Anaphora vs. agreement*

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Abstract

This paper presents new data pertaining to the Anaphor Agreement Effect (originally noted in Rizzi, 1990, and showing that anaphors in many languages seem to be unable to trigger "normal", i.e. ϕ-covarying agreement) from a hitherto underresearched non-IndoEuropean language, namely Tamil of the Dravidian family. On the one hand, this data will be seen to further support the AAE as a robust crosslinguistic generalization. On the other hand, it will be shown to yield new insight on the theoretical principles underlying this descriptive one, and to question the possible loci for parametric variation – by virtue of employing a hitherto unreported strategy to obey the AAE. Specifically, it will be argued that the verbal agreement triggered in the scope of the anaphor is triggered, not by the anaphor itself, but by a different DP in the local phase.

1 Introduction

It has long been noted in the literature (Borer, 1989) that, despite their obvious categorial differences, proforms and ϕ-agreement have much in common: at their core, they both denote referentially deficient linguistic objects. Given this, it is perhaps unsurprising that interactions between the two are both telling and anomalous. The relationship between pronouns and agreement has been well-studied with respect to the phenomenon of *pro*-drop, the original observation, due to Taraldsen (1978) and simplifying greatly, being that languages with rich agreement allow *pro*-drop to a greater degree than do ones with poor agreement. The interaction between anaphora and agreement has merited less attention in the literature. The data that we do have amassed suggests, however, that there is something irregular happening here as well. This irregularity, termed the "Anaphor Agreement Effect" in Rizzi (1990) and developed since (Woolford, 1999; Tucker, 2011, among others), is the observation that, overwhelmingly across languages, anaphors cannot trigger "regular" (i.e. ϕ-covarying) agreement. Languages have been observed to display a range of interesting strategies to

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avoid a violation of the AAE. When an anaphor does occur in agreement-position, the sentence either crashes, or the triggered agreement takes on one of two non-covarying forms: a morphophonological default or "special" anaphoric form. The various parametrized instantiations of the AAE are fascinating, not only because they stand testimony to the presence of a highly irregular relationship between two linguistic objects, but also because they they serve as a window into the ϕ-featural make-up of anaphors and into the mechanism of agreement.

In this paper, I report on a new type of AAE in the Dravidian language, Tamil, a language that has, in fact, been singled out in the literature (Kayne, 1994; Woolford, 1999; Selvanathan and Kim, 2008) as being a possible counterexample to the AAE. The theoretical import of this evidence is multifold. First, it shows that Tamil does indeed obey the AAE, contra previous claims. Second, and relatedly, it bolsters the robustness of the AAE as a potentially universal principle of language. Third, it adds to the typological variety of parametrized strategies languages have been observed to employ to avoid a violation of the AAE. Toward the end of the paper, I speculate on the possible theoretical underpinnings of the AAE as a potential principle of UG.

2 A brief history of the AAE and its empirical motivations

The original observation that led to the formulation of the Anaphor Agreement Effect, as well as the moniker itself, go back to Rizzi (1990). Rizzi's observation was motivated by minimal pairs like (1) and (2) in Italian, and analogous sentences in Icelandic (not listed here), where the anaphor occurs in a position typically associated with agreement in that language:

(1) A loro import-a solo di se-stessi.
to them matters-3SG only of them-selves
"They$_i$ only matter to themselves$_i$."

(2) * A loro interess-ano solo se-stessi.
to them interest-3PL only them-selves.NOM
"They$_i$ only interest themselves$_i$." (Intended)

The THEME object of *interessano* in (1) is in the genitive case, which in turn results in the verb's surfacing with default 3SG agreement. In (2), the object is in the nominative case and does trigger ϕ-covarying (3PL) agreement on the verb. What is significant is that this distinction seems to directly regulate the grammaticality of these sentences. The genitive-marked anaphoric object in (1) is licit, whereas the nominative marked one in (2) is not. Interestingly, too, sentences like (2) become marginally acceptable if the agreement on the verb is replaced with default (non-)agreement:

(3) ? A loro interess-a solo se-stessi.
to them interest-3SG only them-selves.NOM
"They$_i$ only interest themselves$_i$."

Additionally, the same patterns as in (1)-(2) obtain if the 3rd-person *se* is replaced with 2nd-person *voi*, yielding a bound 2nd-person form:

(4) A voi import-a solo di voi-stessi.
to you matters-3SG only of you-selves
"You$_i$ only matter to yourselves$_i$."

(5) * A voi interess-are solo voi-stessi.
to you interest-3PL only you-selves.NOM
"Only yourselves interest you." (Intended)

In addition to corroborating the patterns in (1)-(2), the sentences in (3)-(5) show that the problem with the ungrammatical sentences above has to to with agreement, not with some paradigmatic gap having to do with the absence of nominative anaphors in the morphology (as has been claimed for Icelandic, for instance, by Maling, 1984, among others). Rizzi also notes correctly that the infelicitousness of an anaphor in these sentences could not be explained in terms of the Empty Category Principle (ECP) in conjunction with Chomskyan (Chomsky, 1981) Binding Theory.

On the strength of such data, Rizzi concludes, therefore, that "there is a fundamental incompatibility between the property of being an anaphor and the property of being construed with agreement" (Rizzi, 1990, 28).

2.1 Parametric strategies to avoid an AAE-violation

Subsequently, others (e.g. Woolford, 1999; Haegeman, 2004; Deal, 2010; Tucker, 2011) tested the robustness of the AAE by testing it against a wider range of languages. A major contribution of Woolford (1999) is that it extended the investigation of the interaction between anaphora and agreement to languages with object agreement, predicting correctly that the existence of the AAE in these languages should rule out object anaphors. This prediction was shown to be confirmed for the languages tested. In addition to confirming the systematicity of the AAE, this showed that the AAE in subject agreement languages had nothing to do with the fact that the anaphors in these cases occurred in subject position, per se. That is, the occurrence of the AAE in such languages had nothing to do with properties that distinguished subjects from objects: e.g. due to the absence of nominative-marked anaphors in subject position, the EPP, or licensing by the ECP. Rather, it had to do with the fact that, in these languages, verbal agreement is triggered by the subject, not the object.

Tucker (2011) expands on Woolford's work, discussing in particular the various parametric strategies employed by the world's languages to avoid a violation of the AAE. What emerges is an interesting typology that reflects both the robustness of the AAE as a general crosslinguistic principle and the scope of variation in the language-specific strategies used to avoid its violation. Below is a brief summary of the four main strategies that emerge from Tucker's and Woolford's investigations.

2.1.1 Strategy 1: Detransitivization

In languages that adopt this strategy, an AAE violation is avoided by detransitivizing the predicate in a structure containing an argumental anaphor, such that the predicate no longer agrees with that Inuit is a language that employs this strategy. In Inuit, the verb is (portmanteau-)marked for both subject and object agreement (6). But when the direct

object is an anaphor, object marking on the verb is no longer licit (7) (examples taken from Tucker, 2011, 14, formatting mine):

(6) Angutip arnaq taku-vaa.
man.ERG woman.ABS see.IND.3SG.SUBJ-3SG.OBJ
"The man sees the woman."

(7) * Hansiup$_i$ immi$_{\{i,*j\}}$ asap-puq.
Hansi.ERG himself.ABS wash.IND.3SG.SUBJ-3SG.OBJ
"Hansi$_i$ washed himself$_{\{i,*j\}}$." (Intended)

The structure can be redeemed by suppressing (the overt forms) both the object and the agreement triggered by this object, yielding a "detransitivized" predicate that agrees with the (non-anaphoric) subject alone. This is illustrated in (8):[1]

(8) Asap-puq.
wash.IND-3SG
"He$_i$ washed himself$_{\{i,*j\}}$."

The structure in (8) thus trivially avoids a violation of the AAE by suppressing the agreement-triggering object.

Alternatively, what looks like an anaphor is in fact a detransitivizing morpheme – i.e. not an actual argument and thus trivially not in agreement-triggering position. Tucker (2011) proposes that French is such a language.

2.1.2 Strategy 2: Default agreement

A slightly different strategy is to keep the anaphoric object overt, but to ensure that it doesn't trigger any ϕ-covarying agreement on the verb, by marking it with oblique case or some other mechanism. This version of affairs is also attested in Inuit. In (9), the anaphoric object is marked with oblique case, and the verb surfaces with default agreement.

(9) Angut$_i$ immi-nut$_{\{i,*j\}}$ taku-vuq
man himself-DAT see.IND-3SG
"The man$_i$ sees himself$_{\{i,*j\}}$."

Notice that this is essentially the same strategy that was observed at the outset with Italian (1), repeated below:

(10) A loro import-a solo di se-stessi.
to them matters-3SG only of them-selves
"They$_i$ only matter to themselves$_i$."

In (10), the anaphoric subject is marked with oblique case and thus triggers default agreement on the verb. Regardless of this difference between the two languages, the effect is the same: the presence of oblique case on the anaphor (either in subject or object position) ensures that it triggers no ϕ-covarying agreement on the verb, thereby preserving the AAE.

[1] The pronominal subject is presumably *pro*-dropped.

In other languages, the anaphor surfaces with nominative case-marking but nevertheless doesn't trigger ϕ-covarying agreement on the verb; i.e. the verb still shows invariant agreement. Albanian seems to be such a language (the example below reformatted from Massey, 1990, 135):

(11) Drites i_i dhimset vetja$_{\{i,*j\}}$.
Drita.DAT=3SG.DAT pity.3SG.PAST.NACT ANAPH.NOM
"Drita$_i$ pities herself$_{\{i,*j\}}$."

Given that Albanian has a nominative-accusative case system, one might think that the agreement marking on the verb in (11) is triggered by the nominative-marked anaphor. However, as also observed in Woolford (1999), the agreement marking on the verb remains invariant at 3SG, even when the nominative object is in the first-person. The sentence below essentially constitutes a (scrambled) minimal variant to that in (11) (Hubbard, 1985, 191):

(12) Vetja$_{\{i,*j\}}$me$_i$ dhimset.
ANAPH.NOM=1SG.DAT pity.3SG.PRS.NACT
"I$_i$ pity myself$_{\{i,*j\}}$."

In effect, then, the Albanian strategy is also a default agreement strategy, similar to those attested in Inuit and Italian.

2.1.3 Strategy 3: "Protected anaphora"

A potential variant of the strategy above is that observed in some other languages, where the anaphor is "protected" from triggering agreement by being embedding inside another DP. Since the structural conditions required for the anaphor to trigger agreement on the verb don't exist, the verb surfaces with default agreement instead. The mechanisms of this are likely closely related to those involved in the default agreement strategy described above, given prior analyses of oblique case-marking on a DP as being essentially equivalent to structurally embedding that DP (see Řezáč, 2008, in particular, for a detailed analysis along these lines). Hindi seems to be such a language (Tucker, 2011):

(13) * Atif-ko$_i$ [$_{DP}$ apne aap$_i$] pasand hai.
Atif-DAT ANAPH.MASC.PL like be.3MSG
"Atif$_i$ likes himself$_i$." (Intended)

(14) Atif-ko$_i$ [$_{DP}$ apne$_{\{i,*j\}}$ riʃtedaar] pasand hãĩ.
Atif-DAT ANAPH.GEN.MASC.PL relatives[NOM] like be.3MPL
"Atif$_i$ likes his$_{\{i,*j\}}$ (male) relatives."

In both the sentences above, the anaphoric possessor *apne* is embedded inside a larger DP. Rajesh Bhatt (p.c.) mentions that *apne aap* in (13) is a complex reflexive of sorts, with *aap* also being a kind of reflexive element. However, what is key to the grammaticality patterns is that the verbal agreement in (14) seems to be due to the anaphor directly, whereas in (14), it reflects the features of the possessee object as a whole. In other words, despite appearing to be embedded inside another DP in both cases, it is "protected" from triggering agreement only in (13), and not in (14), yielding grammaticality in the former and ungrammaticality in

the latter. This suggests, once again, that as long as the anaphor is structurally prevented from itself triggering agreement on the verb, the AAE will not be violated and the resulting structure may be licit.

Similar protected anaphora behavior has been discussed for Selayerese (a Malayo-Polynesian language) (Tucker, 2011), Modern Greek (Woolford, 1999) and DP-internal possessors in West Flemish Haegeman (2004).

2.1.4 Strategy 4: "Anaphoric" agreement

In some languages, the presence of an anaphor in agreement-position doesn't lead to ungrammaticality: rather, the anaphor triggers a special form of agreement. This is demonstrated for Swahili below (Woolford, 1999) – the contrasting agreement markers are highlighted in boldface:

(15) Ahmed a-na-**ji/*m**-penda mwenyewe.
Ahmed 3SBJ-PRS-REFL/*3OBJ-love himself
"Ahmed$_i$ loves himself$_i$." (emphatic)

(16) Ahmed a-na-**m/*ji**-penda Halima
Ahmed 3SBJ-PRS-3OBJ-love Halima.
"Ahmed loves Halima."

Crucially, the special *ji* marking on the verb in (15) does not ϕ-covary, nor is it attested elsewhere in the agreement paradigm of the language. Baker (2008, pp. 150-151) provides parallel examples from the Bantu language Chichewa, adapted below (formatting mine):

(17) Ndi-na-**i/*dzi**-khal-its-a *pro[-anaph]* y-a-i-kali.
1SS-PAST-4O-BECOME-CAUS-FV (them) CL4-ASSOC-CL4-fierce
"I made them (e.g. lions) fierce."

(18) Ndi-na-**dzi/*i**-khal-its-a *pro[+anaph]* w-a-m-kali.
1SS-PAST-REFL-BECOME-CAUS-FV (myself) CL1-ASSOC-CL1-fierce
"I made myself fierce."

In (17), the causativized 'become' verb shows overt agreement both with the subject and the non-coreferent *pro* object. In the minimally varying (18), the verb again agrees with the subject, but the usual object agreement marking is replaced by a special reflexive form, namely the infix *-dzi-*.

2.1.5 Summary

To sum up, the following crosslinguistic strategies are attested, which avoid a violation of the AAE:

Detransitivization: The reflexive in agreeing position is deleted altogether yielding an intransitive with inherently reflexive interpretation. Inuit is a language that supposedly exhibits this strategy.

Default agreement: The verb surfaces with default agreement, either because the anaphoric subject or object is marked with oblique case (Italian and Inuit) or due to some other mechanism (Albanian).

Protected anaphora: The anaphor appears inside a PP or possessor DP and is thus unable to trigger agreement: Greek, West Flemish, and the Malayo-Polynesian language Selayarese supposedly employ this "protected anaphora" strategy (see also Haegeman, 2004).

Anaphoric agreement: The verb is marked with a special, "anaphoric" agreement which is different from the regular agreement marking within the ϕ-paradigm of the language in question (e.g. Swahili, Hindi, Modern Greek, Selayarese, West Flemish).

It is valid to ask how languages that lack agreement-marking altogether fare with respect to the AAE. If we assume either that the AAE is a condition on the morphological representation of agreement rather than on agreement itself, or that languages without agreement-marking also lack agreement underlyingly, we predict that such languages should freely allow anaphors in all argument positions. In other words, any restriction on the distribution of anaphors in such languages should be independent of the AAE.

This prediction appears to be confirmed. Languages with nominative-accusative case systems lacking in overt agreement – like Khmer, Vietnamese, Thai, Chinese and Malayalam – allow nominative anaphors in subject (as well as object) position. The following Khmer example from Huffman (1970) via Woolford, 1999, (formatting mine) illustrates this:

(19) Mɨt [teŏŋ-pii neŏq]$_i$ kɨt thaa kluən$_{\{i,*j\}}$ ciə kounsəh.
friend both person think that self be student
"[The two friends]$_i$ resonated that they(self)$_{\{i,*j\}}$ are students."

It is instructive to note, incidentally and as discussed also in Woolford, that the subject anaphors in these languages may be nominative. This in turn shows that the lack of nominative anaphors in an overt agreement language like Icelandic has nothing to do with a paradigmatic gap in nominative anaphors, as has been suggested (see Maling, 1984, among others). Rather, we may surmise this is due to the fact that a nominative marked anaphor in these languages would be in a position to trigger agreement on its clausemate verb, thereby violating the AAE.

Similar behavior is also observed in languages with ergative-absolutive case systems that lack overt marking for object agreement. In such languages, the anaphor may licitly occur in object position without incurring a violation of the AAE. The following example from the Papua New Guinea language, Enga, illustrates this (Lang, 1973; Woolford, 1999):

(20) Baa-mé tánge pi-ly-á-mo.
he-ERG self hit-PRES-3SG.SUBJ-AUGMENT
"He$_i$ is hitting himself$_{\{i,*j\}}$."

From this state of affairs, the following generalization emerges, which we can take to be the current understanding of the AAE (Tucker, 2011, p. 30, ex. 40):

(21) "Anaphors do not occur in syntactic positions construed with covarying ϕ-morphology."

3 The Dravidian problem

The Dravidian languages have been singled out in the literature for their recalcitrant behavior with respect to the AAE. Kayne (1994, 54) first observed that Dravidian languages are potentially problematic for Rizzi's AAE, noting that in a subject-agreement Dravidian language like Tamil, a nominative marked anaphor may occur in (embedded) subject position.

However, Woolford (1999) provides two types of data to argue that such structures do not constitute a counter-example to the AAE. She observes, first, that when the Dravidian anaphor appears as a nominative subject, its clausemate verb is typically non-finite ((22) taken from Asher, 1985, reformatted below):

(22) [*ta(a)n*$_{\{i,*j\}}$ var-r-ad-aagæ] Murugeesan$_i$ so-nn-aarŭ.
ANAPH.NOM.SG come-PRES-3NSG-NMLZ Murugeesan say-PST-3MSG
"Murugeesan$_i$ spoke [of his$_{\{i,*j\}}$ coming]."

One might take issue with Woolford's characterization of the embedded verb as non-finite since it has (active) tense marking, as shown above.[2] What *is* uncontroversial, however, is that the 3NSG agreement-marking on the verb is not ϕ-covarying. Rather, it appears to be a default form which obtains regardless of the ϕ-features of the embedded subject (23) and is also independently attested in "quirky" dative constructions in Tamil. As such, it is clear that sentences like (22) do not violate the AAE as it is formulated in (21):

(23) [Seetha var-r-ad-aagæ] Murugeesan so-nn-aarŭ.
ANAPH.NOM.SG come-PRES-3NSG-NMLZ Murugeesan say-PST-3MSG
"Murugeesan spoke [of Seetha's coming]."

The second piece of evidence adduced by Woolford involves a special construction where the anaphor occurs as the subject of the clausal complement of a speech-predicate (as in (24) below). The clausemate verb of the anaphor in such cases is arguably finite – bearing not just tense but also agreement marking. However, this agreement is 1st-person, as shown below (example taken from Woolford, 1999, 270, formatting mine):

(24) Murukeesan$_i$ [$_{CP}$ taan$_{\{i,*j\}}$ var-r-een-nnŭ] so-nn-aarŭ.
Murugesan.NOM ANAPH.NOM come.PRS-1SG-COMP say-PST-3MSG
"Murugesan$_i$ said [that he$_{\{i,*j\}}$would come]."

Crucially, the anaphor *ta(a)n* cannot take 1st- or 2nd-person antecedents, which makes it difficult to argue that this agreement is triggered by the anaphor directly. As such, Woolford proposes that the 1SG agreement under the anaphor in (24) is not "regular" agreement, but a special anaphoric form (analogous to that seen earlier for Swahili and Chichewa). If this is correct, the verb doesn't agree with the anaphor in traditional terms of ϕ-matching after all and (24) is not a counterexample to the AAE.

But there are (at least) two problems with Woolford's analysis. First, the verbal agreement marking *-een* on the embedded verb in (24) is not "special" in the sense observed for

[2]This is in contrast to the more classic non-finite verbs in Tamil which have neither tense nor agreement marking.

Swahili and Chichewa. It is, in fact, indistinguishable from the regular marking for 1SG agreement in Tamil, as illustrated in the minimal variant to (24) below:

(25) Naan$_i$ [$_{CP}$ *pro*$_i$ var-r-een-nnŭ] so-nn-een.
I.NOM (I) come-PRS-1SG-COMP say-PST-1SG
"I said that I'd come."

Since, in other words, this agreement doesn't seem to involve a morpheme that occurs only under the scope of an anaphor, it is trivially not "anaphoric" agreement. Second, and as has been pointed out more recently (Selvanathan and Kim, 2008), structures like (22) and (24) don't exhaust the possibilities for agreement under *ta(a)n* in Tamil. For a core group of speakers, sentences like that in (26) are licit as well:

(26) Murukeesan$_i$ [taan$_{\{i,*j\}}$ varu-gir-aar-ŭnnŭ] so-nn-aarŭ.
Murugesan.NOM ANAPH.NOM come-PRES-3MSG-COMP say-PST-3MSG
"Murugesan$_i$ said [that he$_{\{i,*j\}}$would come]."

In (26), the verbal agreement under *ta(a)n* is 3MSG, not 1SG. This makes it harder to dismiss the idea that the agreement is triggered directly by *ta(a)n*, in violation of the AAE – this, indeed, being the conclusion that Selvanathan and Kim (2008) reach.

But a closer look at verbal agreement patterns in Tamil, triggered in the scope of the anaphor in subject position, reveals this conclusion to be premature. These patterns show that the agreement triggered in structures like (24) and (26) is indeed special. At the same time, this "anaphoric agreement" is not special in the sense discussed earlier for Swahili and Chichewa. In contrast to what was observed for these languages, there is nothing unique about the overt *form* of verbal agreement triggered in the scope of the anaphor in Tamil; rather, this agreement is part of the standard ϕ-paradigm in this language. What is special about the agreement is how it is triggered: below, I argue that the agreement in structures like (24) and (26) is not triggered by the anaphor at all, but by a different element in the local domain. The AAE, as described in (21), is thus trivially respected. Tamil (and potentially other languages, as I briefly discuss below) thus instantiates a different strategy for preserving the AAE from those discussed earlier.

4 "Anaphoric agreement" in Tamil

Tamil uniformly manifests subject agreement on the verb:

(27) [Nii paris-æ tookkapoo- gir-aaj-ŭnnŭ] Raman namb-in-aan.
you[NOM] prize-ACC lose.go- PRS-2SG-COMP Raman believe-PST-3MSG
"Raman$_j$ believed [$_{CP}$ that you would lose the prize]."

The Tamil anaphor *ta(a)n* may occur in both object and (agreement-triggering) subject position. When *ta(a)n* is the object, the AAE is trivially satisfied, since an object position is not an agreement-triggering position in Tamil. When it is a subject, there are one of two possibilities: *ta(a)n* may be (null-)marked nominative or appear with "quirky" dative case. In the latter instance, the agreement triggered on its clausemate verb is always default 3NSG:

(28) Raman$_i$ [$_{CP}$ tan-akkŭ$_{\{i,*j\}}$ romba pasi-tt-ad-ŭ-nnŭ] namb-in-aan.
Raman ANAPH-DAT very much hunger-PST-3NSG-COMP believe-PST-3MSG
"Raman$_i$ believed [$_{CP}$ he$_{\{i,*j\}}$ was very hungry]."

The structure in (28) thus also satisfies the AAE since the agreement triggered in the scope of the anaphor is not ϕ-varying.

But the nature of verbal agreement triggered under the nominative-marked subject anaphor is very revealing – and the focus of the rest of this discussion. We have of course already seen an example of this – in (26), the agreement on the clausemate embedded verb of *ta(a)n* is 3MSG. What we will see now is that this agreement is not frozen, but ϕ-covarying. What is fascinating, however, is that this agreement seems to covary, not with *ta(a)n* itself, but with the antecedent of *ta(a)n*:

(29) Mia$_i$ [$_{CP}$ Sri$_j$ [$_{CP}$ taan$_{\{i,*j\}}$ too-pp-aaɭ-ŭnnŭ]
Mia.NOM Sri.NOM ANAPH.SG.NOM lose-FUT-3FSG-COMP
nene-tt-aan-nŭ] paar-tt-aaɭ.
think-PST-3MSG-COMP see-PST-3FSG
"Mia$_i$ saw [$_{CP}$ that Sri$_j$ thought [$_{CP}$ that she$_i$/*he$_j$ would lose]]."

(30) Mia$_i$ [$_{CP}$ Sri$_j$ [$_{CP}$ taan$_{\{j,*i\}}$ too-pp-aan-ŭnnŭ]
Mia.NOM Sri.NOM ANAPH.SG.NOM lose-FUT-3MSG-COMP
nene-tt-aan-nŭ] paar-tt-aaɭ.
think-PST-3MSG-COMP see-PST-3FSG
"Mia$_i$ saw [$_{CP}$ that Sri$_j$ thought [$_{CP}$ that he$_j$/*she$_i$ would lose]]."

(31) Koɻændæ$_i$ naɖandadæ-patti joosi-čč-adŭ. Taan$_i$ een
child[SG.NOM] happening-ACC-about reflect-PST-3NSG. ANAPH[NOM] why
kašʈappaʈʈ-iru-kk-adŭ?
suffer-PRF-PRS-3NSG
"[The child]$_i$ reflected about what had happened. Why had it$_{\{i,*j\}}$ suffered so?"

When the intended antecedent is 3FSG *Maya* (29), the agreement under *ta(a)n* is also 3FSG. But in the minimally varying (30), the agreement under *ta(a)n* is 3MSG, with the only possible antecedent being *Raman*. Finally, in (31), *ta(a)n* refers "logophorically" to the extra-sentential attitude-holder *Seetha*, but the agreement under *ta(a)n* must still reflect the ϕ-features of this antecedent: if *Seetha* were replaced by 3MSG *Raman*, the agreement-marking would be 3MSG *-aan* instead. The following descriptive generalization thus emerges:

(32) The verbal agreement tracks the antecedent of the anaphor *ta(a)n*.

4.1 Unviable analytic options

There are (at least) three possible ways to interpret the generalization in (32) above. Here, I show why two of these three options are unviable.

The first option, given that Tamil is elsewhere a uniformly subject-agreement language (see again (27)), would be to propose that the source of agreement under *ta(a)n* is *ta(a)n* itself. In this case, structures like (29)-(31) would constitute an exception to the AAE. Thus, such an analytic option, is to be dispreferred on grounds of theoretical economy (pending

independent empirical evidence to the contrary). Since the agreement triggered under *ta(a)n* may vary, this would be tantamount to proposing, with no independent evidence to support it, that *ta(a)n* has three different sets of ϕ-features in each of the examples above: i.e. that there are three underyingly distinct anaphors that all happen to be pronounced "*ta(a)n*". If we additionally take structures like (24) into account, where the verbal agreement triggered under *ta(a)n* is actually 1SG, into consideration, we would be forced to posit a fourth variant of *ta(a)n* – one which is a 1st-person indexical. Finally, under such an approach, the fact that the features on the verb track those of *ta(a)n*'s antecedent would either have to be treated as coincidence or explained separately.

The second analytical option would be to claim that the agreement on the verb under *ta(a)n* is triggered by the antecedent of this anaphor – e.g. via long-distance agreement (potentially via *ta(a)n*) or something like it. But there are (at least) two independent reasons to reject this option. The first piece of counter-evidence comes from structures like (24) (discussed earlier) and (33) below. These are special structures involving the clausal complement of a speech predicate. The anaphor *ta(a)n* is the nominative subject of this complement; but the agreement triggered under it is 1SG:

(33) [$_{CP}$ Sai$_i$ [$_{CP}$ taan$_{\{i,*j\}}$ ʤej-pp-**een**-nnŭ] so-nn-aan-nnŭ] Sri$_j$
Sai ANAPH[NOM]$_i$ win-FUT-1SG-COMP say-PST-3MSG-COMP Sri
nene-čč-aan.
thought-PST-3MSG
"Sri$_j$ thought [$_{CP}$ that Sai$_i$ said [$_{CP}$ that he$_{\{i,*j\}}$ would win]"

The agreement pattern in these sentences seems superficially dissimilar to those seen in (29)-(31), where the verbal agreement simply matches the ϕ-features of the antecedent of *ta(a)n*. But if we look closer, we see that the sentences in (33) and (24) are actually parallel to these others and, in fact, also obey the antecedent tracking generalization described in (32). We can see this because the 1SG agreement only obtains when the antecedent is the AGENT of a speech-predicate; if the antecedent were *Krishnan*, antecedent-matching 3MSG agreement would obtain instead. Additional evidence supporting this conclusion comes from number marking on the verb. When the agent of the speech predicate (which also serves as the antecedent of the anaphor) is marked plural, the agreement on the verb under *ta(a)n* is 1PL not 1SG:

(34) Pasaŋ-gal$_i$ [$_{CP}$ taaŋ-gal$_{\{i,*j\}}$ ʤej-pp-oom/*aangal-ŭnnŭ] so-nn-aaŋ-gal.
boy-PL.NOM [ANAPH-PL.NOM$_i$ win-FUT-1PL/*3MPL-COMP] say-PST-3M-PL
"The boys said [$_{CP}$ that they$_{\{i,*j\}}$ would win]"

All this shows that the agreement "tracks" the anaphor's antecedent even in cases where its ϕ-features don't match those of the antecedent. Sundaresan (2012) argues that the 1st-person agreement under *ta(a)n* instantiates Kaplanian indexical shift for 1st-person (Kaplan, 1989; Schlenker, 2003) – where the 1st-person refers to the Speaker of the context introduced by the speech predicate in the sentence, and not to the Speaker of the utterance context. In other words, the lack of antecedent ϕ-matching in structures like (33) and (34) is not because the agreement doesn't track the antecedent – but because the evaluation context against which ϕ-features are evaluated is different in the embedded and matrix clauses in these sentences.

Regardless of how the agreement patterns here are to be derived, however, it is clear that we can no longer easily maintain the idea that the agreement features are copied directly from the antecedent (via long-distance feature-transmission or some other similar mechanism). Further evidence against this view comes from structures involving logophoric dependencies, like that in (31): it is difficult to see how feature-transmission from the antecedent would work inter-sententially.

To sum up, the discussion above shows that the verbal agreement that obtains under *ta(a)n* in the Tamil structures above is triggered neither by *ta(a)n* nor by its antecedent. The source of agreement must be something else.

4.2 A viable option: a mediating *pro*

Given the two logical options we have just eliminated, and assuming that agreement is instantiated as a narrow-syntactic Agree operation between a Probe and a Goal in the Minimalist sense, the relevant state of affairs may be summarized as follows:

Assumption: ϕ-feature agreement is locally implemented in the Narrow Syntax. I.e. verbal agreement (realized on the T head) is triggered by an element that is (phase-)local to T.

Observation I: ϕ-feature agreement on T under nominative subject *ta(a)n* is not directly triggered by *ta(a)n*.

Observation II: ϕ-feature agreement on T under nominative subject *ta(a)n* is not directly triggered by the antecedent of *ta(a)n* (which is not local to the T head, in any case).

Observation III: But ϕ-feature agreement on T nevertheless tracks the antecedent of *ta(a)n*.

This in turn leads us to the following conclusions. There must be a *third* element ($\neq$ antecedent, and $\neq$ the anaphor), local to both *ta(a)n* and the T head, which triggers ϕ-agreement on T. This element must, of course, have valued ϕ-features at the point at which it checks those on T: we might thus envision it as a kind of (null) pronoun or *pro*. The antecedent-tracking effect of agreement would follow naturally from the assumption that this *pro* and the antecedent corefer. If the ϕ-features of the antecedent and of *pro* are computed against the same evaluation context (the default scenario), their ϕ-features would necessarily match. By extension, the verbal agreement triggered by *pro* would also match the ϕ-features of the antecedent, yielding the antecedent-tracking effect observed in (29)-(31). But in cases where these evaluation contexts differ – as in the examples in (24), (33), and (34) – the ϕ-features would not match, even when *pro* and the antecedent continue to corefer. Rather, the *pro* in such cases would be a shifted 1st-person indexical denoting the same entity as the antecedent; it would thus trigger 1st-person agreement on the T head.

An important question that this raises is why the *pro* is present in the first place (after all, triggering agreement could not be its sole reason for being). What I propose, in line with prior work (Sundaresan, 2012) is that this silent pronoun plays a central role in mediating long-distance anaphoric dependencies in languages with perspectival anaphoric systems like Tamil

(and also others, like Icelandic and Italian). In such languages, the antecedent of the anaphor always denotes an individual who holds a mental and/or spatio-temporal perspective toward some minimal predication containing the anaphor. As such, I propose that this null pronoun is also associated with a perspectival feature which allows it to pick out a perspective-holder at LF, which serves as the antecedent. In other words, this perspectival pronoun mediates the relationship between the anaphor and its antecedent at LF; triggering agreement on the T head under *ta(a)n* is incidental. Following analogous data and discussion in Koopman and Sportiche (1989); Bianchi (2003); Speas (2004), among others, on logophoric operators in the clausal left-periphery in other languages – I propose that this perspectival pronoun is the specifier of a perspectival phrase (PerspP) in the left periphery of the local clause containing the anaphor.

4.3 Formally deriving anaphoric agreement in Tamil

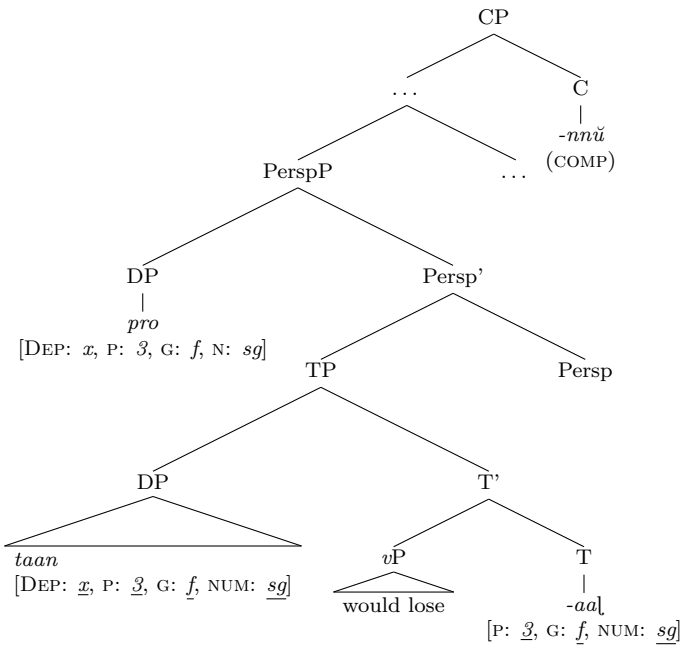
We can now see how the two types of antecedent-tracking agreement patterns in Tamil – the first involving ϕ-matching and the second involving 1st-person agreement – may be formally derived. Consider again the ϕ-matching sentence in (29), repeated below:

(35) Mia$_i$ [$_{CP}$ Sri$_j$ [$_{CP}$ taan$_{\{i,*j\}}$ too-pp-aa[-ŭnnŭ]
Mia.NOM Sri.NOM ANAPH.SG.NOM lose-FUT-3FSG-COMP
nene-tt-aan-nŭ] paar-tt-aa[.
think-PST-3MSG-COMP see-PST-3FSG
"Mia$_i$ saw [$_{CP}$ that Sri$_j$ thought [$_{CP}$ that she$_i$/*he$_j$ would lose]]."

In the current model, the antecedent is associated with the anaphor, and the *pro* operator that binds it, only at LF: thus, as far as the syntax is concerned, the only relevant piece of structure is the local phase (CP) containing the anaphor and *pro*. The tree structure for this CP after Agree and before Spell-Out, thus looks like this:[3]

[3]In the trees shown here, inherited/valued features are notationally distinguished from inherent ones by means of underlining on the former. This is only a visual mnemonic for purposes of explication and should not be treated as a higher-order feature.

(36)



The derivation is fairly straightforward. The *pro* in [Spec, PerspP], being a pronoun, is born with valued ϕ-features; being perspectival, it also bears a valued "DEP"-feature – a perspectival feature that will be responsible for mapping it to a perspective-holder at LF (see Sundaresan, 2012, for detailed motivation and discussion of the properties of this feature). The anaphor *ta(a)n* is born with unvalued ϕ-features; being a perspectival anaphor – i.e. an anaphor which seeks a (mental/spatio-temporal) perspective-holder as antecedent – it also bears a DEP-feature; but this is unvalued on *ta(a)n*. This is syntactically akin to saying that *ta(a)n* is a perspective-seeker: it knows only that it denotes a perspective-holder; it doesn't know who this perspective-holder is. *ta(a)n* probes to get its DEP-feature valued; this is valued by *pro* – the closest c-commanding goal, so that DEP on *ta(a)n* is also valued at *x*.

In the meantime, the T head probes to get its ϕ-features valued. Since Tamil is a subject-agreement language, it looks to the subject to value these features. However, the subject is the anaphor *ta(a)n* which itself lacks values for ϕ-features. We might then assume then that *ta(a)n* and T function as a joint probe (in the sense of Pesetsky and Torrego, 2007, for instance) to get their ϕ-features valued. The *pro* in [Spec, Persp] also serves as the Goal for ϕ-feature valuation, valuing these as 3FSG on both *ta(a)n* and T.

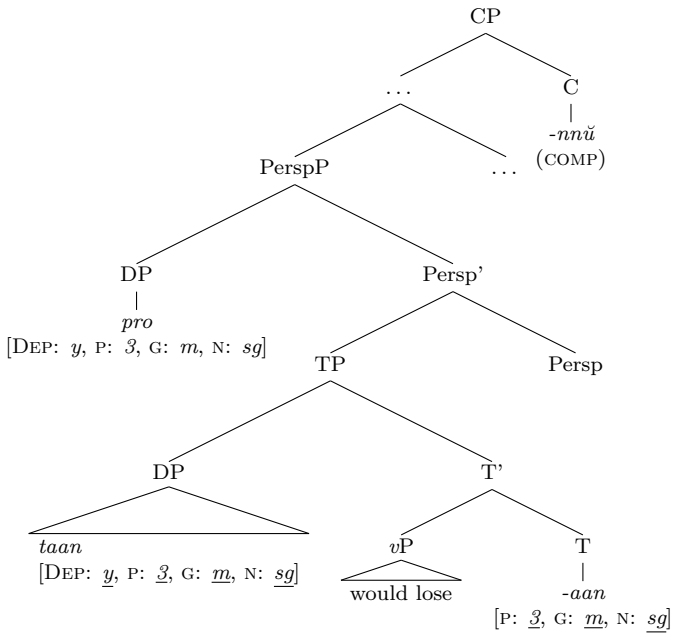
At LF, their matching DEP-values triggers binding of *ta(a)n* by *pro*: *ta(a)n* and *pro* now refer to the same entity. The assignment function then maps these elements to a salient perspective-holder in the evaluation context; the antecedent DP denoting this perspective-holder must also bear 3FSG features. Thus, in (36), *ta(a)n* and *pro* are both assigned to refer to the female entity Mia, and not to the male one Sri. Thus, the antecedent *Mia*, *ta(a)n*, *pro* and the agreement on embedded T are all set to 3FSG – explaining the antecedent ϕ-matching effect observed earlier.

The derivation of the minimally varying sentence in (30), repeated below, is very similar:

(37) Mia$_i$ [$_{CP}$ Sri$_j$ [$_{CP}$ taan$_{\{j,*i\}}$ too-pp-aan-ŭnnŭ]
Mia.NOM Sri.NOM ANAPH.SG.NOM lose-FUT-3MSG-COMP
nene-tt-aan-nŭ] paar-tt-aaḷ.
think-PST-3MSG-COMP see-PST-3FSG
"Mia$_i$ saw [$_{CP}$ that Sri$_j$ thought [$_{CP}$ that he$_j$/*she$_i$ would lose]]."

The only difference between this and the structure in (36) has to do with the ϕ-feature values on *pro*.[4] As illustrated below, the perspectival pronoun in (30) is born with 3MSG ϕ-values: it thus values the features on T and *ta(a)n* as 3MSG (yielding 3MSG rather than 3FSG agreement under *ta(a)n*). At LF, *ta(a)n* and *pro* are both mapped onto a male (rather than female) perspective-holder, represented by the 3MSG DP *Sri*. Both the differences in agreement and antecedent-values between (35) and (37), and the similarity with respect to antecedent-tracking effect of agreement in both, are thus straightforwardly captured:

(38)



To complete the paradigm, let us now look at the special structures involving 1st-person verbal agreement under *ta(a)n*. The structure below is a simpler version of (33):

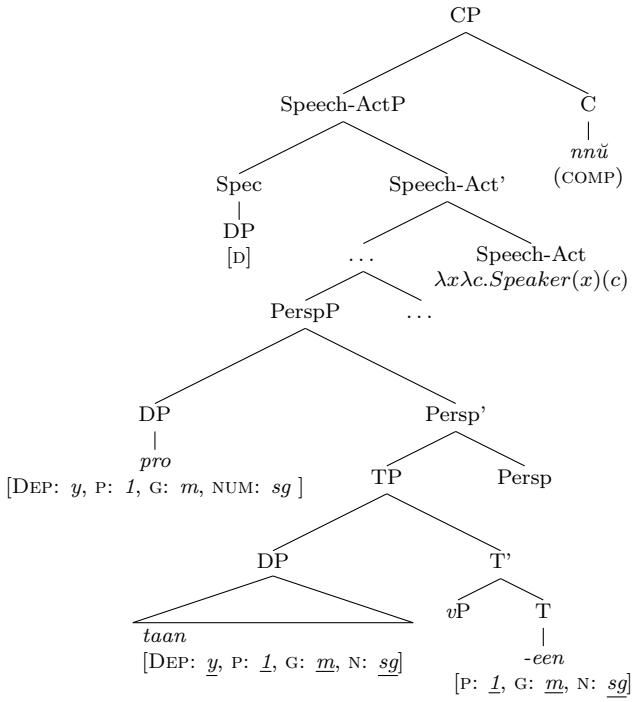
(39) Sai$_i$ [$_{CP}$ taan$_{\{i,*j\}}$ ʤej-pp-**een**-nnŭ] so-nn-aan.
Sai ANAPH[NOM]$_i$ win-FUT-1SG-COMP say-PST-3MSG-COMP
"Sai$_i$ said [$_{CP}$ that he$_{\{i,*j\}}$ would win]"

The basic idea is that the perspectival pronoun in the embedded CP containing *ta(a)n* is born with 1SG ϕ-features. As such, the ϕ-features on *ta(a)n* and T are also mechanically valued by this pronoun as 1SG. However, the difference is that the evaluation context of this embedded CP is not the utterance-context but the "context" pertaining to the speech-event denoted by the matrix speech verb. Thus, 1st-person on *pro* doesn't denote the speaker of the utterance context, but the speaker invoked by the speech-verb – namely Sai. This speaker is also a

[4]It is assumed that there are no restrictions on the ϕ-features that *pro* may be born with. The syntax essentially overgenerates and ill-formed structures – such as, for instance, a 3FSG *pro* and *ta(a)n* denoting a male perspective-holder – are filtered out at LF.

perspective-holder with respect to the embedded CP, thus qualifies to serve as the antecedent of *ta(a)n*. Notice, incidentally, that the root CP is evaluated against the utterance-context: thus the matrix subject denoting the male agent of the speech-verb, triggers 3MSG agreement on the matrix verb. The tree-structure for the syntactically relevant part of the derivation – namely the embedded CP – is depicted below, post-Agree and before SpellOut:[5]

(40)



There is of course nothing in the syntax that prevents the *pro* in (40) from being 3rd-person – and by extension, also *ta(a)n* and agreement on embedded T. But this 3rd-person feature will again be evaluated against the context associated with the speech-verb, not against the utterance context. It will thus necessarily denote an individual *other* than the agent of the speech-predicate, Sai. In other words, Sai could not function as the antecedent of *ta(a)n*; since there is no other salient antecedent in the structure, the sentence will crash at LF. But if there is another salient perspective-holder in the structure – as in (41) below, the problem will be obviated:

(41) [$_{CP}$ Sai$_i$ [$_{CP}$ taan$_{\{j,*i\}}$ ʤej-pp-**aan**-nnŭ] so-nn-aan-nnŭ] Sri$_j$
Sai ANAPH[NOM]$_i$ win-FUT-3MSG-COMP say-PST-3MSG-COMP Sri
nene-čč-aan.
thought-PST-3MSG
"Sri$_j$ thought [$_{CP}$ that Sai$_i$ said [$_{CP}$ that he$_{\{j,*i\}}$ would win]"

In (33), we assume that *pro* in the innermost CP is born with 3MSG features: it values *ta(a)n* and T with these same features. At LF, *pro* and *ta(a)n* cannot refer to Sai – for the reasons given above. But there is another salient perspective-holder which is evaluated as 3MSG in the context associated with the speech-verb (and incidentally, also relative to the utterance

[5]The SpeechActP, selected by the speech-verb, sets the evaluation context to be that associated with the speech-verb. For further details and discussion of the nature of SpeechActP and the representation of this context, see Sundaresan (2012).

context): this is the entity denoted by the matrix subject *Sri*. Thus *pro* and *ta(a)n* are mapped onto this entity with the result that *Sri* is construed as the antecedent of *ta(a)n* in (41).

5 Tamil anaphoric agreement and the AAE

The discussion above shows that Tamil does not employ any of the parametric strategies used by other languages to avoid a violation of the AAE – described in Section 2.1. The Tamil anaphor is not "protected" from triggering agreement, as illustrated for Hindi in Section 2.1.3; the verbal agreement triggered under the nominative subject anaphor *ta(a)n* is not a frozen, default form, as observed for Italian, Inuit, and Albanian (Section 2.1.2); nor is it a special morphological form that obtains only in the scope of anaphors – as observed for Swahili and Chichewa in Section 2.1.4.

But Tamil nevertheless does have a strategy to avoid an AAE violation in the structures discussed above. The agreement triggered under nominative subject *ta(a)n* is ϕ-covarying. But it is ultimately triggered, not by *ta(a)n* (even though the latter is in the standard agreement-triggering position for this language, namely the structural subject position) but by some other element in the local domain of T. This element, we have argued, is the perspectival *pro* is the specifier of a Perspectival Phrase in the left periphery of the clause containing *ta(a)n*. In the account developed here, the anaphor also participates in ϕ-agreement; but it crucially is not a *source* of ϕ-agreement on T: rather T and the anaphor jointly function as probes for ϕ-valuation. The Tamil strategy for avoiding an AAE violation is thus to ensure that the agreement is triggered by some other element in the local domain of the probing head.

Our original formulation of the AAE, based on the discussion of parametric strategies in Section 2.1 was that in (21), repeated below:

(42) "Anaphors do not occur in syntactic positions construed with covarying ϕ-morphology."

The Tamil data investigated here suggests that this must be modified as in (43) below:

(43) **Anaphor Agreement Effect (updated):** Anaphors typically do not occur in syntactic positions construed with covarying ϕ-morphology. If an anaphor *does* occur in this position, there must be some other element in the local domain that can instead serve as the source of agreement, both for the verb and the anaphor.

5.1 How rare is the Tamil strategy?

A valid question to ask, at this juncture, is how unique this strategy is crosslinguistically and, relatedly, what about Tamil allows it to "get away" with it.

The answer is that it may not actually be such a rare strategy as it seems. For instance, the Niger Congo language Donna Sɔ seems to manifest a phenomenon that looks a lot like the special 1st-person agreement seen in Tamil speech complements (the example below is taken and reformatted from Curnow, 2002):

(44) Oumar [$_{CP}$ inyemɛ jɛmbɔ paza bolum] miñ tagi.
Oumar [ANAPH[SBJ] sack.DEF drop left.1SG] 1SG.OBJ informed
"Oumar$_i$ told me [$_{CP}$ that he$_{\{i,*j\}}$ had left without the sack.]"

In (44), we have an anaphoric subject – seemingly occurring in ϕ-covarying subject position. The agreement triggered on the verb under this anaphor is 1SG. Notably, the minimal CP containing the anaphor is a speech complement. Under the old formulation of the AAE (see again (42)), the sentence in (44) would constitute a counter-example to the AAE; but it is entirely accountable under the updated version in (43). The agreement pattern seen in (44) might be explained along the same lines as the 1st-person anaphoric agreement in Tamil: i.e. we might say that the agreement is triggered by an obligatorily shifted 1st-person *pro* in the left periphery of the embedded CP, which also corefers with the antecedent *Oumar*. Of course, further research needs to be undertaken into the anaphoric and agreement systems in Donna Sɔ to see to what extent such an analysis would be viable for this language. But the striking resemblance to Tamil structures like (33) above is suggestive.

Analogous structures may also be attested in Amharic. Amharic has been discussed in the literature as a language that manifests indexical shift (Schlenker, 1999, among others). But in some of the clauses where indexical shift has been shown to obtain, the putatively shifted indexical is actually a silent *pro* (as in (45) below, from Delfitto and Fiorin, 2011, but ultimately due to Malamud (2006)):

(45) Profäsəru$_i$ [$_{CP}$ *pro*$_i$ bät'am bəzu səra ə-sär-allähu] alä.
professor *pro* very much work 1SG-work.IMP-AUX.1SG say.PRF.3SG.MASC
"The professor$_i$ said [$_{CP}$ that he$_i$ works very hard]."

But of course, since the subject is silent, we have no obvious way of knowing that it really is a 1st-person indexical (as also pointed out in Delfitto and Fiorin, 2011, 219). That it is tacitly treated as such is actually due to the 1st-person agreement marking on the clausemate verb. But structures like Tamil (33) and now (potentially) (44), raise the possibility that it is a null anaphor instead, and that the 1st-person agreement is triggered by a shifted 1st-person *pro* higher up in the clause. Indeed, there seems to be independent evidence to support the latter option: Delfitto and Fiorin further note that the null subject may be construed *de re* with respect to the matrix subject. If it were really a shifted 1st-person indexical, this would be unexpected; but a *de re* construal is predicted to be possible if it is a null anaphor, instead (see also Pearson, 2013, for arguments in favor of possible *de re* construals involving anaphors). Thus, it is possible that Amharic too adopts the Tamil strategy for avoiding a violation of the AAE.

Further research into the agreement and anaphora patterns of these and other languages must be done before anything more definitive can be said. What we can perhaps <already say is that, in general, two properties would have to hold, for a language to be able to adopt the AAE strategy proposed here for Tamil. First, it would need to have another potential (non-anaphoric) candidate in the local domain which could trigger agreement instead of the anaphor. In Tamil, the presence of this candidate was seen to be motivated by the perspectival nature of anaphora. Thus, we might predict that other languages which have both overt agreement marking and similar perspectival systems, would also have recourse to this option. Second, the agreement mechanism of this language has to be set up such that,

when the argument in agreement-triggering position is itself unable to trigger agreement, local probing continues on until the next available candidate is found. I.e. agreement must not be satisfied with a default or with crashing in the case that its first preference is, for some reason, unable to trigger agreement. It is unclear at this juncture what independent factors might condition this state of affairs.

6 Conclusion and theoretical speculations

I have presented novel data and reconsidered old data from the Dravidian language Tamil, pertaining to the nature of verbal agreement triggered under the anaphor *ta(a)n* when the latter appears with nominative case in agreement-triggering subject position. In the process, I have argued that this agreement, which looks like standard ϕ-covarying agreement, is nevertheless special and is special because the subject, the standard source of agreement in Tamil, is an anaphor. Specifically, the agreement is triggered in such cases, not by the anaphor, but by another element in the local phase, namely a perspectival *pro*. The anaphor is indeed involved in the agreement mechanism, but crucially not as the source of agreement: rather, it is in this sense just like the T head in its clause, probing to get its ϕ-features valued. The broader crosslinguistic implication of this is that the AAE, namely the generalization that anaphors cannot trigger ϕ-covaring agreement, is valid in Tamil as well. Tamil just uses a different strategy to avoid violating the AAE than the languages discussed so far in the literature.

We have so far said nothing about the theoretical motivations behind the AAE. I.e. *why* can an anaphor not trigger agreement? Why do languages do to such extents to avoid a situation where an anaphor would be in a position to do so? A plausible answer may simply be that anaphors don't have the (valued) ϕ-features required to trigger agreement. Indeed, a popular view in the literature claims that this lack of some or more ϕ-features is the defining property of an anaphor (Kratzer, 2009; Reuland, 2011; Rooryck and vanden Wyngaerd, 2011). A radical implementation of this position would be to say that anaphors are "minimal pronouns" (Kratzer, 2009), *pro*-forms that are born with a fully unvalued set of ϕ-features. They would thus be more like the functional heads T/v that probe to get their ϕ-features valued, than like full-fledged nominals (a position reminiscent of earlier proposals like that in Borer, 1989). A more conservative view would be to say that anaphors lack a subset of ϕ-features. In this case, however, we would additionally have to posit that the Agree mechanism between the anaphor and a probing head does not accommodate partial valuation of ϕ-features on the probe.

Regardless of which position we take, a ϕ-deficiency account of the AAE presupposes that the Agree mechanism for ϕ-features can distinguish between inherent valued features and inherited valued ϕ-features on a DP. I.e. the anaphor should be unable to value the ϕ-features on T/v even after it has potentially inherited these ϕ-features from another DP (either its antecedent or some other local entity, like the *pro* element motivated here). This means that either the probing head can distinguish between inherited and inherent features. Alternatively we would have to say that the T head gets its features valued at the same time as (this is the assumption of the current proposal for Tamil, for instance) or before the anaphoric DP inherits its own ϕ-features.

However, this ϕ-deficiency account of the AAE is independently problematic, a main concern being that it is too simple. The simple fact is that anaphors in the world's languages do not seem to be created equal. Based on the ϕ-featural restrictions on potential antecedence, anaphors seem to have different ϕ-featural specifications. Some anaphors seem to lack all ϕ-features, thus can take antecedents with any combination of ϕ-features: the Chinese anaphor *ziji* is an example (Huang and Liu, 2001). Yet others seem to already have some ϕ-features but lack others: the Dravidian anaphor *ta(a)n*, among many others, places no restriction on the gender or number of its antecedent but restricts its choice of person (3rd-person antecedents are allowed, 1st and 2nd person are not). At the other end of the spectrum, we have anaphors that do not seem to lack any ϕ-features whatsoever. Heinat (2008), for instance, discusses examples from San Lucas Quiaviní Zapotec and Thai, among others, to show that even R-expressions may be anaphorically bound. The following Zapotec example is from Heinat (2008, p. 151):[6]

(46) **San Lucas Quiaviní Zapotec**:

R-ralloh Gye'eihlly$_i$ [$_{CP}$ r-yu'lààa'z Lia Paamm Gye'eihlly$_i$].
HAB-think Mike HAB-like F Pam Mike

"Mike thinks [$_{CP}$ Pam likes Mike$_{\{i,*j\}}$]." (literal)

If we wanted to maintain the ϕ-deficiency account in the face of such data, we would essentially have to say that all anaphors, including those in languages like Zapotec, underlyingly lack ϕ-features, even if they don't seem to do so on the surface. Alternatively, we might find that such languages in fact do not observe the AAE – this would then also count as a potential argument in favor of the ϕ-deficiency account. Clearly, further research needs to be done.

Another source of theoretical interest has to do with the question of what factors condition the choice of parametric strategy that a language adopts in order to avoid a violation of the AAE. I.e. why does one language (e.g. Icelandic, English, or German) prevent anaphors in agreement-triggering positions altogether whereas another language allows it under certain conditions? Of those that allow it, why does one accommodate an AAE violation via a default agreement strategy whereas another does so via a protection strategy, while yet another uses a special anaphoric form? How does the choice of subject vs. object agreement interact, if at all, with the AAE strategy chosen? For instance, the special anaphoric agreement (discussed here for Swahili and Chichewa) has been observed with object-agreeement but not with subject-agreement languages. If this is indeed a restriction, what conditions it? These are also intriguing questions which cannot be answered given our current state of knowledge and merit further research.

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[6]Crucially, evidence from sloppy readings under VP ellipsis show that the R-expression does indeed function like a bound-variable and is not merely accidentally coreferent with its antecedent as in the sentence. "Everyone loves Bill. Even Bill loves Bill!"

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