

On The Derivation of the Anaphor Agreement Effect

Abstract. The Anaphor Agreement Effect (AAE; Rizzi 1990) is a phenomenon occasionally documented whereby reflexive and reciprocal elements cannot control otherwise expected verbal agreement. I argue that the AAE should be properly restricted to only some of the cases documented in the literature and properly understood as applicable only to verbal, not adjectival, agreement. I discuss the case of small clause predicative adjectives in Romance, which appear to show agreement with a reflexive element. The resulting picture is one in which the AAE is applicable to AGREE only, and not that morphology typically taken to be concord. I adopt a proposal for an operation CONCORD slightly modified from Norris (To Appear) and show how this not only accounts for the AAE and the associated adjectival facts, but also a particularly recalcitrant example of putative object agreement with the French reflexive clitic *se*.

1. Introduction

Issues of binding and agreement have been at the core of syntactic theorizing for decades and the question of how the two systems interact has recently risen to a new kind of prominence. The questions that arise here are natural and fundamental: given that the locality conditions governing the binding of anaphors (Condition A effects) and the locality conditions governing agreement and abstract Case are so tantalizingly close, it is natural to seek a theoretical unification of the two domains, as Chomsky (2008) has suggested. One area in which the two systems visibly interact is in the realm of what has come to be known as the Anaphor Agreement Effect. First discovered by Luigi Rizzi 1990, the Anaphor Agreement Effect names a body of observations from a wide variety of languages which indicate that agreement is either disrupted, or takes a special form, when the agreeing element is bound.¹ The Anaphor Agreement Effect constitutes a very important

We would like to thank . . .

¹For the purposes of the present paper, 'bound' will mean 'locally bound from an A-position' in the sense of Condition A of the Binding Theory of Chomsky (1986).

set of observations — both intrinsically and for the potential it has to shed light on how these two core subsystems of linguistic theory interact. The goal of the present paper is to build towards an understanding of the Anaphor Agreement Effect by clarifying its formulation and providing a theoretical analysis.

With the advent of minimalist approaches to syntactic theory such as Chomsky 1995b, *et seq.*, the mechanism responsible for fixing syntactic binding relations has received considerable scrutiny in the literature. Given that the theoretical mechanism of indexation violates the INCLUSIVE-NESS CONDITION of Chomsky (1995b:225), some researchers such as Chomsky (2008); Reuland (2001); Kratzer (2009; 1998); and Deal (2010b) have proposed accounts of binding wherein some or all local binding relations are fixed in the syntax via AGREE, the operation also responsible for fixing morphosyntactic agreement relations.² What each of these proposals share is the observation that both antecedent and anaphor must enter into morphosyntactic relationships with the verbal complex, and therefore need not be directly related syntactically themselves in order to co-vary. Given that there are several commonalities between the behavior of binding for Principle A and agreement, a filter or LF-approach to binding is argued to be unnecessary (and given an Occam's Razor-style reasoning, undesirable) when the conditions on coreference are statable in terms of AGREE.

In order to bolster this claim, many of these works (see especially Reuland 2001; Kratzer 2009; and Deal 2010b on this point) explicitly mention the distinctive agreement morphemes which arise in the context of anaphoric targets, facts well-documented in the brief literature on the ANAPHOR AGREEMENT EFFECT, stated informally in (1):

- (1) *The Anaphor Agreement Effect:* (AAE; adapted from Rizzi 1990 & Woolford, 1999)
Anaphors may not be the controller of agreement, unless that agreement is anaphoric in nature (and therefore lacking in ϕ -featural content).

Understanding the Anaphor Agreement Effect is not a straightforward matter, even when an AGREE-based theory of binding has been posited, as I show in the subsequent sections. In fact,

²In this paper, I will not discuss works such as Chomsky & Lasnik 1993; Chomsky 1993; or Hornstein 2001 which take MOVE to be the relevant operation for binding. Furthermore, this paper is not concerned with construal so much as binding, though for AGREE-based analyses of the former, see, *e.g.*, Borer 1989 and Landau 2001.

the observation that anaphors cannot be construed with agreement seems to argue that agreement and binding are in fact in complementary distribution in the clause (a point made explicitly by Kratzer (2009)), calling into question the entire enterprise of making a deep link between binding and the operation AGREE. But it is surely important to capture what it is that the two systems have in common. The analysis argued for here preserves the intuition that binding and agreement share the same locality domains, but holds that AAE effects emerge in two distinct steps: (i) syntactic agreement attempts to apply, but the lexical specification of anaphors makes morphological co-variation in agreement features impossible (following Reuland 2001 and Kratzer 2009) and (ii) in the post-syntactic morphological component, apparent feature-matching relations between the anaphor and other syntactic objects (antecedents and participles) is fixed via a process identifiable with adjectival concord. This move is forced by the observation that anaphors *may* participate in covariation of φ -features under certain syntactic conditions, while simultaneously not agreeing with the verbs that govern them. The claim, then, is that any apparent agreement relationships entered into by reflexive elements are analyzable as concord bereft of semantic effect, including antecedent–anaphor matching in φ -features. This claim in turn forces an understanding of the syntax of φ -covariation where verbal agreement is distinct from concord, both syntactically and morphologically. The resulting picture is one in which AGREE is responsible for formal argument licensing and semantically interpretable covariation only, whereas concord is responsible for other instances in which syntactic objects must match in featural content.

The argument is structured as follows: in §2, I review the empirical generalizations which underlie the Anaphor Agreement Effect. In §3, I discuss a problem for the particular formulation of the Anaphor Agreement Effect in Rizzi 1990 and Woolford 1999 raised by the agreement between predicate adjectives and subjects in Romance small clause complements to perception verbs. In §4 I show that these facts and others raise problems for previous proposals deriving the AAE and suggest an approach which relies on a post-syntactic operation of CONCORD, following the discussion in Norris To Appear. Finally, §5 discusses the implications of this bifurcation of binding across two components of grammar and concludes.

2. The Empirical Landscape

This section gives representative examples of the kinds of effects typically subsumed by the AAE. This is first done for the case of subject agreement in §2.1 and then for object agreement in §2.2. §2.3 then discusses several borderline cases which help clarify the range of phenomena to which the AAE is thought to apply, including reciprocals, complex DPs in which only a subpart (a possessor) is anaphoric, and long-distance anaphors.

2.1 Subject Agreement

The initial empirical motivation for the AAE comes from domains in which neither the EMPTY CATEGORY PRINCIPLE (ECP) nor the BINDING THEORY of Chomsky (1980; 1986) can account for the ungrammaticality of an anaphor. Given the definitions of both these principles, such examples can only be found for nominative anaphors in governed nonsubject positions.³ Given that the theory at that time took lexical heads such as verbs as governors, a logical place to expect the co-occurrence of agreement construal and an anaphor are places in which non-subjects receive structural nominative case.

Italian dative experiencer verbs such as *importare*, “to matter, be important” and *piacere*, “to like, please” are such a construction, as noted first by Rizzi (1990) and discussed further by Woolford (1999) and Deal (2010a). In the following paradigm from Deal (2010a:100–1), the verb *piacere* agrees with the postverbal nominative theme in (2a), but this agreement is not licit when the theme is an anaphor (2b). In some regional varieties of Italian, default 3.SG.MASC agreement is possible as a rescue strategy (denoted here by the diacritic [?], as in (2c)):

- (2) a. A loro piaccio io.
 to 3.PL.DAT please.1.SG I.NOM
 “They like me.” (Deal 2010a:100)
- b. * Mi piaccio me stesso.
 me please-1.SG myself
 “*Intended*: I like myself.” (Deal 2010a:101)

³This is because the Empty Category Principle rules out ungoverned traces; anaphors are assumed to move at LF in Rizzi 1990, following Lebeaux (1983) and Chomsky (1986); and so subject anaphors will be ungrammatical as ECP violations. Anaphors which are (properly) governed, on the other hand, will leave well-formed traces at LF if they move, those traces being properly governed and thus not violations of the ECP.

- c. ? Mi piace me stesso.
 me please-3.SG myself
 “I like myself.” (Deal 2010a:101)

The preferred option to express reflexive meanings in this construction involves marking the predicate in the genitive case, which does not normally trigger verbal agreement in Italian, as in the following example from Rizzi 1990:

- (3) a loro importa solo di se stessi.
 to them(.DAT) matters.3.SG only of themselves(.GEN)
 “All that matters to them is themselves.” (Rizzi 1990:33)

The key observation made by Rizzi (1990) concerning this state of affairs is that it is not attributable to a morphological gap corresponding to a nominative anaphor — such an anaphor is logically possible and would have the form given in (2b), above.⁴ It is thus not possible to ascribe the ungrammaticality of (2b) to anything other than the construal of an anaphor with the agreement morphology on *piacere*.⁵

⁴One might also object to an explanation of the lack of subject anaphors in terms of morphological case (as in, e.g., Brame 1977, Koster 1978, Anderson 1982, and Maling 1984) based on difficulties extending the approach to reciprocals (see Everaert 1991). However, such an objection is only valid if one assumes that reflexives and reciprocals receive a uniform syntactic treatment. I will suggest below that this cannot be the case for reflexives and reciprocals in English.

⁵In addition to Italian, similar facts have been argued to hold of dative experiencer constructions in Icelandic (Rizzi, 1990). Furthermore, Rajesh Bhatt has pointed out to me (p.c.) that the ungrammaticality of examples from Hindi such as (i) is possibly attributable to the AAE, as well:

- (i) * atif-ko apne aap / apne pasand hāī.
 Atif-DAT himself / SELF.MASC like is.3.SG
 “‘Atif likes himself” (Rajesh Bhatt, p.c.)

The verb *pasand* is a dative experiencer verb, which normally agrees with the following nominative DP, but cannot appear with the anaphors *apne aap* or *apne*. If the anaphor is in the possessor of the nominative, however, the result is grammatical:

- (ii) atif-ko apne riftedaar pasand hāī.
 Atif-DAT SELF.GEN.MASC.PL relatives like is.3.SG
 “‘Atif likes his relatives.” (Rajesh Bhatt, p.c.)

Here the nominative argument is not the anaphor, but a PROTECTED ANAPHOR in the sense of §2.3, so agreement on the verb is not with the anaphor *per se*.

2.2 Object Agreement

- (7) *Anaphor Agreement Effect* (Woolford’s 1999 version):
Anaphors do not occur in syntactic positions construed with agreement, unless the agreement is anaphoric.

It is worth taking a moment to specify what is meant by “anaphoric agreement” in a formulation of the AAE as in (7). The key observation here is that no known example of a language exists with a marker like the Swahili *-ji-* in marking an anaphoric object but unlike Swahili in varying with the ϕ -features of the object. That is, (8) appears to be true:⁶

- (8) *Anaphoric Morphology Generalization*:
Anaphoric morphology on syntactically transitive predicates is never varies in ϕ -features the anaphoric object.

Woolford (1999:266–7) provides the only possible counterexample that I am aware of to (8) from Nez Perce, which expresses reflexives via replacement of the regular subject and object agreement affixes by a single agreeing prefix, as in (9–10):

- | | | | | |
|------|----|---|----|--|
| (9) | a. | ’e-twýak-se.
3.OBJ-feel-IMPERF
“I feel it, I sense it.” (Deal 2010a:115) | b. | Ta’c ’inée-tewyek-se.
good 1.SG.REFL-feel-IMPERF
“I feel good.” (Deal 2010a:115) |
| (10) | a. | Pée-yyew-ne.
3/3-pity-PERF
“He _i pitied him _j .” (Deal 2010a:115) | b. | ’ipnée-yyew-ne.
3.SG.REFL-pity-PERF
“He pitied himself.” (Deal 2010a:115) |

Though as Deal (2010a:115–7) notes, there is considerable evidence suggesting that these kinds of predicates in Nez Perce are syntactically intransitive and the prefix series found in reflexives is derivational: they appear in nominalizations (Deal, 2010a:43), may appear with idiomatic meaning (Deal, 2010a:43), and can radically affect the argument structure of a verbal root (Deal, 2010a:44). It seems reasonable, then, to conclude that the ϕ -varying morphology seen in (9–10) is instead subject agreement with the sole argument of an intransitive predicate.

⁶This generalization is novel, as far as I am aware. A preliminary examination of about half the references for the core languages in the *World Atlas of Language Structures* (Haspelmath *et al.*, 2005) yields no counterexamples. However, a much more systematic investigation is needed. The difficulty in undertaking such a study is that it is crucial that the reflexive constructions in question be demonstrably syntactically transitive by some language-internal metric, or the data in question will be open to reanalysis of the kind Deal (2010a;b) undertakes for Nez Perce. In many cases the theoretical literature on transitivity underdetermines such an investigation.

Since Nez Perce is the only potential counterexample I am aware of to the generalization in (8), let us assume that (8) is a universal. We are then in a position to update Woolford's version of the AAE to the formulation in (11):

- (11) *Anaphor Agreement Effect* (2nd version):
Anaphors do not occur in syntactic positions construed with agreement, unless that agreement is not specified for φ -features.

In §4 I will show that several contemporary hypotheses make a version of the generalization in (11) theoretically explicit by postulating that reflexive elements do not have lexical specifications for agreement features (Kratzer, 2009; Reuland, 2001; Deal, 2010a). For now, however, I will use the generalization as a guiding definition of the AAE in the investigation of cases other than reflexives in argument position.

2.3 *DPs, Reciprocals, and Other Loose Ends*

In this section I discuss several other empirical phenomenon for which one might examine the applicability of a generalization such as (11). The first such case are languages where reflexive DPs are arguably syntactically complex, resulting in an apparent violation of the AAE (2.3.1). The following section (2.3.2) discusses where reciprocals should be placed in an understanding of the AAE. Finally, the last section (2.4) discusses a putative counterexample and concludes that long distance anaphora should not be considered in discussions of the scope of the AAE.

2.3.1 *Protected Anaphora*

In discussing possible counterexamples to the AAE, Woolford (1999) shows that many languages which appear to be counterexamples to the AAE in fact show agreement with a DP, the *possessor* of which is the anaphor. Since the possessor is not the syntactic constituent triggering agreement, these languages are not problematic for (11). The commonality among each of these languages is the fact that each of them has evidence for DP-like syntactic structure dominating the reflexive, in essence “protecting” it from direct external agreement. These instances of morphologically PROTECTED ANAPHORA are important for any discussion of the AAE, since the fact that they are

widely attested, when paired with the data from the sections above shows that natural language conspires to avoid configurations which might violate the AAE. A particularly clear example of this strategy is discussed in Woolford 1999 from the Austronesian language Selayarese.

In Selayarese, reflexive objects appear to trigger object agreement, as the following examples from Finer 1994 (cited in Woolford 1999) show:

(12) Agreeing Anaphors in Selayarese?

- a. la-ʔalle-i doeʔ-iñjo i basoʔ.
 3.ERG-take-3.ABS money-the DET Baso
 “Baso took the money” (Finer 1994:(2a))
- b. la-jañjang-i kalen-na.
 3.ERG-see-3.ABS SELF-3
 “He saw himself” (Finer 1994:(6a))

However, when one attempts to vary the person of the reflexive object, the agreement morphology on the verb remains 3rd person absolutive, as (13) shows (all examples from Dan Finer, p.c. to Ellen Woolford in 1999):

(13) No Agreeing Anaphors in Selayarese:

- a. ku-jañjang-i kaleng-ku.
 1.SG.ERG-see-3.ABS SELF-1.SG
 “I saw myself.”
- b. mu-jañjang-i kalem-mu.
 2.FAMILIAR-see-3.ABS SELF-2.FAMILIAR
 “You saw yourself.”
- c. to-jañjang-i kalem-ba.
 1.EXCLUSIVE-see-3.ABS SELF-1.EXCLUSIVE
 “We saw ourselves.”

Thus, Selayarese is not in violation of the AAE as stated in (11), though it is unclear what the language is doing to avoid configurations which violate (11) given just (12) and (13). Woolford (1999:275–6) gives (14) to show that reflexives in Selayarese have a structure superficially similar to possessives, suggesting that Selayarese embeds its anaphors as possessors of DPs which control agreement on the verb, which is a novel evasion mechanism for the AAE, given the discussion up to this point.

(14) Anaphors are Possessors in Selayarese:

- a. la-jañjang-i i ali andoʔ-na.
 3.ERG-see-3.ABS DET Ali mom-3.POSS
 “His mom saw Ali.” (Finer 1994:(5a))
- b. la-jañjang-i kalen-na.
 3.ERG-see-3.ABS SELF-3
 “He saw himself” (Finer 1994:(6a))

Taking the examples in (12–14) *in toto*, one can see that the reflexive element in Selayarese has the same form as a referential possessed nominal. Let us assume for present purposes that the structure of anaphors such as *kalen-na* in (14b) is like that in (15), abstracting away from the ordering of specifiers (*cf.*, Abney 1987):

(15) [DP REFL [D [NP $\sqrt{\text{KALEN}}$]]]

Such a structure will straightforwardly capture the generalization that each instance of Protected Anaphora involves a genitive-like marking on anaphors which covaries with the antecedent. Being in [Spec,D] position, genitive marking is the expected morphological outcome for ϕ -features valued in that position.

In a structure such as (15), one would moreover expect that agreement would be with the head noun *kaleN* and not its possessor, which in this case happens to be an anaphoric element. The AAE is respected because object agreement in Selayarese reflexives is with a lexical element. However, morphological matching still obtains between the anaphoric possessor and its antecedent; this is an important point to which I shall return in §4.⁷

Stepping back slightly, it is important to consider the import of Protected Anaphora for a proper understanding of the AAE. What data from languages such as Selayarese show is that the AAE does not obtain solely when an XP interpreted as coreferent with another argument is in a position to trigger verbal agreement. If that were the case, one would expect that the constituent in (15) would display the hallmarks of the AAE, contrary to fact. Instead, agreement is possible despite

⁷Similar cases exist in Modern Greek, as Woolford (1999) also discusses. Importantly, the Nez Perce cases discussed by Deal (2010a) show that the AAE is triggered in languages which express reflexives like Selayarese but which have demonstrable possessor raising.

the fact that the entire *kaleN*-POSS complex is interpreted as coreferent with the external argument. It is therefore impossible to account for binding via AGREE by simply positing a feature on bound elements which requires them to be bound (as is done in, *e.g.*, Hicks 2009), as such accounts cannot separate this feature from the complex DP which contains it.

2.3.2 What about Reciprocals?

Every work on the AAE to date (see Woolford (1999:fn.6) and Haegeman (2004:fn.2)) contains a discussion which worries about English and the behavior of subject reciprocals, and with excellent reason: their status with respect to the AAE is decidedly unclear. Woolford (1999) claims overtly that the AAE should be extended to include examples such as (16):

- (16) * They think that each other are linguists.

This is immediately problematic, however, as the example in (17) seems to be somewhat improved:

- (17) (?) The linguists and philosophers seldom know what each other are talking about.

At first blush, this could be accounted for by noting that such examples “in the wild” typically involve “default” singular agreement, as the following example shows:

- (18) Don't you all know what each other is going to say?
<http://www.peterme.com/archives/000750.html>

One could imagine assimilating such facts to the AAE, as Woolford (1999) does, but as Bennett (2009) notes, this is problematic for two reasons: (i) there are still a fair number of examples in the wild of subject reciprocals that *do* countenance plural agreement:

- (19) It may also help to work out what each other are wanting from the relationship.
<http://au.reachout.com/find/articles/maintaining-a-happy-relationship>

and (ii) under *no* conditions are subject reflexives licensed in default-agreement configurations like those above, as the next example shows:

- (20) * Max and Roger think that themselves {is, are} going to posit a Unified Field Theory.

Furthermore, there is no ready explanation for why the presence of *wh*-movement should lead to an amelioration of the AAE effect, especially given that this amelioration only seems to occur in English. It is worth noting that the phenomenon is not necessarily tied to *wh*-movement, suggesting that the presence of a syntactic operator is involved in the licensing of the reciprocal binding. A simple Google search reveals many instances of subject reciprocals in English in the presence of *if...then* conditionals, embedded interrogative *if* clauses, and *whether* interrogatives.⁸ Subject reciprocals in the absence of *wh*-movement or these constructions, however, were never found.

In a very similar vein, Everaert (1991) notes that one often finds what look like agreeing reciprocal subjects in Icelandic, as well (though *cf.* Woolford, 1999:fn.6 for discussion). What all this amounts to in the present context is the following: *contra* Woolford (1999), it is not assumed here that the AAE is responsible for the ungrammaticality of subject reciprocals in English.⁹

⁸These are examples such as the following:

- (1) *If...Then*:
It is a time to shut out the world for a while, to look only at each other and know that if each other is all you have, it will be more than enough.
<http://www.andtheylivedhappilyeverafter.com/33.htm>
- (2) *Interrogative If*:
Make sure they can't tell if each other is raising their hands.
<http://www.skeptoid.com/episodes/4148>
- (3) *Whether*:
This is not a time to argue whether each other is right or wrong, it's a time to listen to each other.
<http://www.familyresource.com/relationships/communication/expecting-the-worst>

I thank Boris Harizanov and Jim McCloskey for pointing out this data to me.

⁹Such an assumption also sidesteps an identical problem which arises in attempting to explain bans on reciprocal possessors in languages with possessor agreement/doubling. Such an approach is taken in Haegeman 2004 to account for the unavailability of reciprocal possessors in languages such as West Flemish, Dutch, and German (i) which have possessor doubling.

- (i) Anaphor Agreement Effects with Possessor Doubling:
 - a. *z'een mekoar under/zen/eur gasten gezien.
they.have each.other their/his/her guests seen
"They have seen each other's guests." (Haegeman 2004:706)
 - b. *ze hebben elkaar hun/z'n/d'r gasten gezien.
they have each.other their/his/her guests seen
"They have seen each other's guests." (Haegeman 2004:706)
 - c. *sie haben einander ihre gäste gesehen.
they have each.other their guests seen
"They have seen each other's guests." (Haegeman 2004:706)
- (ii) They have seen each other's guests.

2.4 A Potential Counterexample: Dravidian and Long Distance Anaphora

To conclude this overview of AAE effects, it is worth noting that the literature contains very few putative counterexamples to the AAE as stated in (11) — yet another argument for its generality. The single well-documented counterexample comes from Tamil. This section shows that the situation in Tamil is confounded by *long distance anaphora* in the language and discusses the place of long-distance anaphors in a proper understanding of the AAE.

2.4.1 Tamil and Dravidian in General

In his book *The Antisymmetry of Syntax*, Kayne (1994) first mentions that Dravidian languages are problematic for the AAE, citing examples from Tamil. While normally in Tamil reflexives occur only in nonfinite clauses which lack verbal agreement, a particular reported speech construction seems to show agreement between a third person embedded anaphoric subject and the verb:

- (21) murukeecan_i taan_i varreen-ṇṇu connaaru.
 Murugesan SELF come(.PRES.1.SG)-QUOT say(.PAS.3.SG.HONORIFIC)
 ‘Murugesan said, ‘himself/I was coming.’’ (Woolford 1999:270)

However, as Woolford (1999) notes, the agreement in the embedded clause is actually expressed on the verb as 1.SG, which does not constitute agreement under a strict feature-matching definition.¹⁰ While this may suffice to rule out (21) as a counterexample to the AAE, one should

Given that reciprocal possessors are available in closely-related Germanic languages such as English (ii), Haegeman (2004) concludes that the AAE is responsible for the ungrammaticality of possessor reciprocals in West Flemish, Dutch, and German.

I am not unsympathetic to the idea that one would expect to find instances of the Anaphor Agreement Effect in languages with true possessor agreement. However, these cases are problematic as instances of the AAE for several reasons. First, the explanation will not extend to the absence of possessive reflexives in English, as Haegeman (2004:710–1) points out, which are uniformly ungrammatical despite not being construed with agreement.

Furthermore, it is not entirely clear to me that the possessive markers which display this affect are true possessor agreement and not doubled clitics (indeed, the analysis presented in Haegeman 2004 suggests they must be, as they double a silent *pro*). If they are doubled clitics, then an explanation in terms of the AAE seems tenuous, given the documented differences between clitic doubling (see, e.g., Preminger 2009). If they are not doubled clitics, it is still not clear why one would expect a full pronominal copy to exhibit the properties of agreement morphology. A better test case for DP-internal languages, to my mind, is the Hungarian data presented by Haegeman (2004:709–10ff), which arguably shows that default possessor agreement is required in Hungarian DPs with anaphoric possessors.

¹⁰Furthermore, examples such as these seem ripe for an analysis in terms of indexical shift (cf., Schlenker, 2003, Anand & Nevins, 2004, and Cable, 2005, *i.a.*) If this is done, it may very well turn out that these examples are a consequence of the interaction of the framework proposed below with the mechanics of indexical shift. See Sundaresan, 2011 for just such an analysis, where it is argued that this data should not fall under the scope of the AAE.

still be concerned about the behavior of the Tamil anaphor *taan* – can it control agreement in other contexts?

In a recent squib, Selvanathan & Kim (2008) answer in the affirmative, citing examples from embedded indirect speech clauses, as in (22):

(22) Tamil Agreeing Anaphors?

- a. [taan varugir-aan/*-aal enru] murukeecan conn-aan.
 SELF come-3.SG.MASC/3.SG.FEM COMP Murugesan say-3.SG.MASC
 “Murugesan said he is coming.” (Selvanathan & Kim 2008:15)
- b. [taan varugir-aal/*-aan enru] mala conn-aal.
 SELF come-3.SG.FEM/3.SG.MASC COMP Mala say-3.SG.FEM
 “Mala said she is coming.” (Selvanathan & Kim 2008:15)

Similarly, Sundaresan (2011) gives the following two observations, which also show that the agreement in such contexts seems to be obligatorily non-default, as it can occur under a non-speech matrix verb or with feminine agreement:

- (23) a. raman_i taan_{i/*j} jey-pp-aan/*-een-nnu
 raman-NOM SELF-NOM win-FUT-3.MASC.SG/1.SG-that
 kaṇḍupidi-tt-an.
 find.out-PAST-3.MASC.SG
 “Raman found out that he would win.” (Sundaresan 2011:(2))
- b. seetha_i taan_{i/*j} jey-pp-aal/*-aan-nnu kaṇḍupidi-tt-aal.
 seetha SELF win-PAST-3.FEM.SG/3.MASC.SG-that find.out-PAST-3.FEM.SG
 “Seetha found out that she would win.” (Sundaresan 2011:(3))

If Selvanathan & Kim (2008) and Sundaresan (2011) are correct, then (22) poses a genuine challenge to the AAE, even under the less strict wording in (7). However, there is evidence that *taan* is not a genuine (local) anaphor, as noted by Everaert (2005), who notes that *taan* is minimally a *long-distance* anaphor, as it can be bound outside of its minimal domain, as (24) shows:

(24) Tamil *taan* and Long-Distance Behavior:

- a. kamalaa_j avan_i taan-ai_i veru-kkir-aan enru ninai-tt-aal.
 Kamala he SELF-ACC hate-PRES.3.SG.MASC COMP think-PAST-3.SG.FEM
 “Kamala thought that he hated himself.” (Everaert 2005:(22a))

- b. kamalaa_i avan_j taan-ai_i veru-kkir-aan enru ninai-tt-aal.
 Kamala he SELF-ACC hate-PRES.3.SG.MASC COMP think-PAST-3.SG.FEM
 “Kamala thought that he hated herself.” (Everaert 2005:(22b))

While *taan* displays the familiar local binding in (24a), (24b) shows that *taan* can be long-distance bound.¹¹ This conclusion raises the question of whether long-distance anaphors should or should not be expected to fall under the purview of the AAE.

To examine this question, it must be considered from two possible directions: (i) whether or not it is feasible to treat the bound elements in the same way (*i.e.*, are long-distance and local anaphors the same kinds of elements?) and (ii) whether or not the binding operation itself is the same in both local and long-distance cases. Let us take these questions in turn. There are, firstly, quite a few reasons to believe that long-distance anaphors (LDAs) are a fundamentally different beast from locally bound anaphors (*e.g.*, Cole & Sung, 1994; Cole *et al.*, 1990).

Firstly, LDAs tend to be monomorphemic, whereas their locally bound counterparts tend to be polymorphemic. Thus in Chinese one finds a locally bound form consisting of a pronoun followed by the reflexive element *ziji*, whereas the LDA is simplex *ziji* without a pronominal proclitic. Secondly, whereas locally bound anaphors must be construed with subjects, LDAs tend to allow binding from other grammatical functions. Thus whereas *ziji* procliticized by a pronoun cannot be coreferent with an object, the simplex LDA *ziji* may be noncoreferent with the subject. Thirdly, long distance anaphors exhibit what Cole & Sung (1994) call *The Blocking Effect* — when a chain of clausal embedding contains subjects which mismatch in person, LDAs are not permitted:¹²

¹¹Everaert (2005) notes that there are some instances in which *taan* does appear to be clause bound, but in those cases a verbal auxiliary which is reflexive-marked appears obligatorily. I have omitted these examples for space considerations, but note that if that generalization is correct, then those cases in Tamil become an instance of the “detransitivizing morphology” evasion strategy. What remains for future work, however, is to understand why *taan* in (24a) can trigger agreement, which is rare for long-distance anaphors cross-linguistically. For more discussion of why one would *not* want to include long-distance anaphors in the same morphosyntax as local anaphors, see Haddad 2007 and Kratzer 2009.

¹²Cole & Sung (1994) also note the puzzling cross-linguistic similarity that Italian and other Romance languages do not exhibit this Blocking Effect, as evidenced by data like (1):

- (1) Gianni_i suppone che tu_j sia innamorato della propria_{i/j} moglie.
 Gianni supposes that you are in love with SELF wife
 “Gianni supposes that you are in love with his/your wife.” (Cole & Sung 1994:(25))

- (25) Zhangsan_i renwei wo_j zhidaowangwu_k xihuan ziji_{*i/*j/k}.
 Zhangsan think I know Wangwu like self
 “Zhangsan thinks that I know that Wangwu likes himself.” (Cole & Sung 1994:(20a))

Unfortunately, it does not appear to be immediately feasible to test whether LDAs obey (11) directly, since the typological literature discusses LDAs primarily from only two types of languages: (i) those that do not have overt subject-verb agreement anyway and (ii) those in which issues of morphological case marking of the LDAs confound judgments of acceptability (*i.e.*, judgments of ungrammaticality with subject anaphors could be confounded by example sentences with accusative-marked LDAs). Since I know of no language that has both verb agreement and a logically possible nominative LDA, I leave this matter for further research. For now, I take it as given from Cole *et al.* (1990) and Cole & Sung (1994) that LDAs and local anaphors are fundamentally different entities.

From the process-oriented angle, there are also arguments that the operation which creates long-distance anaphoric dependencies is distinct from the one that creates locally bound anaphora. For one, only binding over a long distance allows split antecedent readings for pronouns (Lebeaux, 1984; Hicks, 2009, *i.a.*):

- (26) Split Antecedence in English: (Hicks 2009:138)
 a. John told Mary that there were some pictures of themselves for sale on Ebay.
 b. * John told Mary about themselves.

Additionally, long distance anaphora only allows sloppy readings for bound pronominal elements in an ellipsis site — a restriction not shared by local binding (*cf.*, Reinhart & Reuland, 1993; Grodzinsky & Reinhart, 1993):

- (27) VPE Strict and Sloppy Readings in English: (Hicks 2009:139)
 a. John thought there were some pictures of himself for sale on Ebay, and Bill did, too.
 himself = John; himself = Bill
 b. John respects himself, and Bill does too.
 himself = Bill; himself ≠ John

I have nothing to add over and above their discussion of this contrast, except to note that it is never found in local reflexives, as far as I can tell. Thus, while LDAs can vary on this point, local anaphors do not. Therefore, this cross-linguistic variation should be irrelevant to the point here.

I do not have anything to add here beyond what is discussed in the references above as far as analysis of these facts is concerned, but they suffice for our purposes insofar as they give further evidence that it is not feasible to treat long-distance binding in terms of the AGREE relation (see Hicks, 2009 for especially compelling discussion of this). Furthermore, it is not clear why one would *a priori* want to reduce long-distance binding to an operation such as AGREE, since agreement is fundamentally local, unlike long-distance binding. For all of these reasons, I conclude here that long-distance anaphors should not fall under the purview of the AAE. Instead, I will adopt the suggestions made by Deal (2010b:329–30) that long-distance anaphors contain lexically specified agreement features, separating them from their featureless locally bound counterparts.

With this conclusion in place, one can then see why Tamil is in fact not a counterexample to the AAE (*pace* Sundaresan, 2011; Selvanathan & Kim, 2008; and Kayne, 2000): *taan* is a long-distance anaphor, which is neither the same kind of thing as a local anaphor, nor bound by the same operation as local anaphora. I therefore set such examples aside in what follows.

3. The Problem of Adjectives

In this section I discuss a further revision in the understanding of the AAE which is needed to account for the behavior of reflexives in positions where they are construed with nonverbal agreement morphology. The obvious candidate context to evaluate this behavior are positions where a reflexive is the subject of a predicative adjective which can independently surface with ϕ -varying morphology.

Such a case is provided by small clause complements of perception verbs in the Romance languages, as in the examples in (28).¹³

- (28) a. Jean considère [Marie drôle].
 Jean considers Marie funny
 “Jean considers Marie funny.” (French; Sportiche 1995:288)
- b. Mateus considera [Maria estúpida].
 Mateus considers Maria stupid

¹³Where data are not otherwise marked for source, they are from my personal fieldnotes. Thanks go to Angela Aiello, Mateus Barros, Laurie Duprie, Edwin Osei Tutu, and Emma Peoples for help with the Romance data. Thanks are also due to an anonymous reviewer for pointing out the importance of this data to me.

- “Matt considers Maria stupid.” (Brazilian Portuguese)
- c. Raimondo considera [Maria aggraziata].
Raimondo considers Maria graceful
“Raimondo considers Maria graceful.” (Italian)
- d. Juan considera [orgulloso de sí mismo a Pedro].
Juan considers proud of himself DOM Pedro
“Juan considers Pedro proud of himself.” (Spanish; Contreras 1987:228)

In each of the preceding examples, the verb *consider* takes a tenseless complement which is termed a SMALL CLAUSE, following Williams (1975). While the existence and exact structural analysis of these constituents is a matter of debate (see especially Williams, 1983), the problem raised here for theories of the AAE is independent of the analysis of small clauses. What is crucial is that in such structures a DP must match a predicative adjective in ϕ -morphology.¹⁴

What happens when a reflexive is the subject of an adjectival small clause such as those in (28)? There are two logical possibilities: (i) the Anaphor Agreement Effect obtains in the adjectival domain as well, and no or default agreement is required on the predicate or (ii) agreement obtains, calling into question the universality of the AAE. In fact, (ii) is the result, as the following examples demonstrate.¹⁵

¹⁴Though not necessarily [PERSON]; see Baker 2008 and below.

¹⁵Examples like those given in the text are likely not restricted to Romance languages, though I have only investigated the matter in the languages reported here. Baker (2008:150–1) gives a tantalizingly similar pair of examples from Chichewa:

- (i) (a) Ndi-na-i-khal-its-a *pro*[CL4] y-a-i-kali.
1.SG.SUBJ-PAST-4.OBJ-become-CAUS-FV CL.4-ASSOC-CL.4-fierce
“I made them (*e.g.*, lions) fierce.” (Baker 2008:150)
- (b) Ndi-na-dzi-khal-its-a *pro*[+ana] w-a-m-kali.
1.SG.SUBJ-PAST-REFL-become-CAUS-FV CL.1-ASSOC-CL.1-fierce
(*dz-a-dzi-kali)
REFL-ASSOC-REFL-fierce
“I made myself fierce” (Baker 2008:151)

These examples show, according to Baker (2008:150–1) that a null object *pro* can license secondary adjectival predicate agreement (ia), but that there is no available specialized anaphoric morphology in the case of a null anaphoric object (ib). With the anaphoric interpretation in (ib), only the “normal” adjectival agreement is possible.

The conclusion which Baker (2008:150–1) reaches from this pair of examples is that anaphoric agreement is restricted to the verbal domain and cannot appear on adjectives — the same conclusion we reach on the basis of the Romance data discussed above.

- (29) a. Mateus se considera estupid-o/*-a/*-os/*-as.
 Matt SELF consider stupid-MASC.SG/-FEM.SG/-MASC.PL/-FEM.PL
 “Matt considered himself stupid.” (Brazilian Portuguese)
- b. As meninas se considera-m
 the students.FEM SELF consider-3.PL
 estupid-as/*-os/*-a/*-o.
 stupid-FEM.PL/-MASC.PL/-FEM.SG/-MASC.SG
 “The students (fem.) considered themselves stupid.” (Brazilian Portuguese)
- (30) a. Raimondo si considera coraggios-o/*-a/*-i/*-e.
 Raimondo SELF consider.3.SG brave-MASC.SG/-FEM.SG/-MASC.PL/-FEM.PL
 “Raimondo considers himself brave.” (Italian)
- b. Quelli ragazzi consider-ano se stessi
 those boys consider-3.PL SELF
 coraggios-i/*-e/*-o/*-a.
 brave-MASC.PL/-FEM.PL/-MASC.SG/-FEM.SG
 “Those boys consider themselves brave.” (Italian)
- c. Maria considera se stessa aggraziat-a/*-o/*-e/*-i.
 Maria consider.3.SG SELF graceful-FEM.SG/-MASC.SG/-FEM.PL/-MASC.PL
 “Maria considers herself graceful.” (Italian)
- d. Quelle ragazze si consider-ano
 those girls SELF consider-3.PL
 aggraziat-e/*-i/*-a/*-o.
 graceful-FEM.PL/-MASC.PL/-FEM.SG/-FEM.PL
 “Those girls consider themselves graceful.” (Italian)

In the examples in (29–30), the adjectival predicate of the small clause agrees with its subject in both number and gender. Since person agreement is not a feature of adjectival agreement in any known language (see, *e.g.*, Baker 2008), it is not possible to test the agreement of person in these constructions. However, where one can examine possible ϕ –morphology mismatches in these predicates, the reflexive subject of the small clause must agree with the adjective.

This phenomenon is not limited to predicative AP uses, however. When the small clause contains a predicative substantive adjective (syntactically an NP), agreement is also required, as the following examples from Italian show:¹⁶

- (31) a. Maria si considera la più bella della classe/intelligentissima.
 Maria SELF considers the most beautiful of.the class/most intelligent

¹⁶I thank an anonymous reviewer for providing me with these data, which I have since confirmed with my Italian consultants.

- “Maria considers herself the most beautiful of the class/extremely intelligent.”
- b. Maria considera se stessa la più bella della classe/intelligentissima.
 Maria considera SELF the most beautiful of the class/extremely intelligent
 “Maria considers herself the most beautiful of the class/extremely intelligent.”

In these examples the predicate of the small clause is not the adjective itself, but rather the null *pro* head of the AP *la più bella pro della classe*. Here, too, the adjective modifying this predicate shows covarying φ -morphology with the reflexive, as any other gender or number on the predicate is ungrammatical.

Given (28–31), we must re-evaluate the status of the AAE, as in each case an adjective is showing agreement which is possibly triggered by the reflexive element. It is certainly possible to entertain the hypothesis that the adjectives here receive their φ -features from the antecedent of the reflexive and not the reflexive itself. On this account, however, the operation which is responsible for agreement on the adjective must not only operate over a troublingly long distance, but it also must be countercyclic — the antecedent of the reflexive is not merged until much later than the adjective.¹⁷ For these reasons, an explanation of the adjectival data which takes the agreement to be with the reflexive seems preferable to one which takes the agreement to be with the antecedent DP.

What, then, is the status of the AAE? The resulting picture is one in which the AAE seems applicable to *verbal* φ -morphology only and not adjectival φ -morphology. The final descriptive version of the AAE must be revised from the formulation in Woolford (1999) to specify its restriction to verbs, as in (32):

- (32) *Anaphor Agreement Effect* (Final Version):
 Anaphors do not occur in syntactic positions construed with verbal agreement, unless the agreement does not vary for φ -features.

At this point it is also worth taking a step back to consider the version of the AAE in (32)

¹⁷The problem is even more acute if small clauses are argued to be STRONG PHASES in the sense of Chomsky (2000; 2001), since the operation in question would then have to violate the PHASE IMPENETRABILITY CONSTRAINT of Chomsky 2001, as well. Given that AGREE is not typically thought to operate across phase boundaries, this would constitute another conceptual argument for the idea that the operation involved in deriving this adjectival agreement is not AGREE.

and what it means for the morphological expression of binding. The proper generalization in the AAE is not that agreement must be anaphoric in the presence of local binding, but instead that φ -features must not be expressed. Anaphoric morphology, therefore, is nothing more than the morphological realization of this absence of φ -features, but in all cases the anaphor itself does not provide sufficient features for verbal agreement to manifest on the verb. This makes a kind of intuitive sense — anaphors are syntactic objects which, by definition, receive their interpretation from the syntactic context. The definition in (32) simply extends this contextual variability to the domain of morphological expression as well by claiming that verbal agreement directly reflects only inherently specified syntactic information. The understanding of the AAE forced by (32) is one in which the anaphor contextually receives *morphological* content as well as interpretive content. However, the need to also account for the adjectival data above shows that only some kinds of syntactic φ -covariation are sensitive to this property of anaphors. The following sections turn to spelling out a theoretical proposal which can account for this bifurcation explicitly.

4. Theoretical Considerations

In this section I discuss two available approaches to the AAE instantiated in various places in the literature. In §4.1 I take up the idea that the AAE is a manifestation of a PRO-theorem-like effect which arises when attempting to form a syntactic chain containing both the antecedent and verbal agreement. In §4.2 I discuss a somewhat newer idea that takes locally bound elements to be devoid of φ -featural content. In both cases the initial data supporting the AAE can be made to work for each proposal; neither, though, extends straightforwardly to cases of adjectival secondary predication like that discussed in the previous section. Finally, in §4.3 I develop an understanding of the relationship between AGREE and a proposed operation CONCORD which can account for the observed agreement morphology in adjectival secondary predicates.

4.1 Chains and the PRO Theorem

Historically, the first solution to the Anaphor Agreement Effect attempts to equate the unavailability of agreement morphology with the inability of PRO to have a phonetic realization: the syntax

delivers a chain which has conflicting values for the referential features $[+A(NAPHORIC)]$ and $[+P(ONOMINAL)]$. This analysis assumes a typology of referentiality features along the lines of Chomsky (1981), summarized in (33):

- (33) Nominal Categories and the Referential Feature Typology (Chomsky, 1981):
- a. $[+a(naphoric), -p(onominal)]$ = anaphors/A-traces
 - b. $[-a, +p]$ = pronominals
 - c. $[-a, -p]$ = R-expressions/*wh*-traces
 - d. $[+a, +p]$ = nonexistent/PRO

The solution which Rizzi (1990) proposes for the AAE involves deriving a Binding Theory contradiction of the kind that Chomsky (1986) proposes for PRO. In order to see how this works, let us first consider Chomsky's (1986) definition of the binding principles, as in (34):

- (34) The Binding Theory of *Knowledge of Language* (simplified):¹⁸
- a. PRINCIPLE A: An anaphor is bound in a local domain.
 - b. PRINCIPLE B: A pronominal is free in a local domain.
 - c. PRINCIPLE C: An R-expression is free (...). (Chomsky, 1986:166)

Chomsky then grounds the definition of “anaphor,” “pronominal,” and “R-expression” in terms of the referential features $[\pm a, \pm p]$ discussed above. The upshot of this definition is that it allows Chomsky (1986:182–183) to derive the obligatorily ungoverned status of PRO: since PRO is $[+a, +p]$, it must simultaneously be bound and free if it is governed, and this contradiction in Binding-Theoretic needs means that PRO must necessarily be ungoverned.

Rizzi's (1990) idea here is to equate the AAE with the *Pro Theorem*, with this understanding of the latter's derivation. Again assuming that Agr^0 is $[-a, +p]$ and anaphors are $[+a, -p]$, a chain containing such elements will necessarily lead to a Binding Theory contradiction, since it will inevitably consist of elements which simultaneously require satisfaction of both Principles A and B. Unlike with PRO, however, such a chain will contain an overt element (the anaphor) and allowing it to be ungoverned is not an option (as this would mean the anaphor fails to receive Case). Thus,

¹⁸Specifically, this is simplified in that I abstract away from the notion of a COMPLETE FUNCTIONAL COMPLEX and thus do not provide a definition for “local domain” in these principles. See Chomsky 1986:164–186 for adequate discussion.

the AAE is a surface artifact of language's inability to form such representational chains with contradictory needs. Here again Woolford (1999) notes that all that is needed to bring this solution in line with the facts from anaphoric agreement rescue strategies is to assume that an anaphoric Agr⁰ exists. Chains containing such an Agr⁰ and an anaphor then do not have contradictory Binding-Theoretic requirements, both elements being [+a, -p].

There are several reasons why I think it preferable to develop a novel approach to the AAE. The first of these is theory-internal and depends on assumptions about the architecture of syntax. The Rizzi 1990 solution relies both on the notion of a CHAIN and the notion of a dedicated syntactic head housing agreement, Agr⁰. Recently, arguments have been given in the literature against both the necessity and desirability of using such constructs (see, for instance, Iatridou, 1990 and Chomsky, 1995b for arguments against Agr⁰ and Chomsky, 1995b; 2000 for arguments against Chains).

Even if one wants to retain a modern instantiation of Chain Theory (as Reuland, 2001 argues for explicitly), the extension of Chain Theory to AAE effects remains problematic. Initially, syntactic chains were a representational device used to encode derivational histories by linking moved elements in a structure with their pre-movement positions. However, the antecedent-anaphor relationships which are at the heart of the AAE are of a fundamentally different character than those which hold between moved elements and their origin sites. This concern is directly relevant to the derivation of the AAE just considered since once we extend the notion of a Chain in the way required, there is no *a priori* reason why distinct elements in a Chain should not be required to meet distinct (and contradictory) binding conditions.

There is an additional objection which can be leveled against the assumption that these lines of inquiry share: that the AAE is derivative of the featural content of agreement. In Chain-based solutions to the AAE, analysis begins with the presupposition that Agr⁰, the syntactic head responsible for hosting agreement features, is pronominal in character.¹⁹ Informally, the idea behind this

¹⁹This assumption is derivative of the argumentation in Rizzi 1982:127–36 that inflection is pronominal in languages such as Italian. The basic idea is, as Rizzi (1982:131) puts it, is that agreement "... is a verbal affix with (pro-)nominal properties, specified with respect to such grammatical features as person and number." Obviously, this idea will not extend to languages such as Japanese, which allow null subjects but do not have agreement morphology. While one

analysis was that languages differed with respect to a property of Agr^0 which determined whether or not the agreement morphology in the language could act pronominally in subjectless clauses (*cf.*, Chomsky, 1981:241; Rizzi, 1990:131).

However, it is worth stepping back and questioning why this should be so. Specifically, if it is the pronominal agreement which causes the Anaphor Agreement Effect, then the chain approach predicts that the AAE should not hold in languages without *pro*-drop. This is because languages without *pro*-drop should, *ceteris paribus*, have agreement which cannot be pronominal (Rizzi, 1982:131). Given this, we would expect that chains of the form $\text{CH} = (\text{Agr}^0 \dots \text{anaphor})$ would neither violate referential autonomy nor trigger a PRO-Theorem-like contradiction in binding needs — the offending $[+p]$ feature on Agr^0 should be missing in languages without null subjects. However, the facts do not bear out this prediction; many languages without *pro*-Drop have been argued to have the AAE including Icelandic (Rizzi, 1990) and Georgian (Woolford, 1999). Note too that this problem is inherited by more recent accounts of the AAE (*e.g.*, Woolford, 1999 and Haegeman, 2004), since these proposals carry over the essentials of Rizzi's analysis.

Moreover, it is also worth scrutinizing the claim in Woolford, 1999 that the analysis of Rizzi (1990) is well-suited to explaining the AAE given the more refined understanding given by the Anaphoric Morphology Generalization as stated in (8). To account for this contrast in a framework based on realizing agreement in an Agr^0 head, one must assume that anaphoric agreement morphology is $[+a, -p]$, whereas regular agreement is $[-a, +p]$. Representationally, then, there are two kinds of agreement in such an approach. There are two problems with this view: (i) there does not seem to be an independent reason to suspect that agreement is bifurcated into such categories (since the morphemes are in complementary distribution) and (ii) in such an approach it remains a mystery why all $[+a]$ agreement morphology lacks ϕ -features. This approach will thus miss capturing the Anaphoric Morphology Generalization with the same underlying mechanism that derives the AAE.

could certainly jettison the idea that inflectional material licenses null subjects, this would lose the connection to Italian, where the presence of agreement correlates with null subjects. It seems to me, then, that a better tack is to take the category “null subject language” to be a heterogeneous one, with languages such as Japanese licensing null arguments via discursal strategies.

Approaches which take the mechanism underlying the AAE to be Chain formation will also require nontrivial extensions to account for the agreement relations in predicate adjectival contexts discussed in §3. The assumption that agreement morphology forms a chain with the DP which licenses it can certainly be extended to account for predicative adjective agreement, but how can a PRO-theorem contradiction be prevented in these cases? The obvious move is to say that agreement morphology in predicative adjectives is not [+p] in the same way as the agreement morphology on verbs — in other words, agreement induced by concord is not pronominal.²⁰ This certainly will account for the data, but notice that the problem of the preceding paragraph has just been compounded: agreement morphology in the same language can now be [+a, -p], [-a, +p], and [-a, -p] variably.²¹ To the extent that other approaches can give a simpler treatment to the kinds of morphology seen in these examples, these approaches should be preferred. As I will demonstrate in the following section, a number of recent approaches to the featural specification of bound elements can provide such a treatment.

For these reasons, I will seek a different derivational explanation of the AAE. The next section outlines a solution which turns the intuition behind Rizzi's proposal precisely on its head: it is not the featural content of agreement which gives rise to the AAE, but rather certain characteristics of the anaphoric element.

4.2 *Minimal Variables*

Another popular approach to the syntax of binding/agreement interactions is the idea that locally bound syntactic elements do not contain lexical specifications for φ -features.²² The intuition here is that the relevant features are predictable from the context in which the anaphor finds itself — acquired directly or indirectly from its interaction with its binder. We will have more to say about

²⁰This will also presumably account for the unavailability of null subjects with these adjectives despite their demonstrable inflection.

²¹Notice also that the resultant theory would have no way to explain the observation made by Baker (2008:150–1) that there is no anaphoric counterpart to agreement morphology in the adjectival domain.

²²This approach is most clearly fleshed out in the works of Kratzer (1998; 2009), Deal (2010a;b), and Reuland (2001; 2006), though precursors to the basic ideas can be found in papers by Chomsky (2008), Hicks (2009), Schäfer (2010; 2008; To Appear), and many others. In order to discuss these approaches, which contain some small differences, I must settle on an implementation. In doing so here, I stay closest to the implementation given by Reuland (2006) and Deal (2010a;b), as they are the most theoretically explicit.

this interaction shortly, but it should now be clear in an initial way why the AAE would emerge: the target of binding is an element with no inherent agreement features.

If the anaphor contains no values for its ϕ -features, then any Agree relation established with a head H before the anaphor acquires feature values from its binder will fail to value the corresponding ϕ -features on H. If the syntax exits at this point, the morphology will be left to interpret a verbal agreement complex which does not contain any ϕ -features.²³ Default agreement, no agreement, and anaphoric agreement invariant for ϕ -features thus emerge as morphological variants of $\phi[]$ in an approach that takes the anaphor to be lexically underspecified for agreement features. In languages in which such agreeing anaphors are simply ineffable, one need only assume that language-particular morphological requirements force the realization of agreement for grammaticality, but that the language provides no appropriate morphological element.

What about the phenomenon of Protected Anaphora discussed above in §2.3.1? Recall that in languages with these kinds of reflexives, agreement is still possible on the verb, but this agreement is demonstrably with the head noun in the extended reflexive. In an approach to the AAE like the one sketched here, these cases are in some sense uninteresting. Verbal agreement in languages like Selayarese and Modern Greek (see Woolford, 1999:273–4 for the Modern Greek facts, which are not discussed here) always shows invariant third person singular (masculine) agreement with protected anaphors. Given that protected anaphors are composed of a lexical head noun which is itself third person singular, the observed morphological agreement is thus exactly what head-based feature percolation expects, or if agreement relations are in fact relations between labels. The only addendum under the approach here is that the variable reflexive element in possessor position will lack values for its ϕ -features at the outset of the syntactic computation. However, this is a position which is not expected to trigger verbal agreement anyway in such languages, and its agreement features (or more precisely: lack thereof) are predicted to be irrelevant to the determination of verbal agreement. This is exactly the empirical result argued for above and in Woolford 1999 (and

²³In stating things this way, I am assuming that in principle AGREE can fail without a necessary crash for the derivation as a whole. This is a somewhat contentious assumption, though it is defended in Preminger 2009 and at length in Preminger 2011.

somewhat more obliquely in Deal 2010a;b).

Thus, it seems as though a lexical specification approach to the AAE has several advantages over the approach in terms of pronominal Agr proposed in Rizzi 1990. Not only does this approach dispense with some theoretical machinery (Chains, Agr⁰, and Government), but it does not make the prediction that the AAE should correlate with the availability of *pro*-drop, which was shown in the previous section to be false. Moreover, the lexical underspecification approach derives most of the cross-linguistic AAE-avoidance strategies from the same underlying syntax, surely a desirable result.

While the idea is simple to state informally, some questions arise when we attempt to go beyond intuition. Here a central observation concerning all the data discussed up to this point is in order. In each of the languages discussed above in §2, the AAE impacts the morphological realization of anaphor-verb agreement, but anaphor-antecedent agreement always proceeds unhindered. This is in some sense a trivial observation, but it is one that we must explicitly address in a framework which takes the anaphor to be φ -deficient — something in the derivation must ensure that antecedent-anaphor φ -matching is obligatory. Here we see the solution to the formalization issue: anaphors must come to possess φ -values during the derivation for convergence. This is exactly the formal empirical reflection of uninterpretable features as used in (Chomsky 1995b, *et seq.*) insofar as their presence in a syntactic computation forces valuation before convergence is assured at Spell-Out. Following similar proposals in Kratzer 2009; Schäfer 2010; 2008; To Appear; and Reuland 2006, we can state this formally as in (35):

- (35) *Featural Definition of Anaphors:*
Anaphors are syntactic heads with $u\varphi$ [].²⁴

The definition in (35) formally captures the intuition behind the discussion of agreement morphology above insofar as it featurally specifies that anaphors are elements which gain their mor-

²⁴Here there is plausibly some question as to the semantic content of the features on the anaphor itself. The assumption implicit in Reuland 2001 and Kratzer 2009 is that they are uninterpretable. However, Reuland 2006 develops an approach utilizing the feature system in Pesetsky & Torrego 2001 that takes these features to be interpretable. I believe the discussion in the main text applies equally to both frameworks, and so I abstract away from the interpretability of φ -features on the reflexive element henceforth.

phological and semantic content solely from their context. In order for a derivation containing an anaphor to converge, an AGREE operation must value the anaphor's φ -features. Furthermore, this valuation need occur only once at any point during the derivation before Spell-Out, a comforting prediction given that Principle A can be satisfied at any point during the derivation (Belletti & Rizzi, 1988).²⁵ Moreover, if a head bearing φ -features such as v or T were to Agree with the anaphor, the anaphor would be unable to give any feature values to the probing head. The Anaphor Agreement effect, is thus derived insofar as the verbal inflection will never be given values by the anaphor itself.

Turning now to the typology of AAE-avoidance strategies, we can see that (35) will ensure that these are the only available options, and it derives most of them from the same underlying syntax, as discussed above. If the anaphor cannot value the $u\varphi[]$ on any probe, all attempts to agree directly with an anaphor will lead to valueless φ -features on the probe at the interface. When morphology thus interprets these results (assuming morphology is interpretive, as in, *e.g.* Distributed Morphology; see Halle & Marantz, 1993), it can in principle make one of three choices: (i) leave the valueless features unvalued and converge, (ii) assign a default agreement morpheme, (iii) realize the verbal inflection as a specialized morpheme which never varies for φ -features. (i) is the no-agreement strategy, (ii) is the default agreement strategy, and (iii) is the anaphoric agreement strategy. Moreover, the auxiliary Anaphoric Morphology Generalization is automatically captured. The choice of (i-iii) for a particular language, furthermore, will be a lexical property — whether or not the morphology in the language has the relevant morpheme. In this sense, the proposal conforms to what the literature has called *The Chomsky-Borer Conjecture* (*cf.*, the discussion in Borer 2005a;b and Baker 2008), a positive result, as I see it.

Despite its attractive simplicity, there are two problems which the unadorned minimal pronoun approach cannot handle without some rethinking: (i) the antecedent-anaphor φ -matching which obtains in Protected Anaphora contexts and (ii) the agreement seen on predicative adjectives which appears to be triggered by the reflexive element itself. In each of these cases the structural rela-

²⁵Furthermore, in frameworks such as these it becomes possible to reduce the domain of Principle A to the syntactic phase. See Chomsky 2008 and Lee-Schoenfeld 2004; 2007; 2008 for more on this reduction.

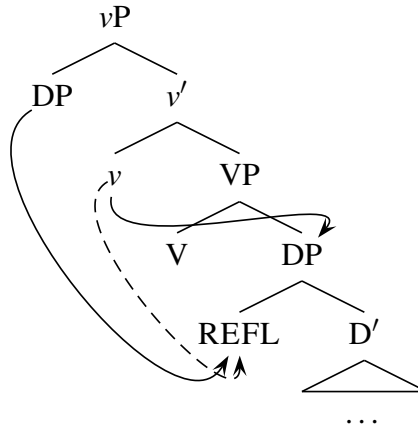
tionship required for the variable to receive ϕ -features by AGREE is not present, and theories in this class thus predict that agreement should be impossible in these contexts.

To see why case (i) is problematic, first recall the Selayarese example in (36) repeated from §2.3.1, above:

- (36) ku-jañjang-i kaleng-ku
 1.SG.ERG-see-3.ABS SELF-1.SG
 “I saw myself.”

there is both binding and agreement — the verb is displaying 3.SG.ABS agreement with the lexical head noun *kaleN*, whereas feature matching between antecedent and anaphor in [Spec,D] has still applied. Instead of a unary operation, then, the Agreement relations in Selayarese (and Protected Anaphora more generally) are as in (37):²⁶

- (37) Apparent Agreement Relations in Protected Anaphors:



The minimal pronoun approach predicts that binding should occur, shown in (37) by the dotted line, given that anaphors must be bound by an instance of AGREE before Spell-Out. However, the overt morphological evidence supports the relations shown by the two solid lines: (i) a binding/feature-matching relation between antecedent DP and REFL and (ii) a verbal agreement relationship between v and the DP dominating REFL.

Pushing further, one may ask if this limitation is inherited by all theories that assume that binding occurs, not directly between antecedent and anaphor, but via the mediation of a functional

²⁶I abstract away from linear order in all of the trees that follow, since the main expository concern is the AGREE relations.

head (in the Selayarese case, this would be v). This is a common theme in Binding-as-AGREE proposals, and it is made overtly in Chomsky, 2008 and Reuland, 2001; 2006, among others. As the line of reasoning above suggests, Protected Anaphora effects will in each case show that this defect is indeed unavoidable in such theories. In languages which exhibit Protected Anaphora, binding, object agreement, and antecedent-anaphor matching are all present simultaneously, yet the verb does not match the anaphor in φ -features. What each of these proposals share is the claim that there are only two relations in clauses with anaphors: (i) an anaphor-verbal head relation and a (ii) antecedent-verbal head relation. In the context of Protected Anaphora, however, we see that ensuring antecedent-anaphor φ -matching via transitivity of AGREE will necessarily imply that the verb should match the anaphor in φ -features. Since it demonstrably does not in Selayarese and other languages with Protected Anaphors, I conclude that this assumption is, too, untenable.²⁷

At this point, the careful reader may object that I have not considered every way to implement transitive agreement relations. Specifically, Frampton & Gutmann (2000); Pesetsky & Torrego (2001; 2007); and Kratzer (2009) have all proposed that AGREE proceeds formally by feature unification, and it is certainly possible that this move could turn out to be crucial. The following discussion shows that such an assumption is unable to derive the AAE.

To see why this is, we must first consider the definition of Agree given in Kratzer, 2009, which is by far the most explicit on the feature-unification point:

- (38) *Agree* (from Kratzer, 2009):
 The φ -feature set of an unindexed head α that is in need of φ -features (the probe) unifies with that on an item β (the goal) if β is the closest element in α 's c-command domain that has the needed features.

In a simple case of object-agreement AAEs where an anaphor fails to trigger regular object agreement, however, this predicts the wrong result. In a unification framework, reflexives must enter the derivation with $\emptyset$ as its φ -featural content (Kratzer, 2009).²⁸ AGREE with v will yield $\emptyset \cup \emptyset = \emptyset$,

²⁷Note that a similar conclusion is reached based on the data used in Chomsky, 2008 and Reuland, 2006 by Safir (2010). I do not discuss Safir's work on anaphora here for reasons of space, but see Safir 2004 for a different approach to binding and agreement which I believe is compatible for the most part with the claims made here.

²⁸I abstract away from the [REFL] feature which Kratzer (2009) argues is contributed by v for reasons of expository simplicity. Following the intuition in Kratzer 2009, however, I denote a bare variable as a syntactic head REFL. At the

since v also has no ϕ -features. At this point, Merge of the antecedent occurs and its features are unified with the complex resulting from $v \cup \text{REFL}$.²⁹ This leads to the feature calculus in (39):

$$(39) \quad \text{DP} + v = \{[\text{PERS}], [\text{NUM}], [\text{GEN}]\} \cup \emptyset = \{[\text{PERS}], [\text{NUM}], [\text{GEN}]\}$$

Notice however that (39) is precisely the wrong result from the perspective of the AAE, as v has the same ϕ -features as the reflexive, which in turn has the same ϕ -features as the antecedent. Feature unification, therefore, cannot be the underlying mechanism for AGREE if this operation is to be responsible for binding. The AAE seems to suggest that the checking approach initially conceived in Chomsky, 1995b was the correct one, since checking as a formal mechanism preserves an inherent asymmetry in the features which drive the Agree relation. If this asymmetry is lost, then with it goes the formal ability to prevent the antecedent DP's features from spreading erroneously to the verb.

Turning now to the second problematic case for minimal pronoun approaches, we must first be clear about the assumed structure for such constructions as (40), repeated from §3, above:

- (40) Maria considera se stessa aggraziat-a/*-o/*-e/*-i.
 Maria consider.3.SG SELF graceful-FEM.SG/-MASC.SG/-FEM.PL/-MASC.PL
 "Maria considers herself graceful." (Italian)

Following Bowers (1993; 2002), I assume that predicate adjective phrases such as *se stessa aggraziata* are of the category Pred(icate)P. The reflexive element is θ -marked by the adjective, I assume it is first merged in [Spec,*aggraziata*], from where it then moves to [Spec,Pred], which is phonetically null in Italian examples such as (40).³⁰ From this position the anaphoric variable is certainly in the domain of v , and so the derivation can proceed as discussed above for simple cases.

same time, I assume that this head selects for nothing, making it simultaneously minimal and maximal in the sense of Bare Phrase Structure Chomsky (1995a).

²⁹This result is obtained somewhat differently depending on the exact implementation of feature sharing. The reasoning for Kratzer 2009 is given in the text because it is expositoryly the simplest. However, in Frampton & Gutmann, 2000; Pesetsky & Torrego, 2001; and Pesetsky & Torrego, 2007, the same result can be obtained. In these frameworks the subject will come to value the anaphor's ϕ -features via CYCLIC AGREE as discussed in Legate, 2005.

³⁰Nothing crucial hinges on the assumed movement of the small clause subject, which I assume given the observation by Maling (1976:715–7) that quantifiers may strand inside the small clause, as in the English *I consider them all assholes*. Furthermore, I will not take a position in this work as to whether or not PredP is a PHASE in the sense of Chomsky (2000), *et seq.*. The issue of PredP's phasehood is largely orthogonal to the discussion at hand since under either account [Spec,Pred] is accessible to AGREE from a higher head. For a different approach to θ -marking in predicative adjective constructions, see the discussion in Baker (2008).

However, what of the agreement morphology on the adjective? It must match the reflexive and antecedent in φ -features, yet the reflexive has none. One might entertain establishing a relation between the adjective and the antecedent directly, but this relation would be countercyclic and presumably operate over an extended distance — not a relation which should be posited without considerable evidence. Multiple AGREE between a head hosting agreement and all elements in its c-command domain (in this case both the anaphor and the predicative adjective) is not an option, either, as this would predict that the verbal and adjectival agreement in such examples should covary, contrary to fact.

The only workable solution to this problem is to assume, as Kratzer (2009) and Deal (2010a;b) do, that agreement relations (including Specifier-Head agreement, which is included; see Kratzer (2009:192) and Deal (2010b:225–6)) are interpreted in an order isomorphic to their means of formation, not their timing of formation. When agreement is established by a specifier-head relation, it can be interpreted earlier or later than agreement which has been established under c-command, with the timing fixed by parameter on a language-specific basis. Thus the AAE is derived when verbal agreement is morphologically resolved prior to the resolution of agreement between antecedent and anaphor. However even now we are left with no alternative but to say that the verb-reflexive relation is interpreted before that of the antecedent-verb and reflexive-adjective relations. This would require abandoning the otherwise useful assumption that morphology is realized inside-out (Bobaljik 2000; Embick 2010), as the operation is countercyclic.

Given these difficulties, I conclude that an addition must be made to the minimal pronoun approach in order to account for the agreement which remains after the AAE has been derived. This includes not only the predicative adjectives but also any φ -matching between antecedent and anaphor. In the next section, I turn to outlining a revision of the minimal pronoun approach which can account for these facts.

4.3 *Concord and Uninterpretable Morphology*

In this section I develop a slightly different minimal pronoun account based on the observation that the problematic cases for the AAE as analyzed in vanilla minimal pronoun approaches are all adjectival. The system is presented in §4.3.1 and some features of the analysis in unrelated domains are discussed in §4.3.2

4.3.1 *The System*

Taking the discussion in §4.2 in total, one can observe that the problematic agreement relations for unadorned minimal pronoun approaches are the ones which the reflexive minimal pronoun participates in agreement with nonverbal predicates. In the case of the predicate adjectives, this relation is between the reflexive variable and the adjective, whereas in the case of Protected Anaphors this relation is between the reflexive variable and the antecedent DP. On the other hand, the discussion in §4.2 shows that the assumption that locally bound syntactic elements are φ -featureless is useful for deriving the verbal AAE. What I would like to suggest in this final section is that a solution exists to the problematic cases within a minimal pronoun approach, provided the grammar allows for a postsyntactic agreement-like operation which I will term *CONCORD*, following Norris (To Appear). The two key differences between the operation *CONCORD* and the more familiar *AGREE* are timing and directionality: whereas *AGREE* operates in the narrow syntax that operates downward, *CONCORD* is a postsyntactic morphological operation with no effect on interpretation which operates upward.³¹

Beyond the novel operation *CONCORD* to be defined below, the system needs no assumptions beyond those typically made in the literature on minimal pronouns. Specifically, locally bound anaphoric elements are devoid of φ -features and cannot value heads which target them for *AGREE*

³¹By making *CONCORD* postsyntactic, I am differing somewhat from the formal definition of this relation in Norris To Appear and Baker 2008, which is syntactic. I see no principled reason why the operation in question could not take place after Spell-Out, however, and so I take its applicability to the AAE to be evidence that it should be postsyntactic in nature. The major difference between my approach to adjectival concord and the approaches of Norris and Baker is that I take concord to never have a semantically interpretive effect, given that adjectival agreement only ever occurs in the presence of interpretable features on some other syntactic element. Future research is needed to investigate the empirical question of whether or not adjectival concord ever has semantic effect. If it turns out that it does not, the approach in the text will be justified insofar as it takes to occur after syntactic computation has exited.

in the narrow syntax. I will also assume, following Preminger (2010; 2011), that attempts to establish an AGREE relation which do not necessarily result in valuation on the probing head do not result in ungrammaticality. Assuming an interpretive morphological component such as that in Distributed Morphology thus derives the AAE as the output of the narrow syntax, and does so in a way which Kratzer (2009) calls *constructive* — ungrammatical examples are not simply ruled out, but rather not generated by the system at all. When a minimal pronoun is merged in a position which is available for target by AGREE, the targeting head will receive no ϕ -features and the syntax will exit with no inflectional morphology possible unless that morphology is invariant for ϕ -values. This in turn derives the Anaphoric Morphology Generalization as stated in (8).

The work remaining, then, is to specify precisely how agreement morphology comes to appear on both the reflexive element itself as well as any associated nonverbal predicates. It is clear that the operation in question must be able to copy features from a c-commanding element onto any element which requires morphological feature realization in the language in question. I will also assume, following Embick (1997) and Norris (To Appear), that agreement needs with no semantic ramifications are represented grammatically by the post-syntactic adjunction of an Agr head to the element showing agreement. The operation CONCORD is then responsible for copying features from the c-commanding antecedent to any unvalued ϕ -features on Agr heads. Generalizing somewhat from the definition in Norris (To Appear), we can define CONCORD as in (41):³²

- (41) CONCORD =_{def} For each Agr α with $\phi[]$, copy into Agr the $\phi[val]$ β such that:
- a. The head H which hosts β c-commands α .
 - b. There is no head H' such that:
 - i. H' has valued ϕ -features,
 - ii. H' c-commands α but not H, and
 - iii. H c-commands H'.

The definition of CONCORD in (41) will ensure that any Agr inserted postsyntactically will receive

³²In ongoing work, Norris (2012) has argued from partitive data in Icelandic for a different formulation of CONCORD based on Grimshaw's (1991; 2005) notion of an EXTENDED PROJECTION. I will not consider this formulation here, as it is roughly identical on all details except the size of the domain under which CONCORD can apply. Since all the cases I am considering plausibly relate two elements both in the same phase, I assume that some version of CONCORD can be made to serve these needs, regardless of the future work on the proper domain of this operation.

φ -values from the closest c-commanding set of φ -features. In the cases of classical adjective-nominal concord, this closest set is on the head which hosts case morphology as shown in Norris (To Appear). In the cases under consideration here, these features will be on the antecedent DP. The result will be a structure in which features have spread in the opposite direction as those valued by AGREE, allowing valuation of the reflexive and any associated nonverbal elements.

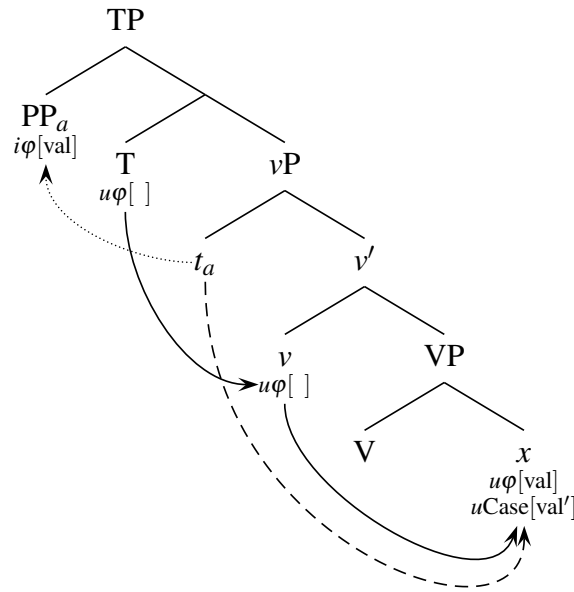
To see how this works in detail, consider first the simple case of the dative experiencer with a nominative object like those in Italian, repeated from §2.1 above as (42):

- (42) a. A loro piaccio io.
 to 3.PL.DAT please.1.SG I.NOM
 ‘‘They like me.’’ (Deal 2010a:100)
- b. *Mi piaccio me stesso.
 me please-1.SG myself
 ‘‘Intended: I like myself.’’ (Deal 2010a:101)
- c. ?Mi piace me stesso.
 me please-3.SG myself
 ‘‘I like myself.’’ (Deal 2010a:101)

Under the assumptions made above, the derivation of a sentence such as Italian (42c) is shown in the tree in (43), where the solid lines represent instances of AGREE, dashed lines represent instances of CONCORD, and dotted lines represent instances of MOVE. The dative experiencer provides values for the φ -features of the reflexive under postsyntactic concord, though by that time the verbal agreement has been fixed as φ -featureless by the prior operation of AGREE.³³ The AAE is thus derivative of AGREE, whereas the feature-matching between antecedent and anaphor is derivative of CONCORD.

(43) Complete Morphosyntactic Relations – Dative Experiencers:

³³For this to work, it is crucial that AGREE be formulated in such a way that the v -reflexive instance is sufficient to fix the values of v 's φ -features. That is, valueless features must count as a value, or CONCORD will value the features of v postsyntactically, destroying the derived AAE. By separating the two operations one can imagine that the output of AGREE is opaque to CONCORD in some principled way; one obvious option is semantic recoverability, as explored by Reuland (2001).



If CONCORD can relate the antecedent and anaphor directly in the Italian cases such as those in (42–43), then it will also be capable of relating the antecedent to the anaphoric element inside protected anaphors, provided that the structure for these elements is as suggested in §2.3.1 with the minimal variable in the possessor position, [Spec,D]. To see how this works explicitly, let us take a simple Protected Anaphor such as *kaleN-* in Selayarese. Recall from §2.3.1 that in these cases the verb agrees with the features projected lexically by *kaleN-*, yet matching still occurs between antecedent and a subpart of the anaphor:

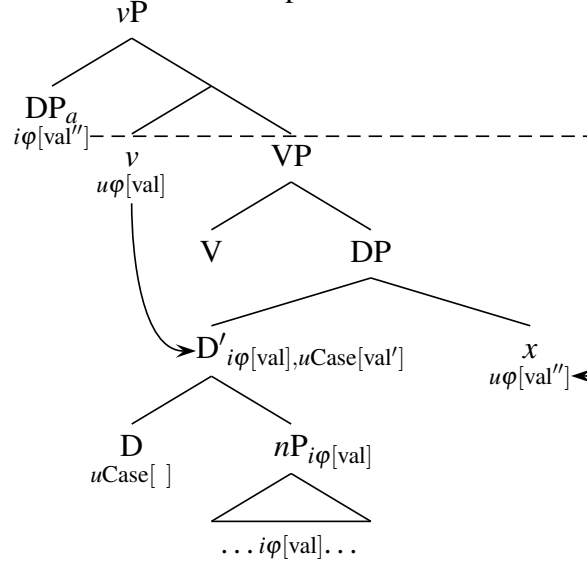
(44) Selayarese Protected Anaphors:

- a. ku-jañjang-i kaleng-ku.
1.SG.ERG-see-3.ABS SELF-1.SG
“I saw myself.”
- b. mu-jañjang-i kalem-mu.
2.FAMILIAR-see-3.ABS SELF-2.FAMILIAR
“You saw yourself.”
- c. to-jañjang-i kalem-ba.
1.EXCLUSIVE-see-3.ABS SELF-1.EXCLUSIVE
“We saw ourselves.”

Under the system developed here, these cases are in fact no different from the simple reflexive object cases, provided that the [Spec,D] position is accessible to higher syntactic operations. This is a typical assumption, even under theories which take DP to be a cyclic domain for syntactic com-

putation (e.g., Svenonius 2004).³⁴ The derivation assigned to Protected Anaphors in this system is shown in the tree in (45):

(45) Complete Morphosyntactic Relations – Complex Reflexives:



In the narrow syntax, verb-object agreement with the head noun *kaleN-* is fixed by AGREE with *v*, which also provides Case-licensing to the object element. At Spell-Out, however, agreement is required on the minimal pronoun in the [Spec,D] position; CONCORD must apply to satisfy this need.³⁵ The only available ϕ -feature values in the derivation are on the antecedent of the reflexive, and morphological matching proceeds under the definition in (41).

The final case is that of predicative adjectives with a reflexive argument, and here we see the full effect of positing that ϕ -matching with the reflexive is via CONCORD. Recall from §3, above, that adjective small clauses in Romance will show ϕ -matching between adjective and reflexive, as repeated in (46), where any agreement besides feminine singular is ungrammatical:

- (46) Maria considera se stessa aggraziat-a/*-o/*-e/*-i.
 Maria consider.3.SG SELF graceful-FEM.SG/-MASC.SG/-FEM.PL/-MASC.PL

³⁴Further evidence that the possessor position must be available to higher syntactic computation is the phenomenon of possessor raising, whereby possessors behave as though they were arguments of the verb directly. See Szabolcsi 1983 and Deal 2010a;b for more on possessor raising.

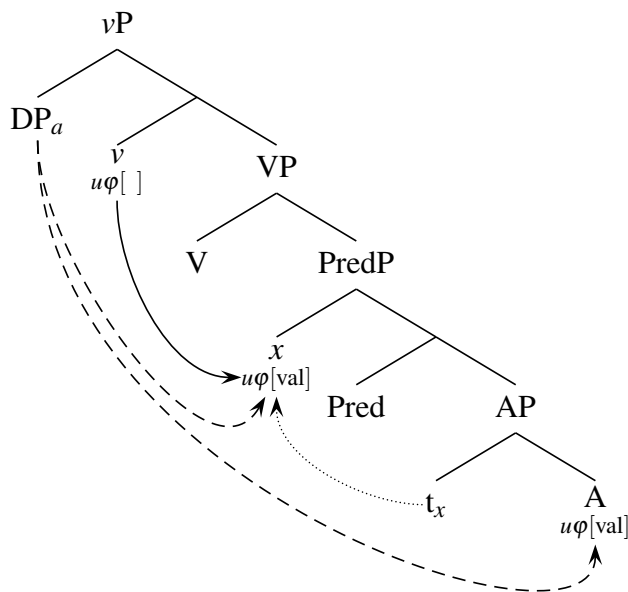
³⁵I assume here that CONCORD must apply because something in the morphological component requires ϕ -featural content on the anaphor for well-formedness at PF. There are several ways to think about this requirement: (i) the anaphor must be pronounced, and the only available form (pronominal reflexives) require ϕ -features for insertion, (ii) the anaphor actually has uninterpretable features which cannot be checked in the narrow syntax, and if they are not removed by PF a crash will result and (iii) CONCORD simply applies wherever it can, forcing copying even if the anaphor itself does not require features for convergence. I will not attempt to decide between these alternatives here.

“Maria considers herself graceful.”

(Italian)

Here the antecedent again c-commands all the elements which later come to have covarying φ -values, and the definition of CONCORD in (41) will ensure that these features spread in the post-syntax to the adjective and reflexive. The complete derivation the current framework gives to sentences such as (46) is shown in the tree in (47) below:

(47) Complete Morphosyntactic Relations — Predicative Adjectives



Again agreement operates in the narrow syntax between the v and small clause subject anaphor. While there is no object agreement in these cases in Italian, we predict that there could be no object agreement in such structures in languages which do show object-verb agreement. After the syntax exits, the morphological need for agreement on both *se stessa* and *aggraziata* requires an instance of the operation CONCORD which provides the relevant features under c-command from the antecedent. The system thus derives the adjective agreement as separate from the verbal agreement since the two operations apply at different times during the syntactic derivation.

With a complete derivation for each of the three core cases discussed in this paper, we can now be sure that the proposed system provides an understanding of both the AAE and its apparent violation by nonverbal agreeing elements such as adjectives. In the final section, I turn to discussing some features of this analysis in other empirical domains.

4.3.2 Useful Features & Consequences

One of the longstanding problems in understanding the syntax of Anaphor Agreement Effects was first pointed out by Woolford (1999) and concerns the putative object agreement seen on participles of reflexive verbs in Romance languages such as French. An example of this agreement alternation is seen in the following data from Woolford 1999:

(48) French Past Participle Agreement:

- a. Cécile a décrit Marie comme sympathique.
Cecile has described Marie as friendly
“Cecile described Marie as friendly.” (Woolford 1999:276)
- b. Cécile s’=était décrit-e comme chaotique.
Cecile REFL=was described-FEM as chaotic.
“Cecile described herself as chaotic.” (Woolford 1999:276)
- c. Cécile l’=a décrit-e comme sympathique.
Cecile her=has described-FEM as friendly
“Cecile described her as friendly.” (Woolford 1999:276)
- d. Cécile était décrit-e comme sympathique.
Cecile was described-FEM as friendly
“Cecile was described as friendly.” (Woolford 1999:276)

In the examples in (48), one can see that in simple actives such as (48a), the participle *décrit* does not show agreement. However in reflexive (48b), clitic climbing (48c), and passive (48d) cases, the participle agrees with an argument of verb. Woolford (1999:276–7) notes that examples such as (48b) are *prima facie* counterexamples to the AAE, as it appears as though the participle *décrite* is agreeing with the reflexive clitic *se*.

Woolford (1999) gives two possible solutions to this potential counterexample. The first is a straightforward one: preserve the AAE as stated by claiming that the agreement seen on the participle in (48b) is not regular agreement but instead anaphoric agreement. As anaphoric agreement, it would not violate the AAE. There are two problems with this approach, however, the first of which Woolford (1999:277) notes: it would be an odd state of affairs indeed for a language to have two kinds exactly homophonous agreement morphemes, one for anaphoric and another for non-anaphoric arguments. Aside from being strange from a theoretical perspective, this move would void the Anaphoric Morphology Generalization as stated in (8), above. For these reasons,

it does not seem tenable to assume that French morphology provides homophonous anaphoric and nonanaphoric participial agreement morphology.

The second solution entertained by Woolford (1999:277) follows Marantz (1984) in assuming that reflexive constructions such as (48b) are in fact intransitive in the syntax, making the putative object agreement in (48b) in fact agreement with the sole argument of an intransitive. These data would not be counterexamples to the AAE since they would not involve agreement with the anaphoric *se* at any level of representation. While this solution is technically workable, it misses a significant generalization shown in (48), namely that this agreement occurs with the object in clitic climbing contexts, as well as the promoted object of passives. If we assume that only the first and third of these are syntactically intransitive, we are left with a situation where there is only accidental relation between examples such as (48b,d) on the one hand and (48c) on the other; not a desirable state of affairs if it can be avoided.

What I would like to suggest here is that a postsyntactic account of the agreement morphology seen on the participle will obviate these problems and provide a novel solution to French participles in reflexive contexts. Specifically, all we need do is assert that morphologically the grammar treats participles such as *decrit(-e)* as adjectives and not verbs.³⁶ In the present framework, this is tantamount to requiring them to undergo postsyntactic Agr-insertion and CONCORD. In each of these cases the element which triggers agreement on the verb c-commands the participle at Spell-Out. Therefore, provided that the participle moves to any functional projection outside of ν P, it will be in same syntactic domain as the reflexive clitic *se*.³⁷ This, in turn, predicts that any features *se* picks up via CONCORD will appear on the participle as well. Divorcing AGREE from CONCORD thus provides not only an account of adjectives predicated of reflexive elements directly, but also other adjective-like elements which show ϕ -feature variation with the reflexive. This, in turn, allows one to maintain a uniform account of the examples in (48) where the participial

³⁶This is not an uncommon assumption, though how to cash this out theoretically is a matter of some debate. See, for instance, Haspelmath 1993 and Borer 1990 for the claim that passive participles are adjectival.

³⁷I will not take a position here on what the category of this functional projection might be. Possible candidates include a syntactic Agr(eement) head (Pollock, 1989), as well as an Asp(ect) head (Cinque, 1999). In either case, the identified FP would immediately select for ν and be immediately selected for by T. I assume it is possible to identify such a head, but leave the matter for future work.

morphology is object agreement.

5. Conclusion

Throughout the literature on binding one can find scattered references to the incompatibility of binding and agreement in the same verbal domain. This paper has argued from the data in Rizzi (1990) and Woolford (1999) that these references are more than a passing observation, but rather indicative of the core mechanics of binding-agreement interactions. I showed that once this Anaphor Agreement Effect is understood properly as a statement about verbal agreement with locally bound anaphors, considerably clarity results in the empirical domain.

Furthermore, I discussed a novel bit of data from the perspective of studies on the AAE. I showed that in Romance the agreement on predicative small clause adjectives presents a serious challenge for theories which take the AAE to be derived by AGREE finding an element defective in ϕ -features (*e.g.*, Reuland, 2001; Kratzer, 2009), as agreement is still required on the adjectives. I suggested that the solution to this contradiction comes in taking seriously the difference between agreement and concord in syntactic theory. By utilizing the mechanisms of concord discussed in Norris (To Appear), I showed that one can have the AAE and seemingly AAE-violating examples coexist side-by-side in the same language.

Looking forward, one can ask if the extension of the notion of concord to include elements outside a single DP generalizes to other cases. I showed that one such case is a recalcitrant problem in theories of the Anaphor Agreement in the form of French reflexive verb participles. There, I showed how the extension of CONCORD can account for a surface morphological pattern typically taken to be verb-argument agreement. One particularly enticing question to ask is how the grammar partitions the space of AGREE and CONCORD application. Recently, Baker (2008) and many others have suggested that the crucial difference might be the appearance or absence of the ϕ -feature [PERSON]. In the future, one might ask if it is possible to restrict CONCORD's application to just those instances in which person agreement is not possible.

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