with a local antecedent by Condition B. Not only that, I take their behavior as possessors to support the ambiguity analysis of English possessive pronouns. If we were instead to reformulate Condition B in such a way as to allow a possessor to take the local subject as its antecedent, then we would have no explanation for why epithet possessors cannot take the local subject as their antecedent.

7.3 Focus Logophors

We have seen that focus can permit violations of the binding conditions, especially Condition B and Condition C. Focus also permits local anaphors to be used without a local antecedent in some cases, for some speakers, in apparent violation of Condition A. Such apparently antecedentless anaphors are what Reinhart and Reuland (1993) refer to as "focus logophors":

(80) (Reinhart and Reuland 1993: 672, (27))

a. This letter was addressed only to myself.

b. Why should the state always take precedence over myself?

c. Bismarck's impulsiveness has, as so often, rebounded against himself.

By far the most common example of this involves first person *myself*.

I see two possible accounts of this. First, for speakers who permit this (I am not one of them), the local anaphor here is not actually a local anaphor, it is being used in some other way (however exempt anaphors are used). The second option is that it is a local anaphor, but speakers who allow this permit first person and sometimes second person and third person logophoric centers to be in Set A all the time. Then the local anaphor can refer to them, even though no NP with that denotation was used in the local syntactic context. I will not attempt to decide between these two alternatives here, nor will I attempt to spell out an analysis of exempt anaphors in which they are used as something other than a local anaphor. I will leave that topic to future research.

7.4 Strong Crossover

The last issue I will discuss here is strong crossover. Following Wasow (1972) and Chomsky (1981), strong crossover is often accounted for as a Condition C violation (see Lasnik and Funakoshi 2017 for an overview):

(81) * Which girl$_1$ does she$_1$ think John likes ~~which girl~~$_1$?

In the copy theory of movement (Chomsky 1993), there is an unpronounced R-expression in the extraction site, as shown with strikethrough. This R-expression is bound by an antecedent in an A-position that precedes and phase-commands it. This is a violation of Condition C.

Lasnik and Funakoshi (2017) and Nediger (2017) point out that, unlike standard Condition C violations, focus on the antecedent does not remedy the violation (Lasnik and Funakoshi cite a 2008 class handout of Seth Cable for this observation):

(82)   * Who$_1$ does only HE$_1$ (HIMSELF) still think Mary likes t_1? (Lasnik and Funakoshi 2017: (89))

Both take this to suggest that Strong Crossover should not be accounted for as a Condition C violation.

In the current analysis, this is no barrier to analyzing strong crossover as a Condition C violation. I assume first of all that in an example like (81), the trace position is filled with a silent copy of the wh-phrase. As shown, it is of the form *Det R* (it is possible the wh-determiner is transformed into the definite article, as in Fox 2002). As explained in the previous subsection, focus permits R not to be dropped in non-wh cases because leaving R present can serve a pragmatic purpose like disambiguation. Since R is not actually pronounced in the wh-case, being part of a null copy, there is no way it can serve this pragmatic function. Therefore focus does not help in (82).

It is worth highlighting the definition of Condition C here, because strong crossover simply follows from it, as does the failure of focus to remedy it:

(83)   PPC Condition C (Minimize Restrictors):
        The denotation of an NP of the form *Det R* is presupposed not to be identical to the denotation of an NP in active set C if R could have been dropped without affecting either (i) the denotation of the description or (ii) its various pragmatic effects.

I assume that in the null copy, R can not actually be dropped without violating the grammar. But notice that in the formulation of Condition C, that does not matter, the only thing that allows R not to be dropped is affecting either the denotation or the pragmatics. Nothing is said about grammatical principles. The result is that dropping R violates the grammar, but not dropping R violates Condition C. There is simply no way to get around violating something, and so strong crossover always results.

Strong crossover therefore falls out from the way Condition C is stated here, as does the failure of focus to remedy the violation. I take this to be a strong advantage of the approach.

7.5 Summary

This section has gone through some issues from the literature regarding focus, strong crossover, and epithets. Nediger (2017) had to make various ancillary hypotheses to fit them into the theory of Safir (2004). They all simply fall out from the PPC binding theory, with no additional assumptions or hypotheses necessary. In addition, the behavior of epithet possessors supports the ambiguity account of pronouns that can be locally bound or not.

8 Conclusion

I have argued here that the central tenets of the classical binding theory are correct: the binding conditions regulate both binding and coreference, and NPs fall into classes subject to distinct conditions. These conditions do not involve syntactic movement and they do not involve competition. I have proposed a new version of the classical binding theory, the PPC binding theory, which states the binding conditions as presuppositions on NPs. This theory accounts for all of the basic binding theory data, including reciprocals, and it also accounts for the effects of focus and ellipsis.

I have mostly focused on English, and there is obviously a lot more to be accounted for when we turn to other languages. I have argued that certain NPs in particular languages that were argued to be problematic for the classical binding theory are actually not, but in many cases, like Dutch *zich* and SE anaphors in general, we still need to do a lot more work. Only further research can tell us whether they really can be accounted for by a version of the classical binding theory. Continuing with cross-linguistic diversity, in some languages, local anaphors are strictly subject-oriented, and so the binding conditions will have to allow some parameterization in order to capture this (either Set A can only include subjects, or the presupposition requires identity of denotation with a subject in Set A). The locality condition may have to be modified or parameterized across languages, as well (to allow embedded subjects as local anaphors, for instance, briefly alluded to in section 5). Many languages have reflexive possessors; these should fit into the theory straightforwardly, but future work will have to verify that.

I have also argued against existing reductionist accounts. I have shown that these have so far been very unsuccessful. This does not mean that no reductionist account could ever be successful, however. I hope that this paper has at the very least shown what a reductionist account will have to do in order to be successful. The PPC binding theory I have proposed has simply stipulated the classes of NPs and the conditions they are subject to. Any successful reductionist account will have to account for all of the data that the PPC binding theory does, but derive at least some of the primitives from other, independently necessary first principles.

Finally, I also briefly argued against accounts that tried to relate the binding behavior of certain NPs to their featural makeup, or their syntactic structure. I should emphasize that all I have done here is show that certain particular claims in this direction are incorrect or unmotivated. I believe that there actually are cross-linguistic tendencies of this sort that need to be accounted for. Local anaphors tend overwhelmingly to be morphologically complex, for example (but not always, especially the ambiguous ones). The behavior of certain pronominal elements or even R-expressions sometimes seems to be related to their syntactic makeup (see Deen and Timyam 2018, for instance). Future work should pay very careful attention to this issue.

Bibliography

Abels, Klaus (2003), *Successive-Cyclicity, Anti-Locality, and Adposition Stranding*. Ph.D. thesis, Storrs, CT: University of Connecticut. Available at http://ling.auf.net/lingBuzz/000049.

Alexiadou, Artemis, and Elena Anagnostopoulou (2001), "The Subject-in-Situ Generalization and the Role of Case in Driving Computations." *Linguistic Analysis* 1: 205–245.

Alexiadou, Artemis, and Elena Anagnostopoulou (2007), "The Subject-in-Situ Generalization Revisited." In Hans-Martin Gärtner and Uli Sauerland, eds., *Proceedings of the Workshop on Interfaces + Recursion = Language?*, Berlin: Mouton de Gruyter, pp. 31–60.

Authier, J.-Marc (1992), "Iterated CPs and Embedded Topicalization." *Linguistic Inquiry* 23: 329–336.

Bhatt, Rakesh, and James Yoon (1991), "On the Composition of COMP and Parameters of V2." In Dawn Bates, ed., *The Proceedings of the Tenth West Coast Conference on Formal Linguistics*, Stanford: CSLI Publications, pp. 41–52.

Bresnan, Joan (1976), "On the Form and Functioning of Transformations." *Linguistic Inquiry* 7: 3–40.

Bruening, Benjamin (2014), "Precede-and-Command Revisited." *Language* 90: 342–388.

Bruening, Benjamin (2016), "Alignment in Syntax: Quotative Inversion in English." *Syntax* 19: 111–155.

Büring, Daniel (2005a), *Binding Theory*. Cambridge: Cambridge University Press.

Büring, Daniel (2005b), "Bound to Bind." *Linguistic Inquiry* 36: 259–274.

Chomsky, Noam (1981), *Lectures on Government and Binding*. Dordrecht: Foris.

Chomsky, Noam (1986), *Knowledge of Language: Its Nature, Origin, and Use*. New York: Praeger.

Chomsky, Noam (1993), "A Minimalist Program for Linguistic Theory." In Kenneth Hale and Samuel Jay Keyser, eds., *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, Cambridge, MA: MIT Press, pp. 1–52.

Chomsky, Noam (2008), "On Phases." In Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, eds., *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud*, Cambridge, MA: MIT Press, pp. 133–166.

Cole, Peter, Gabriella Hermon, Yassir Tjung, Chang-Yong Sim, and Chonghyuck Kim, eds. (2007), *Anaphoric Expressions in the Peranakan Javanese of Semarang*. Muenchen: Lincom.

Cole, Peter, Gabriella Hermon, Yassir Tjung, Chang-Yong Sim, and Chonghyuck Kim (2008), "A Binding Theory Exempt Anaphor." In Ekkehard König and Volker Gast, eds., *Reciprocals and Reflexives: Theoretical and Typological Explorations*, Berlin: Mouton de Gruyter, pp. 577–590.

Cole, Peter, Gabriella Hermon, and Yanti (2015), "Grammar of Binding in the Languages of the World: Innate or Learned?" *Cognition* 141: 138–160.

Culicover, Peter W. (1991), "Topicalization, Inversion and Complementizers in English." In Denis Delfitto, Martin Everaert, Arnold Evers, and Frits Stuurman, eds., *Going Romance and Beyond*, Utrecht: University of Utrecht, pp. 1–45.

Dahl, Östen (1973), "On So-Called 'Sloppy Identity'." *Synthese* 26: 81–112.

Deen, Kamil Ud, and Napasri Timyam (2018), "Condition C in Adult and Child Thai." *Language* 49: 157–190.

Dubinsky, Stanley, and Robert Hamilton (1998), "Epithets as Antilogophoric Pronouns." *Linguistic Inquiry* 29: 685–693.

Fiengo, Robert, and Robert May (1994), *Indices and Identity*. Cambridge, MA: MIT Press.

Fox, Danny (2000), *Economy and Semantic Interpretation*. Cambridge, MA: MIT Press and MIT Working Papers in Linguistics.

Fox, Danny (2002), "Antecedent Contained Deletion and the Copy Theory of Movement." *Linguistic Inquiry* 33: 63–96.

Frazier, Lyn, and Charles Clifton, Jr. (2006), "Ellipsis and Discourse Coherence." *Linguistics and Philosophy* 29: 315–346.

van Gelderen, Elly (2000), *A History of English Reflexive Pronouns: Person, Self, and Interpretability*. Amsterdam/Philadelphia: John Benjamins.

Grodzinsky, Yosef, and Tanya Reinhart (1993), "The Innateness of Binding and Coreference." *Linguistic Inquiry* 24: 69–101.

Haddad, Youssef A. (2007), "Subject Anaphors: Exempt or Not Exempt?" *Linguistic Inquiry* 38: 363–372.

Heim, Irene (1998), "Anaphora and Semantic Interpretation: A Reinterpretation of Reinhart's approach." In Uli Sauerland and Orin Percus, eds., *The Interpretive Tract*, Cambridge, MA: MITWPL, vol. 25 of *MIT Working Papers in Linguistics*, pp. 205–246.

Heim, Irene (2007), "Forks in the Road to Rule I." Invited talk at NELS 38, available at https://semanticsarchive.net/Archive/TA0ZGI3O/Nels%2038%20talk.pdf.

Heim, Irene, and Angelika Kratzer (1998), *Semantics in Generative Grammar*. Oxford: Blackwell.

Heim, Irene, Howard Lasnik, and Robert May (1991), "Reciprocity and Plurality." *Linguistic Inquiry* 22: 63–101.

Hestvik, Arild (1995), "Reflexives and Ellipsis." *Natural Language Semantics* 3: 211–237.

von Heusinger, Klaus (2007), "Alternative Semantics for definite NPs." In Kerstin Schwabe and Susanne Winkler, eds., *On Information Structure, Meaning and Form: Generalizations across Languages*, Amsterdam: John Benjamins, pp. 485–508.

Hornstein, Norbert (2001), *Move! A Minimalist Theory of Construal*. Cambridge, MA: Blackwell.

Jacobson, Pauline (2007), "Direct Compositionality and Variable-Free Semantics: The Case of 'Principle B' Effects." In Chris Barker and Pauline Jacobson, eds., *Direct Compositionality*, Oxford: Oxford University Press, pp. 191–236.

Kayne, Richard (2002), "Pronouns and their Antecedents." In Samuel David Epstein and T. Daniel Seely, eds., *Derivation and Explanation in the Minimalist Program*, Oxford: Blackwell, pp. 133–166.

Keenan, Edward L. (1971), "Names, Quantifiers, and the Sloppy Identity Problem." *Research on Language and Social Interaction* 4: 211–232.

Kim, Christina S., and Jeffrey T. Runner (2009), "Strict Identity, Coherence, and Parallelism in VP Ellipsis." In Ed Cormany, Satoshi Ito, and David Lutz, eds., *Proceedings of Semantics and Linguistic Theory (SALT) 19*, eLanguage, pp. 275–287.

Lasnik, Howard, and Kenshi Funakoshi (2017), "Condition C Violations and Strong Crossover." In Martin Everaert and Henk van Riemsdijk, eds., *The Wiley Blackwell Companion to Syntax*, ?: John Wiley and Sons, vol. ?, second ed., p. ?

Lebeaux, David (1983), "A Distributional Difference between Reciprocals and Reflexives." *Linguistic Inquiry* 14: 723–730.

Lidz, Jeffrey (2001), "Condition R." *Linguistic Inquiry* 32: 123–140.

McCloskey, James (2006), "Questions and Questioning in a Local English." In Raffaella Zanuttini, Héctor Campos, Elena Herburger, and Paul H. Portner, eds., *Negation, Tense and Clausal Architecture: Cross-Linguistic Investigations*, Georgetown, D.C.: Georgetown University Press, pp. 86–126.

McKillen, Alanah (2016), *On the Interpretation of Reflexive Pronouns*. Ph.D. thesis, McGill University.

Merchant, Jason (1999), *The Syntax of Silence: Sluicing, Islands, and Identity in Ellipsis*. Ph.D. thesis, University of California Santa Cruz.

Nediger, Will (2017), "Overcoming Empirical Challenges for an Extended Approach to Condition C." *Linguistic Inquiry* 48: 99–127.

Ong, Matthew, and Adrian Brasoveanu (2014), "Strict and Sloppy Reflexives in VP Ellipsis." In Christopher Piñón, ed., *Empirical Issues in Syntax and Semantics 10*, Online publication: http://www.cssp.cnrs.fr/eiss10/, pp. 251–268.

Partee, Barbara H., and Emmon Bach (1984), "Quantification, Pronouns, and VP Anaphora." In Jeroen Groenendijk, Theo M. V. Janssen, and Martin Stokhof, eds., *Truth, Interpretation and Information: Selected Papers from the Third Amsterdam Colloquium*, Dordrecht: Foris, pp. 99–130.

Potts, Christopher (2005), *The Logic of Conventional Implicatures*. Oxford: Oxford University Press.

Reinhart, Tanya (1981), "A Second Comp Position." In Adriana Belletti, Luciana Brandi, and Luigi Rizzi, eds., *Theory of Markedness in Generative Grammar: Proceedings of the 1979 GLOW Conference*, Pisa: Scuola Normale Superiore di Pisa, pp. 517–557.

Reinhart, Tanya (1983a), *Anaphora and Semantic Interpretation*. Chicago: University of Chicago Press.

Reinhart, Tanya (1983b), "Coreference and Bound Anaphora." *Linguistics and Philosophy* 6: 47–88.

Reinhart, Tanya (2006), *Interface Strategies*. Cambridge, MA: MIT Press.

Reinhart, Tanya, and Eric Reuland (1993), "Reflexivity." *Linguistic Inquiry* 24: 657–720.

Reuland, Eric (2001), "Primitives of Binding." *Linguistic Inquiry* 32: 439–492.

Reuland, Eric (2011), *Anaphora and Language Design*. Cambridge, MA: MIT Press.

Reuland, Eric (2017), "Grammar of Binding in the Languages of the World: Unity versus Diversity." *Cognition* 168: 370–379.

Richards, Norvin (2001), "A Distinctness Condition on Linearization." In Karine Megerdoomian and Leora Bar-El, eds., *WCCFL 20: Proceedings of the 20th West Coast Conference on Formal Linguistics*, Somerville, MA: Cascadilla, pp. 470–483.

Roelofsen, Floris (2010), "Condition B Effects in Two Simple Steps." *Natural Linguistic Semantics* 18: 115–140.

Rooryck, Johan, and Guido Vanden Wyngaerd (2011), *Dissolving Binding Theory*. Oxford: Oxford University Press.

Rooth, Mats (1992), "A Theory of Focus Interpretation." *Natural Language Semantics* 1: 117–121.

Safir, Ken (2008), "Construal and Narrow Syntax." *Syntax* 11: 330–355.

Safir, Kenneth (2004), *The Syntax of Anaphora*. Oxford: Oxford University Press.

Sag, Ivan (1976), *Deletion and Logical Form*. Ph.D. thesis, Massachusetts Institute of Technology. Distributed by MIT Working Papers in Linguistics, Cambridge, Mass.

Sauerland, Uli (2013), "Presuppositions and the Alternative Tier." In Todd Snider, ed., *Proceedings of Semantics and Linguistic Theory (SALT) 23*, eLanguage: http://elanguage.net/journals/salt/index, pp. 156–173.

Schlenker, Philippe (2005a), "Minimize Restrictors! (Notes on Definite Descriptions, Condition C and Epithets)." In Emar Maier, Corien Bary, and Janneke Huitink, eds., *Proceedings of Sinn und Bedeutung 9*, Radboud University Nijmegen: NCS, pp. 385–416. `www.ru.nl/ncs/sub9`.

Schlenker, Philippe (2005b), "Non-Redundancy: Towards a Semantic Reinterpretation of Binding Theory." *Natural Language Semantics* 13: 1–92.

Sung, Li-May (1990), *Universals of Reflexives*. Ph.D. thesis, University of Illinois at Urbana-Champaign.

Veraart, Fleur (1996), *On the Distribution of Dutch Reflexives*. Master's thesis, Massachusetts Institute of Technology.

Volkova, Anna, and Eric Reuland (2014), "Reflexivity without Reflexives?" *The Linguistic Review* 31: 587–633.

Wasow, Thomas (1972), *Anaphoric Relations in English*. Ph.D. thesis, Massachusetts Institute of Technology. Distributed by MIT Working Papers in Linguistics, Cambridge, Mass.

Williams, Edwin (1977), "Discourse and Logical Form1." *Linguistic Inquiry* 8: 101–139.

Yang, Dong-Whee (1983), "The Extended Binding Theory of Anaphors." *Language Research* 19: 169–192.

Yanti, Peter Cole, and Gabriella Hermon (2017), "The Grammar of Binding in the Languages of the World: A Response to Reuland." *Cognition* 168: 380–384.

Zwart, Jan-Wouter (2002), "Issues Related to the Derivational Theory of Binding." In Samuel David Epstein and T. Daniel Seely, eds., *Derivation and Explanation in the Minimalist Program*, Oxford: Blackwell, pp. 269–304.