

Deriving the Anaphor Agreement Effect and its Violations

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The term ‘Anaphor Agreement Effect’ refers to the descriptive generalization that the anaphors cannot control agreement on the verb. The general consensus in the literature was that the Anaphor Agreement Effect was in fact a universal phenomenon. Contrary to this, in this paper, I put forth the data from a set of languages, where the anaphor does indeed control agreement on the verb, in the violation of the Anaphor Agreement Effect. To explain this dual nature of anaphors in world’s languages, I propose a derivational timing analysis that derives not only the Anaphor Agreement Effect but also those problematic cases in which it seems to be violated.

1. The Anaphor Agreement Effect

At the most basic level, both anaphora and agreement seem to describe a phenomena where properties of one element depend on and reflect those of another. For instance, in the case of agreement in (1), the inflection on the auxiliary directly corresponds to the number and person features of the subject.

- (1) a. The child is playing.
- b. The children are playing.

A similar type of dependency is also seen in the case of anaphoric relations. As shown in (2), the anaphors *himself* and *herself* are dependent on their respective antecedents *John* and *Mary* not only for their interpretations but also for their φ -feature specifications.

- (2) a. John_i saw himself_i in the mirror.
- b. Mary_i saw herself_i in the mirror.

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Given that anaphor by itself is dependent on some other element for its interpretation, Rizzi's (1990) Anaphor Agreement Effect generalization raises the question of whether an anaphor can act as the source of a dependency established by agreement? In other words, can it successfully control agreement on the verb?

This question, however, cannot be tested in languages like English because they only have subject agreement (3a) but not object agreement (3b). In addition, the anaphor can only occur in object position (4a) but not in subject position (4b). As a result, there is no direct interaction between anaphora and agreement in English.

- (3) a. John sees the children.
b. *The children sees John.
- (4) a. John likes himself.
b. *Heself likes John.

Therefore, the interaction between anaphor and agreement can only be tested in those languages that either allow the anaphor to appear in subject position or have object agreement. A language that meets one of these requirements is Icelandic, which allows the nominative argument to control agreement from the object position with certain experimenter verbs like *leiddust* 'be bored' (Sigurðsson 1991, 1996), as shown in (5).

- (5) Henni leiddust strákar
she.DAT bored.3PL boys.NOM
'She found the boys boring.' Icelandic (Sigurðsson 1996:3 (1))

Replacing the pronominal object in (5) with an anaphor gives us the right context to test the interaction between anaphora and agreement. It turns out that, in such context, the sentence becomes ungrammatical as shown in (6).

- (6) *Konunum_i leiddust SIG_i
women.DAT bored.3PL REFL.NOM
'Women were bored with themselves.' Icelandic (Halldór Sigurðsson p.c.)

The same pattern can also be observed in Italian as well, where it is possible for a nominative pronominal DP to control agreement from object position (7a) but with the anaphoric DP, the sentence becomes ungrammatical (7b).

- (7) a. a me interessano solo loro
to me.DAT interest-3PL only they.NOM
To me matter only they.' Italian (Rizzi 1990:32 (14b))

- b. *A lorro_i interest-ano solo se-stessi_i
 to them.DAT matters-3PL only REFL.NOM
 They_i only matter to themselves_i.’ Italian (Rizzi 1990:33 (15))

Rizzi argues quite rightly that the ungrammaticality of (6) and (7b) cannot be explained by Principle A of the Binding Theory (Chomsky 1981) because in both cases, the dative subject could serve as a local antecedent for the anaphor, which satisfies Principle A of the Binding Theory.¹ Thus, having ruled out the Binding Theory as a possible explanation, Rizzi accounts for the ungrammaticality of the examples in (6) and (7b) by proposing the Anaphor Agreement Effect generalization, which is given below.

- (8) *Anaphor Agreement Effect* (henceforth AAE):
 Anaphors cannot occur in a position construed with agreement.

According to this generalization, an anaphor can never control agreement and consequently, the ungrammaticality of (6) and (7b) can be straightforwardly explained since, in each of these cases, anaphors occur in an agreement-controlling position.

More importantly, what this generalization predicts is that, when the anaphor does not occur in an agreement-controlling position, the sentence should be grammatical. This prediction holds true for both Italian and Icelandic. In the case of Italian, when the anaphor occurs in genitive case, which independently cannot control agreement, the sentence becomes grammatical.

- (9) a lorro_i import-a solo di se-stessi_i
 to them.DAT matters-3SG only of them-selves.GEN
 ‘They_i only matter to themselves_i.’ Italian (Rizzi 1990:33 (15))

Similarly in the case of Icelandic, when the anaphor occurs in accusative case, which also cannot control agreement, the sentence becomes grammatical.

- (10) Henni_i virðist sig_i vanta peninga.
 Her.DAT seems REFL.ACC lack money
 ‘She_i seems to herself_i to lack money.’ Icelandic (Everaert 1991:288 (23b))

The grammaticality of the resulting sentence when the anaphor is not in an agreement-controlling position validates the AAE generalization.

In addition to these Italian and Icelandic facts, it is often the case with Indo-European languages that they lack the nominative case form of an anaphor and it is precisely the

¹The dative subject can very well act as a suitable antecedent for the anaphor as in (9) and (10), therefore it is not the failure of binding that causes the ungrammaticality of (6) and (7b).

nominative case form that controls the agreement in these languages. Putting together these two facts, we seem to have a simple explanation in terms of the AAE for the absence of nominative anaphors in these languages. Consideration such as these led Rizzi to claim that the AAE generalization holds ‘systematically across natural languages’ (Rizzi 1990:28).

Since Rizzi’s original observation, there has been both empirical and theoretical study of the AAE generalization, which yielded interesting results (Woolford 1999; Shiraki 2004; Tucker 2010; Sundaresan 2016; Yuan 2018; Preminger 2019). The empirical side of the research has focused on the different repair strategies that languages employ to overcome the violation of the AAE and the theoretical side has tried to develop an explanation for the inability of the anaphor to control agreement. As already claimed by Rizzi, all these studies seem to conclude that the AAE is in fact a universal phenomenon.

On the contrary, in this paper, I put forth the data from a set of languages, where the anaphor does indeed control agreement on the verb. To explain these apparently contradictory properties of anaphors, I propose an analysis that appeals to the Strict Cycle Condition (Chomsky 1973) and the derivational timing of Merge of an agreement target and anaphor’s antecedent, when they both establish an Agree relation with the anaphor.

This paper is divided into the following sections: In section 2, I discuss the languages that conform to the AAE generalization, where repair strategies are used to avoid a violation of the AAE. In section 3, I provide data from languages where the AAE is in fact violated. In section 4, I propose an analysis that explains not only those languages that follow the AAE generalization, but also the languages that violate it. In section 5, I discuss the further consequences of the proposed analysis. In section 6, I compare the proposed analysis with some competing approaches. Section 7 is the conclusion.

2. AAE respecting languages

The languages that follow AAE are alike in not having agreement inflection controlled by the anaphor. However, these languages differ in terms of the repair strategies that they employ to overcome an AAE violation. The two prominent repair strategies that languages employ are ‘default agreement’ with the anaphor (Storoshenko 2016) and ‘agreement switch’ from the anaphor (Patel-Grosz 2014; Sundaresan 2018). In this section, I discuss each of these strategies in turn.

2.1 Default Agreement

A clear case of default agreement with anaphor is seen in Shona, which is a Bantu language belonging to Niger-Congo language family. It has both subject marking (SM) and object marking (OM) as a part of its verbal morphology. As shown in (11), SM tracks the noun class of the subject and OM corresponds to the noun class of the object.

- (11) Mufaro a-Ø-ri-bik-a bota
 Mufaro.1 SM.1-PST-OM.5-cook-FV porridge.5
 'Mufaro cooked porridge.' (Storoshenko 2016:161 (5))

When the arguments are personal pronouns (12), they are obligatorily pro-dropped and their φ -feature specifications can be recovered from the SM and OM respectively.

- (12) *pro* ndì-nó-mù-gèz-bvùnz-à *pro*
 1SG SM-PRES-OM-question-3SG 3SG
 'I question him.' (Déchaine and Wiltschko 2012:17 (37a))

When the anaphor occurs as the object, an invariable morpheme *zvi-* occurs in the OM slot, which does not φ -covary with the features of the anaphor. As shown in (13), even when anaphor bears different φ -values, the *zvi-* morpheme remains invariant.

- (13) a. ndì-nó-**zvi**-gèz-'a
 SM-PRES-OM-wash
 'I wash myself.'
 b. tì-nó-**zvi**-gèz-'a
 SM-PRES-OM-wash
 'We wash ourselves.'
 c. ù-nó-**zvi**-gèz-'a
 SM-PRES-OM-wash
 'You wash yourselves.' (Déchaine and Wiltschko 2012:17 (35))

On the face of it, it is unclear what exactly the status of this *zvi-* morpheme is, as it could very well be an incorporated reflexive pronoun. However, Storoshenko (2016) points out that *zvi-* is not an incorporated pronoun but a class 8 agreement marker that belongs to the actual φ -paradigm of the language and typically occurs as default agreement. The evidence to show that *zvi-* is indeed a default agreement marker comes from conjunction. As shown in (14), when the object is a conjunct DP with nouns belonging to the different noun classes, the language resolves this conflict by inserting the *zvi-* morpheme into the object agreement slot.

- (14) nda-ö-**zvi**-tor-a [sadza no-mu-riwo]
 SM.1.SG-PST-OM.8-take-FV Sadza.5 and-3-relish
 ‘I took them (sadza and relish).’

Another context where *zvi*- occurs as default agreement is when the whole clause acts as an agreement controller. In such configurations, in the absence of a proper referential DP as an agreement controller, *zva*-² morpheme occurs in the subject agreement slot, as shown in (15).

- (15) [Ku-tsav-ir-a mu-mba ma-zuva e-se] **zva**-ka-kosh-a
 INF-sweep-APPL-FV house day every SM.8-RPST-important-FV
 ‘Sweeping the house every day was important.’ (Storoshenko 2016:17 (22))

Therefore, as argued by Storoshenko, if *zvi*- typically occurs in default agreement contexts, then its occurrence with the anaphor in (13) must also be an instance of default agreement and this shows that Shona repairs AAE violating contexts by using default agreement.

2.2 *Agreement switch*

Agreement switch is a strategy where the agreement controller is switched from the anaphor to some other local element in the clause. Patel-Grosz (2014) reports that Kutchi Gujarati, an Indo-Aryan language, displays this pattern. Regarding its basic agreement system, Kutchi Gujarati has a split agreement system based on aspect (Patel-Grosz 2014; Grosz and Patel-Grosz 2014). In the imperfective aspect in (16a), the verb agrees with the subject. In the perfective aspect in (16b), the verb agrees with the case marked object.

- (16) a. John Mary-ne jo-th-o t-o
 John Mary-ACC see-IMPERF-MSG PST-MSG
 ‘John was seeing Mary.’ (Patel-Grosz 2014:1 (1a))
 b. Mary John-ne jo-y-o
 Mary John-ACC see-PERF-MSG
 ‘Mary saw John.’ (Patel-Grosz 2014:2 (2))

Given that it is the object that controls agreement in (16b), we can replace it with an anaphor. As shown in (17), in such case, the agreement facts do not change as the normal expected ϕ -covarying agreement still obtains.

- (17) Mary_i potha_i-ne jo-y-i
 Mary REFL-ACC see-PERF-FSG
 ‘Mary_i saw herself_i.’ (Patel-Grosz 2014:5 (10))

²*zva*- is an allomorph of *zvi*- that shows up in certain subject agreement contexts (Fortune 1985).

On the face of it, the agreement facts in (17) gives the impression that it is the anaphor that controls φ -covarying agreement. However, Patel-Grosz demonstrates that in these cases, it is not the anaphor that controls agreement, but rather the subject DP. Her evidence for this ‘agreement switch’ comes from dative subject constructions in the perfective aspect. In the perfective aspect, agreement usually tracks the object (18a) as can be seen by plural agreement on the verb. However, when the object is an anaphor (18b), agreement switches to the subject and since the dative subject is typically unavailable for agreement, default singular neuter agreement surfaces on the verb.

- (18) a. Raj-ne chokra-ne jo-va par-y-a
 Raj-DAT children-ACC see-INF.PL had-PERF-PL
 ‘Raj had to see children.’ (Patel-Grosz 2014:6 (13b))
- b. Raj_i-ne e-na potha_i-ne jo-v-u par-y-u
 Raj-DAT 3SG-GEN REFL-ACC see-INF.NSG had-PERF-NSG
 ‘Raj_i had to see himself_i.’ (Patel-Grosz 2014:5 (12a))

The fact that dative subjects cannot control φ -covarying agreement and only default neuter agreement can be shown independently. In the following intransitive construction with a dative subject, the verbal complex shows default agreement:

- (19) John-ne av-u par-y-u
 John-DAT come-NSG had-PERF-NSG
 ‘John had to come.’ (Patel-Grosz 2014:3 (6b))

Given that NSG is a default agreement that obtains with the dative subject, this clearly shows that (18b) has undergone an agreement switch, where the goal of agreement is switched over from the anaphor in the object position to the dative subject. Therefore, Kutchi Gujarati uses agreement switch as a repair strategy to overcome the violation of the AAE.

3. AAE Violating Languages

In this section, I will discuss the data from Tamil, standard Gujarati, Archi and Ingush, where the anaphors do control φ -covarying agreement in violation of the AAE.

3.1 Tamil

Tamil³, a Dravidian language primarily spoken in the southern parts of India, is a nominative-accusative language, where only the nominative argument controls agreement on the

³All the data in this section comes from the fieldwork conducted in Pollachi, which is located in the state of Tamil Nadu, India.

verb. As shown in (20), the unmarked nominative subject controls agreement for person, number and gender features.

- (20) Meena Kohli.y-ai paar-t-aal
 Meena(F).NOM Kohli(M)-ACC see-PST-3SGF
 'Meena saw Kohli'

In addition to this construction, Tamil also has dative-accusative and dative-nominative constructions (Lehmann 1993; Schiffman 1999). The dative-accusative construction is typically used with the verbs like *pidi* 'like', in which agreement is neither with the dative subject nor with the accusative object and as a result, the verb surfaces with default 3SGN agreement as in (21).

- (21) Kohli-ukku Meena.v-ai pidi-t-atu/*aan/*aal
 Kohli(M)-DAT Meena(F)-ACC like-PST-3SGN/*3SGM/*3SGF
 'Kohli liked Meena.'

The dative-nominative construction typically occurs only with the verbs like *kidai* 'got', and *tevai* 'need' (Baker 2015). In these type of constructions, agreement tracks the nominative object. As shown in (22), the nominative objects controls φ -covarying agreement on the verb.

- (22) Kohli-ukku Meena kidai-t-aal
 Kohli(M)-DAT Meena(F).NOM get-PST-3SGF
 'Kohli got Meena.'

When it comes to the distribution of the anaphor *taan*, it can occur as an accusative object under the nominative subject as in (23). Since the accusative-marked arguments cannot control agreement in Tamil, the AAE is irrelevant here.

- (23) Kohli_i tan_i-ai kanadi-le paar-t-aan
 Kohli(M).NOM REFL-ACC mirror-LOC see-PST-3SGM
 'Kohli_i saw himself_i in the mirror.'

In addition to this, the anaphor *taan* can also occur as a nominative object under the dative subject. In this case, as shown in (24), the corresponding agreement on the verb is φ -covarying.

- (24) a. Kohli_i-ukku taan_i tirumba kidai-t-aan
 Kohli(M)-DAT REFL.NOM again get-PST-3SGM
 'Kohli_i got himself_i back again.'

- b. Meena_i-ukku taan_i tirumba kidai-t-aal
 Meena(F)-DAT REFL.NOM again get-PST-3SGF
 'Meena_i got herself_i back again.'

The occurrence of *taan* in an agreement-controlling position with corresponding φ -covarying agreement in (24) does not immediately point to the conclusion that it is the anaphor that controls agreement because it could very well be the case of an agreement switch as we saw in Kutchi Gujarati. However, it can be straightforwardly shown that there is no agreement switch in these cases. The evidence for this comes from the intransitive construction, where the dative subject is the sole argument of the sentence. In such case, as shown in (25), the default agreement is the only option.

- (25) a. Kohli-ukku pasi-t-atu/*-aan
 Kohli(M)-DAT hungry-PST-3SGN/*3SGM
 'Kohli was hungry.'
 b. Meena-ukku pasi-t-atu/*-aal
 Meena(F)-DAT hungry-PST-3SGN/*3SGF
 'Meena was hungry.'

Also in the dative-accusative construction that we had already seen in (21), default agreement is the only option. Therefore, if the dative arguments are typically unavailable for agreement, the source of agreement in (24) can only be from the nominative anaphor in the object position and thereby Tamil presents a genuine violation of the AAE.

3.2 Standard Gujarati

Similar to Kutchi Gujarati, the standard variety of Gujarati also has split agreement system based on aspect, where the imperfective aspect shows agreement with the subject (26a) and the perfective aspect shows agreement with the object (26b) (Mistry P 2000; Doctor 2004).

- (26) a. Raaj copdi kharidt-o hat-o
 Raaj(M) book(F) buy-MSG be-MSG
 'Raaj was buying a book.' (Mistry P 2000:343 (17a))
 b. Sudha-e Raaj-ne uthaad-o
 Sudha(F)-ERG Raaj(M)-DOM awakened-MSG
 'Raj awakened Sudha.' (Kinjal Joshi p.c.)

Given that it is the object that controls agreement in (26b), we can replace it with an anaphor. As shown in (27), in such case, the agreement facts do not change as the normal expected φ -covarying agreement still obtains.

- (27) Sudhaa_i-e potaa_i-ne sando-vi
 Sudha(F)-ERG REFL-DOM involved-FSG
 'Sudha_i involved self_i.' (Mistry P 2000:344 (19))

However, there is still the question with regard to (27) of whether it is the anaphor that controls agreement or if this is a case of agreement switch. If this were agreement switch, then the target of agreement switch has to be the clause-mate subject. However, similar to Tamil, the ergative subject is not an agreement controller in the language. Evidence for this comes from (28), where the ergative subject with the clausal object gives rise to default neuter agreement on the matrix verb.⁴

- (28) Raaj-e jaṇaav-yū [ke Sita jarur aavše]
 Raj(M)-ERG informed-N that Sita(F) definitely come.FUT-3
 'Raj informed that Sita will definitely come.' (Kinjal Joshi p.c.)

The default agreement suggests very clearly that it is not possible for the ergative argument to control ϕ -covarying agreement. Therefore, the source of ϕ -covarying agreement in (27) can be only from the anaphor in the object position, where there is no agreement switch.

Another piece of evidence to show that there is no agreement switch to the clause-mate subject in standard Gujarati can be seen by comparing the dative subject construction in standard Gujarati with that of Kutchi-Gujarati. In standard Gujarati, the ϕ -covarying agreement in (29a) suggests that there is no agreement switch to the dative subject because if there were, then we would expect to see default neuter agreement as in Kutchi Gujarati (29b).⁵

- (29) a. Sita_i-ne pota_i-ne apnav-i che
 Sita(F)-DAT REFL-DOM adopt-FSG be
 'Sita_i wants to adopt herself_i.' Gujarati (Kinjal Joshi p.c.)
 b. Raj_i-ne potha_i-ne jo-vu par-y-u
 Raj(M)-DAT REFL-DOM see-N had-PERF-N
 'Raj_i had to see himself_i.' Kutchi Gujarati (Patel-Grosz 2014:5 (12))

These facts strongly suggest that it is the anaphor that controls agreement in standard Gujarati and we are therefore dealing with another example of an AAE violation.

⁴Another difference between the Kutchi Gujarati and the standard Gujarati is that the subject is overtly marked with the ergative case in standard Gujarati but for the similar construction in Kutchi Gujarati, the subject is unmarked.

⁵Both in the Kutchi Gujarati and standard Gujarati, the dative subject never controls agreement.

3.3 Ingush

Ingush, a Nakh-Daghestanian language, also presents a clear case of an AAE violation. It is also an ergative-absolutive language, where only the absolutive argument controls agreement (Nichols 2011). In (30a), the verb shows agreement in gender B⁶ with the direct object and in (30b), the verb shows agreement with the direct object in gender J.

- (30) a. aaz jett aara-b.oala-b.yr
 1SG.ERG cow(B).ABS out-B.GO-B.CS.WP
 'I led the cow out.'
- b. aaz Mariem aara-j.oala-j.yr
 1SG.ERG Mariem(J).ABS out-J.go-J.CS.WP
 'I led the Mariem out.'
- (Nichols 2011:432 (5-7))

In Ingush, the anaphor can occur as an absolutive argument either with an ergative subject (31a) or with a dative subject (31b) and the corresponding agreement on the verb is φ -covarying.

- (31) a. Muusaaz learrha shie xoadav-veav
 Muusa.ERG on.purpose REFL.ABS cut-V.CS.NW.V
 'Musa cut himself on purpose.'
- (Nichols 2011:641 (27))
- b. Suona shie kizjgaa-chy bwarjga+j-eira
 1SG.DAT REFL.ABS mirror.GEN-in eye+J.see.WP
 'I(female speaker) saw myself in the mirror.'
- (Nichols 2011:641 (22))

In the above example, the change in the case of the subject from ergative to dative did not affect the agreement. If there was an agreement switch to the clause-mate subject in (31), then φ -covarying agreement is not expected because the ergative or dative arguments are by default not an agreement controllers in the language. The evidence for this fact that dative argument is not an agreement controller comes from (32), where the dative

⁶In the example in (30) the letters B and J refer to the morphological φ -features of the argument. A glossing convention that Nichols (2011) adopts in her grammar of Ingush. The other φ -features and their corresponding letters are given in the following table.

Person	Gender	SG	PL
1/2	M	V	D
1/2	F	J	D
3	M	V	B
3	F	J	B
3	various non-human	B	B
3	various non-human	B	D
3	various non-human	D	D
3	various non-human	J	J

subject with the clausal object does not trigger agreement on the matrix verb as it appears without any agreement inflection.

- (32) Suona [yz dika sag voliga] xou
 1SG.DAT 3SG good person V.BE.SBJ know.PRES
 'I know he is a good person.'
 (Nichols 2011:547 (40))

If the dative or ergative arguments are generally not agreement controllers, then they cannot be the source of φ -covarying agreement in (31) and consequently, it must be the anaphor that controls agreement. Thereby, Ingush also presents an AAE violation.

3.4 *Archi*

Archi is yet another Nakh Daghestanian language that violates the AAE. It is also an ergative-absolutive language, where only the absolutive argument controls agreement on the verb (Chumakina et al. 2016).⁷ As shown in (33), only the features of the absolutive argument are reflected on the verb.

- (33) zari noʃš darc'-li-r-ši ebt'ni
 1SG.ERG horse(III)[SG.ABS] post-SG.OBL-CONT-ALL III.SG.tie.PERF
 'I tied the horse to the post.'
 (Chumakina et al. 2016:60 (29))

Similar to Ingush, the anaphor can occur as the absolutive argument and the corresponding agreement inflection is φ -covarying as shown in (34).

- (34) a. Zalik-li-s inža-w w-ak:u dayon-n-aš
 Zalik(I)-SG.OBL-DAT REFL.ABS-I.SG I.SG-see.PERF mirror(IV)-SG.OBL-IN-EL
 'Zalik saw himself in the mirror.'
 (Bond and Chumakina 2016:69 (52))
 b. laha-s inža-w w-ak:u
 child(I).SG.OBL-DAT REFL.SG.ABS-I.SG I.SG-see.PERF
 'A boy saw himself.'
 (Sadler 2016:158 (19))

If only absolutive argument can control agreement in Archi (Chumakina et al. 2016), then

⁷Not all verbs in Archi show agreement inflection and only a set of verbs do. They always inflect for the features of the absolutive argument. The agreement inflection are for two numbers: Singular and plural. The Gender system consist of four genders. The I and II denote male and female humans respectively. The other nouns are distributed across III and IV. The agreement declension for the verb 'bite' is shown in the table below (Bond et al 2016: 23).

	SG	PL
I	w-eq:'u	b-eq:'u
II	d-eq:'u	
III	b-eq:'u	eq:'u
IV	eq:'u	

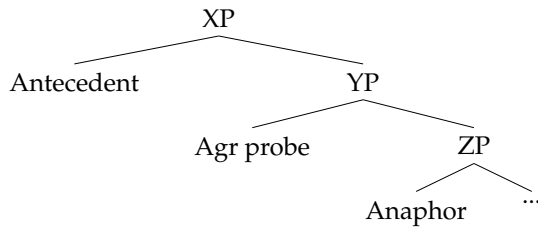
agreement in (34) can only come from the anaphors, which occur in absolutive case. These facts suggest that Archi also presents a clear case of an AAE violation similar to Tamil, standard Gujarati and Ingush. If compare these languages with the AAE respecting languages like Shona and Kutchi Gujarati that we have seen in section 2, the central questions that arise are (i) why does the AAE seem to hold in some languages but not others, (ii) how to account for the difference between these two types of languages? In following section, I take up these questions in detail.

4. Proposal

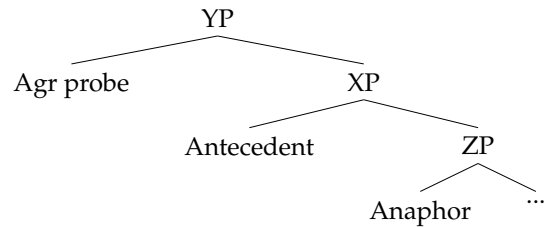
To begin with, I argue that both the AAE and its violations are predicted outcome of a system that treats both agreement inflection and anaphors as φ -probes that undergoes Agree (Chomsky 2000) with the corresponding DPs that act as suitable φ -goals (Reuland 2001; Heinat 2008; Rooryck and Vanden Wyngaerd 2011). The anaphor, being an unvalued φ -probe itself, cannot control agreement. However, the anaphor is not going to remain unvalued throughout the course of the derivation because there will be some point in the derivation where the anaphor ends up getting value for its φ -features as a result of undergoing Agree with its antecedent. This valuation will change the anaphor from being a φ -probe to a φ -goal. As a result, if agreement targets the anaphor after it has become a φ -goal, then it is predicted to be able to control agreement.

Regarding the question of how and when exactly the anaphor becomes a φ -goal, I propose that it depends on derivational timing, that is the order in which an agreement probe is merged relative to the antecedent of the anaphor.⁸ The two possible abstract scenarios are given below,

(35) *Derivation A:*



(36) *Derivation B:*



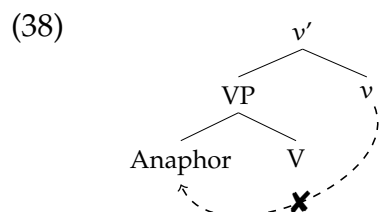
In derivation A, the Agr probe is merged before the antecedent. When this structure is built up to the level of YP, there is only Agr probe and anaphor in the structure. When Agr probe tries to agree with the anaphor, it does not yet have φ -features and agreement fails. This failure of agreement is what results in the AAE.

⁸The usage of term 'agreement probe', here, refers to the functional heads like T or *v* that that agrees with the corresponding DP.

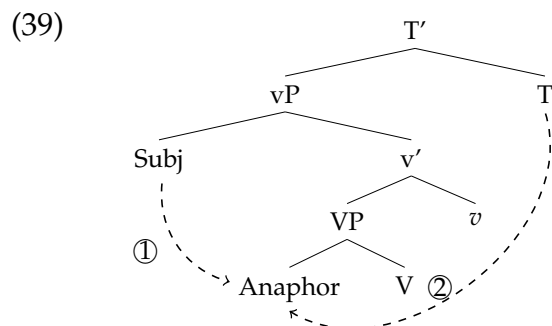
In derivation B, the antecedent is merged before the Agr probe and at the level of XP, both the antecedent and the anaphor are present in the structure. This allows the anaphor to first undergo Agree with the antecedent and acquire the ϕ -features before the Agr probe is merged. Thus, the anaphor becomes a ϕ -goal prior to Agree with the Agr probe, allowing it to control agreement. This is what results in a violation of the AAE. The predicted patterns are schematized below:

- (37) a. Pattern A: Agr probe \succ Antecedent \rightarrow AAE holds
 b. Pattern B: Antecedent \succ Agr probe \rightarrow AAE violation

In Pattern A, where the Agr probe is merged before the antecedent, the AAE is expected to hold without any exception. On the other hand, in Pattern B, where the antecedent is merged after the Agr probe, the AAE is predicted not to hold. Given these predictions, the functional head that acts as an Agr probe in a given language plays an important role in determining the AAE profile of that language. For instance, if v functions as an Agr probe, which seeks to agree with the anaphor in the object position, as shown in (38), the subject (or the antecedent) has not yet been merged in the structure. Therefore, in such case, the anaphor would not have yet acquired its ϕ -features and cannot act as a suitable agreement controller when v agrees with it.



On the other hand, if it is not v but T is the Agr probe that seeks to agree with the anaphor in the object position, as shown in (39), the subject (or the antecedent) is already merged in the structure. Therefore, the anaphor would have already acquired its ϕ -features from the subject and consequently, it can act as suitable agreement controller when T agrees with it.



I show that those languages, where the AAE holds like Shona and Kutchi Gujarati have v as their Agr probe and as a result, they follow the AAE. On the other hand, languages like Tamil, standard Gujarati, Archi and Ingush have T as their Agr probe and as a result, they allow agreement with anaphors in violation of the AAE. However, before actually deriving these patterns in these languages, I will first present the background assumptions that are needed for the analysis.

4.1 Assumptions

4.1.1 Nature of φ -probes

Following Tucker (2010) and Rooryck and Vanden Wyngaerd (2011), I assume that anaphors and functional heads like T or v are alike in terms of inherently lacking a value for their φ -features. Therefore, they both enter the derivation without any feature specifications as shown below.

- (40) a. Anaphor = $\{\varphi: _ \}$
 b. T or v = $\{\varphi: _ \}$

Although the anaphor and the functional head start out in the derivation without any values for their φ -features, they eventually acquire the value by undergoing Agree with a corresponding DP that is inherently specified with φ -feature values such as $\{\varphi: 3SG\}$. Therefore, by the end of the derivation, they would be represented as shown below.

- (41) a. Anaphor = $\{\varphi: \underline{3SG}\}$
 b. T or v = $\{\varphi: \underline{3SG}\}$

As (41) indicates, there is no featural distinction between an anaphor and a functional head. The difference between them comes from the interpretability of the φ -features (Tucker 2010; Rooryck and Vanden Wyngaerd 2011). Since anaphors belong to the class of nominals, the φ -features are semantically interpretable on them, whereas the same set of φ -features are not interpretable on functional heads. Therefore, in terms of formal representation, the anaphor would start the derivation with an interpretable and unvalued feature, while functional come with an uninterpretable and unvalued feature as shown below.

- (42) *At the beginning of the derivation:*
 a. Anaphor = $\{i\varphi: _ \}$
 b. T or v = $\{u\varphi: _ \}$

Given these feature representations, the anaphor only needs to receive a value for its unvalued feature whereas the functional heads have to not only acquire the value but also need to check their uninterpretable feature by the end of the derivation as shown below.⁹

(43) *At the end of the derivation:*

- a. Anaphor = {i ϕ :3SG}
- b. T or v = {u ϕ :3SG}

4.2 *Nature of Agree*

As I have illustrated above, the functional head and the anaphor undergo change in the nature of their representation in the due course of the derivation from (42) to (43). I assume that the process responsible for that change, where the uninterpretable feature is checked and unvalued feature gets valued, is Agree. Although there have been various types and versions of Agree proposed in the literature, My analysis involves a specific version of Agree adapted from ‘upward Agree’ (Zeijlstra 2012; Bjorkman and Zeijlstra 2019). I will postpone the justification for choosing this version of Agree over others for now and instead focus on how the upward Agree analysis works for anaphoric binding and ϕ -agreement.

The basic definition of ‘upward Agree’ as originally proposed in Zeijlstra (2012) is given below.

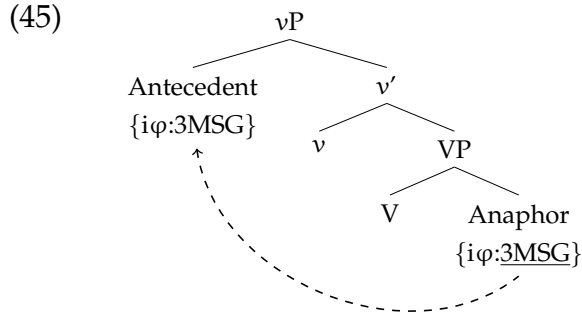
(44) Upward Agree:

α can agree with β iff:

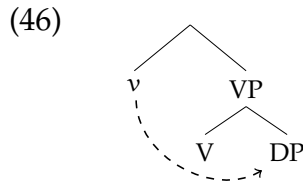
- a. α carries at least one uninterpretable feature and β carries a matching interpretable feature.
- b. β c-commands α .
- c. β is the closest goal to α (Zeijlstra 2012)

The basic intuition behind this definition is that it is the goal (β) that c-commands the probe (α) and hence probing happens upward rather than downward. Adopting the same intuition for the valuation of anaphors, I assume that an anaphor with an unvalued feature probes upward and is valued from its c-commanding antecedent as shown in the (45).

⁹A requirement imposed by the principle of full interpretation (Chomsky 1995) at the interfacel level.



Although the valuation of an anaphor is straightforward under the upward Agree version, the checking and valuation of features on a functional head is not quite so. The main reason for this is that it most often the case that the functional head c-commands the DP that it agrees with. In other words, the functional head is a probe that c-commands its goal and hence the direction of the probing would have to be downward as shown in (46).



In order to accommodate this fact with in upward Agree, I assume a simplified version of the ‘accessibility relation’ introduced in Bjorkman and Zeiljstra (2019). Simply put, this accessibility relation allows for downward valuation provided there was a prior upward checking relation between the elements involved. In the absence of a prior upward checking relation, downward valuation is not possible.¹⁰

Accordingly, I assume that the elements that are involved in the prior upward checking relation are case features where I assume that DP with structural case enter the derivation with an uninterpretable case feature as shown below.

(47) Uninterpretable case feature:

- a. Nominative DP = {uT}
- b. Accusative DP = {uv}

¹⁰This is slight deviation from Bjorkman and Zeiljstra (2019) because for them, the downward valuation can only happen when the higher DP cannot fully value the probe’s features but I assume that downward valuation is automatically licensed whenever there is a prior upward checking relation.

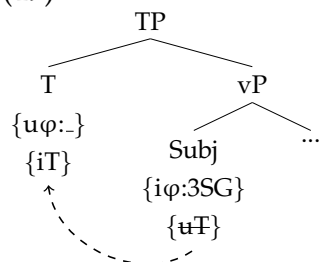
The uninterpretable case feature associated on the DP has to be checked before the derivation reaches the LF, otherwise it causes a crash at the interfaces. These features can only be checked against those functional heads that have the corresponding interpretable case features. Accordingly, I assume the following interpretable case feature on functional heads:

(48) Interpretable case feature:

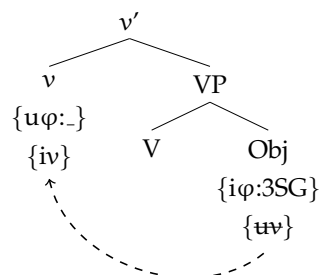
- a. $T = \{iT\}$
- b. $v = \{iv\}$

The uninterpretable case features associated with DPs and interpretable case feature associated with the functional heads undergo feature checking as illustrated by the structures in (49) and (50), where the $\{uT\}$ feature of the nominative subject probes upwards to check its feature against the $\{iT\}$ feature of T (49). Similarly, the $\{uv\}$ feature of the accusative object and probes upwards to check its feature against the $\{iv\}$ feature of v (50).

(49)

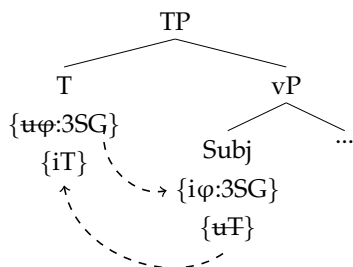


(50)

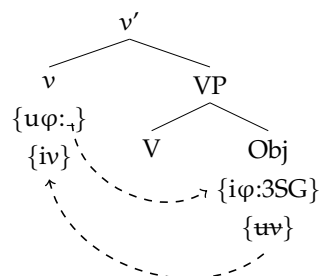


Given this prior upward checking relation, the accessibility relation allows for the downward valuation as illustrated in (51) and (52), where v and T can probe down to check and value its uninterpretable and unvalued feature with the subject and the object respectively.

(51)



(52)



Therefore, in the system that I am assuming, the φ -features of the anaphor can be valued

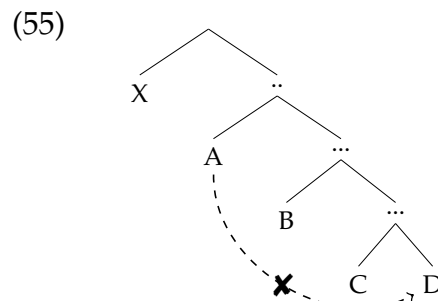
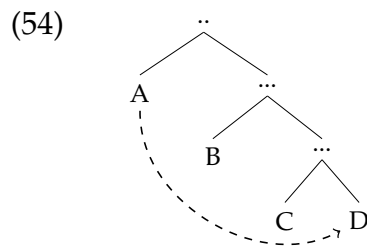
straightforwardly since the probing is by default upwards. However, the functional head can only have its feature checked and valued downwards from the corresponding DP when there is a prior upward Case-checking relation between the DP and the functional head.

In addition, for Agree between the anaphor and its antecedent and between the functional head and the corresponding DP, I assume that they are constrained by the Strict Cycle Condition. The Strict Cycle Condition as in (53) was initially proposed in Chomsky (1973:243) as one of the underlying principles of derivational grammar that restricts syntactic operations like Agree, Merge and Move.

(53) *Strict Cycle Condition* (Chomsky 1973):

No rule can apply to a domain dominated by a cyclic node A in such a way as to affect solely a proper subdomain of A dominated by a node B, which is also a cyclic node.

According to this condition, in a structure like (54), if Agree has to apply between A and D, then it can only happen before X merges into the structure. However, with X already present in the structure as in (55), the Strict Cycle Condition prevents subsequent Agree relation between A and D because it affects a proper subdomain dominated by the current cyclic node (the root node).



Having elaborated on all the assumptions that are needed for the analysis, in what follows, I will derive the difference between the AAE-respecting and AAE-violating languages discussed in Section 2 and 3.

4.3 Deriving default agreement in Shona

We have already seen in section 2.1 that Shona marks both its subject and object with class covarying subject and object markers.

- (56) a. Mufaro a-Ø-ri-bik-a bota
 Mufaro SM.1-PST-OM.5-cook-FV porridge.5
 'Mufaro cooked porridge.' (Storoshenko 2016:161 (5))
- b. *pro* ndì-nó-mù-gèz-bvùnz-à *pro*
 1SG SM-PRES-OM-question-FV 3SG
 'I question him.' (Déchaine and Wiltschko 2012:17 (37a))

Storoshenko (2016) illustrates that SM is the realization of T agreeing with the subject and OM realizes object agreement on *v*. In what follows, I provide three pieces of evidence in favour of Storoshenko's characterization that T and *v* are the relevant functional heads that undergo agreement with the subject and the object respectively.

The first argument comes from the general morphological template of Bantu languages as given in (57). In this template, the inflectional affixes occur as prefixes and the derivational affixes occurs as suffixes to the main verbal root (Stump 1997).

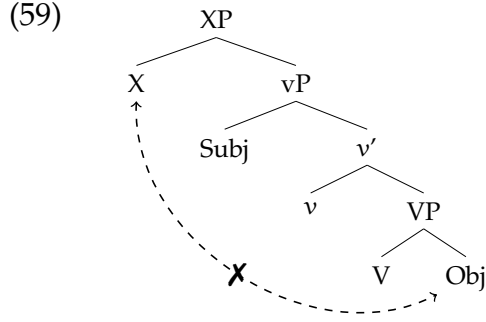
- (57) NEG-SM-TENSE-ASPECT-OM-VERB-CAUS-APPL-FV

If we consider the relative order of inflectional prefixes in (57), SM is prefixed to the tense and OM is prefixed to the verb, which suggests that object agreement is lower than T (i.e. in *v*), whereas subject agreement can be at least as high as tense (in T).

The second piece of evidence comes from the infinitive clause in Shona (58) where there is only object agreement.

- (58) ku-mú-vérénga-er-a
 INF-OM-read-APPL-FV
 'to read to him.' (Julien 2002:197 (18))

The presence of object agreement in (58) suggests that agreement is triggered not by the functional head T because it is infinitive. Therefore, object agreement can only come from the the lower functional heads like *v*. The third piece of evidence comes from minimality effects. The functional head that seeks to agree with the object has to necessarily be located below the subject, when the subject is also a suitable goal as in the case of the simple finite clause in (56). This is because for any object agreement probe that is located above the subject, it has to skip the intervening subject, which leads to minimality violation when the subject is also a suitable goal as shown in (59).

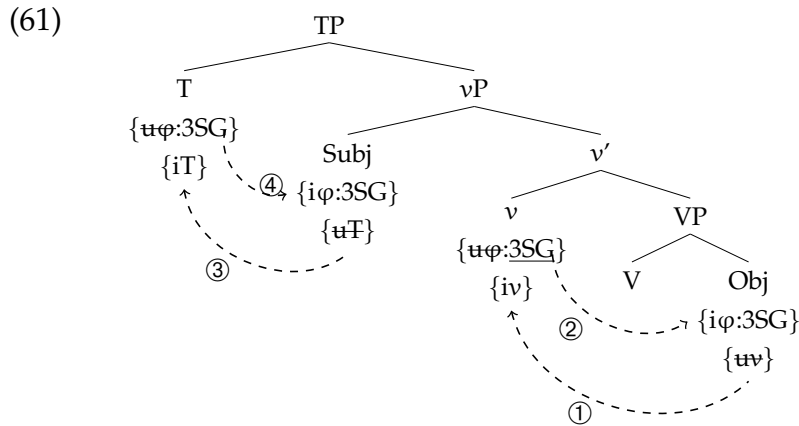


Considerations such as these led Storoshenko to propose that ‘for Shona, *v* may be the better choice for the position of the (object) marking’ (Storoshenko 2016:163). Implementing these agreement facts in terms of an upward Agree approach that I am pursuing in this paper, I assume the following feature specifications on the DPs and the functional heads.

(60)

Functional heads	DP
$T = \{iT\}, \{u\varphi:-\}$	$DP_{NOM} = \{uT\}, \{i\varphi:3SG\}$
$v = \{iv\}, \{u\varphi:-\}$	$DP_{ACC} = \{uv\}, \{i\varphi:3SG\}$

Given these feature specifications, it is the $\{uv\}$ feature of the object and the $\{uT\}$ feature of the subject that probe upwards in order to have their uninterpretable features checked against the $\{iv\}$ feature of *v* and the $\{iT\}$ feature of *T* respectively. This in turn licenses the reverse checking relation of the $\{u\varphi:-\}$ feature of the *T* and *v* against the $\{i\varphi:-\}$ of the arguments. This reverse checking also values the unvalued features of the functional heads as shown in (61).



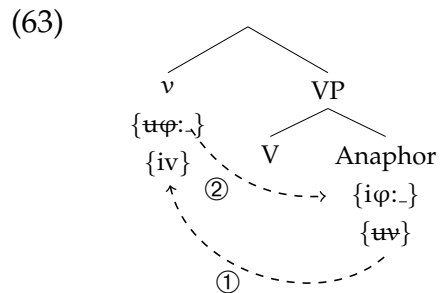
Having T as the locus of the subject agreement and v as the locus of the object agreement will give us the desired result for the derivation involving the anaphors. We have already seen in Shona that whenever an anaphor occurs as the object, the class 8 marker *-zvi-* occurs in the object agreement slot as default agreement.

- (62)
- a. ndì-nó-**zvi**-gèz-‘a
SM-PRES-OM-wash
‘I wash myself.’
 - b. tì-nó-**zvi**-gèz-‘a
SM-PRES-OM-wash
‘We wash ourselves.’
 - c. ù-nó-**zvi**-gèz-‘a
SM-PRES-OM-wash
‘You wash yourselves.’
- (Déchaine and Wiltschko 2012:17 (35))

The derivation that results in default agreement with the anaphors is enumerated in the steps below.¹¹

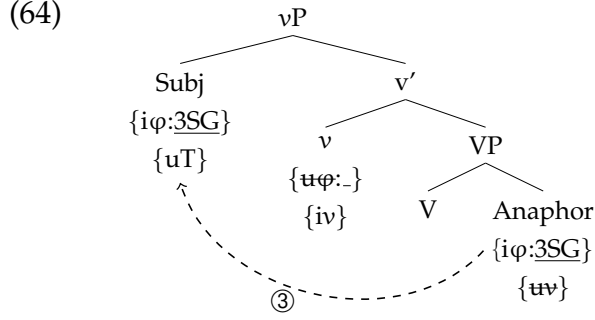
Step 1: In the first step in the derivation, the anaphor is merged in the structure with the features $\{i\varphi:-\}$ and $\{uv\}$ and the derivation is built bottom-up. Once the VP is built, v is merged in the structure with the features $\{u\varphi:-\}$ and $\{iv\}$.

Step 2: In accordance with the Strict Cycle Condition, the $\{uv\}$ feature of the anaphor probes upwards to find the $\{iv\}$ feature of the functional head v. This upward Agree relation licenses the reverse checking relation, where the $\{u\varphi:-\}$ feature of the v is checked against the $\{i\varphi:-\}$ feature of the anaphor but when it comes to the valuation, the anaphor itself does not have features and thus cannot value the probe’s features (63).



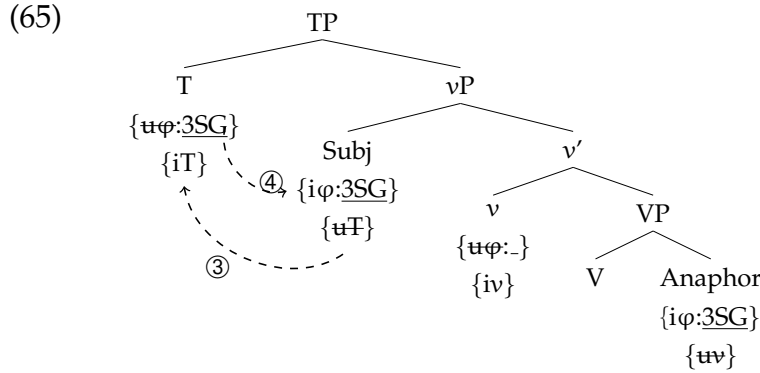
Step 3: In the next step in the derivation, the subject is merged to the structure with the features $\{i\varphi:3SG\}$ and $\{uT\}$. This allows the anaphor to receive a value for its unvalued feature from the subject.

¹¹See Tucker (2010) for a similar type of analysis based on downward Agree (Chomsky 2000, 2001) approach.



When it comes to the unvalued features of v , which is still without a value, it can no longer probe down again to get valued by the anaphor because that would violate the Strict Cycle Condition as defined in (53).

Step 5: In the next step in the derivation, when T enters the structure with $\{uφ:_\}$ and $\{iT\}$ features, the subject undergoes Agree with T and this Agree relation checks the $\{uT\}$ features of the subject and values the T's $\{uφ:_\}$ features as shown in (65).



An important thing to be noted from these derivational steps is that the agreement probe v that seeks to agree with the anaphor merges in the structure below the antecedent (subject). Consequently, when v agrees with the anaphor in (63), the anaphor would not have any $φ$ -features to control agreement. The failed valuation is interpreted as default agreement at the interface level (see Preminger 2014). This order of derivation conforms to the Pattern A (repeated as (66)), where the AAE holds by having default agreement with the anaphor.

(66) Pattern A: Agr probe \succ Antecedent \rightarrow AAE holds

4.4 Deriving agreement switch in Kutchi Gujarati

In section 2.2, we have seen that whenever the anaphor occurs in the agreement-controlling position in Kutchi Gujarati, $φ$ -agreement switches its target to the subject.

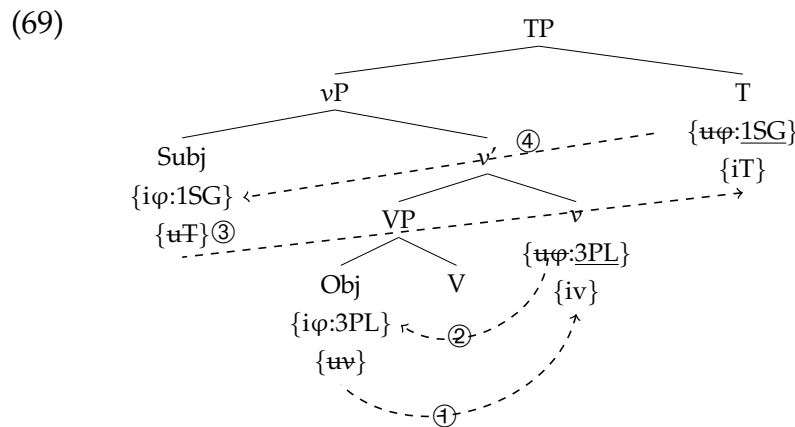
- (67) John_i potha_i-ne jo-y-o
 John REFL-ACC see-PERF-MSG
 'John_i saw himself_i.'
 (Patel-Grosz 2014:4 (9))

Before going into detail about how this agreement pattern is derived, it is important to establish what the agreement probes are in this language and what they agree with. In the examples that we have seen so far in Kutchi Gujarati, the set of agreement values on the verb seem to track only one argument. However, Grosz and Patel-Grosz (2014) give an example from future perfect tense in Kutchi Gujarati, where two different sets of agreement values, each corresponding to the different arguments, show up on the verb and the auxiliary respectively. As shown in (68), the auxiliary verb agrees with the subject and the perfective verb agrees with the object.

- (68) Hu chokra-ne jo-y-a ha-is
 1SG boys-ACC see-PERF-PL AUX-FUT.1SG
 'I will have seen the boys.'
 (Grosz and Patel-Grosz 2014:11 (9b))

Given this nested pattern of agreement, Grosz and Patel-Grosz (2014) propose that there are two different agreement probes in Kutchi Gujarati, where T agrees with the subject and *v* agrees with the object irrespective of whether they overtly show up or not.

Having T and *v* agreeing respectively with the subject and the object is exactly the same pattern that we have seen earlier in Shona. So the derivation of the agreement facts in Kutchi Gujarati would also work exactly in the same way as Shona and the only trivial difference is Shona is head-initial and Kutchi Gujarati is head-final as shown in (69).

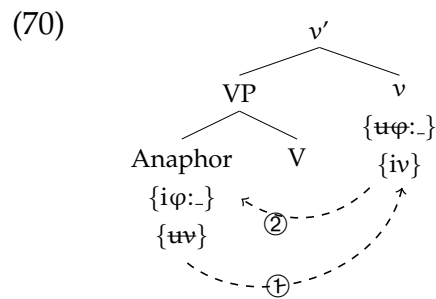


Given this structure, we would expect the derivation of agreement switch in Kutchi Gu-

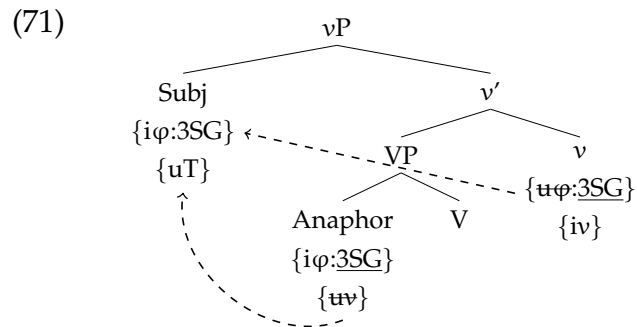
jarati to proceed along the same lines as the derivation of the default agreement in Shona.¹² This is true for the first two steps, which are enumerated below.

Step 1: In the first of the derivation, the anaphor is merged into the structure with $\{i\phi:-\}$ and $\{uv\}$ features. Once the VP is built, v is merged with $\{u\phi:-\}$ and $\{iv\}$ features.

Step 2: In accordance with the Strict Cycle Condition, the $\{uv\}$ feature of the anaphor probes upwards and is checked against the $\{iv\}$ feature of the functional head v . This upward Agree relation licenses the reverse checking relation, where the $\{u\phi:-\}$ feature of v is checked against the $\{i\phi:-\}$ feature of the anaphor. However, the reverse checking relation cannot value the unvalued feature of v because the anaphor by itself is unvalued.



So far, the derivational steps are identical to Shona, but the crucial difference between them arises at this point in the derivation where the checked unvalued feature of v in Shona is interpreted as default agreement in Shona whereas in Kutchi Gujarati it remains active for further probing to agree with the subject when it is merged as shown below.



Though this gives us the desired result, the question that remains is why the unvalued feature of v in Shona ends up as default agreement when it can potentially agree with the subject similar to Kutchi Gujarati. To answer this question, I follow Béjar and Rezac (2009), where they propose that probes come in various types. The requirements of some probes can be fully satisfied by the argument they agree with (e.g. the object), whereas

¹²See Patel-Grosz (2014) and Murugesan and Raynaud (to appear) for a different analysis on first conjunct agreement that obtains as a result of agreement switch.

others can trigger a second cycle of Agree with other another argument (e.g. the subject). I assume that this is the basic difference between Shona and Kutchi Gujarati. The probes in Shona are satisfied in the first cycle by resorting to the default agreement and in Kutchi Gujarati, the probes trigger a second cycle by undergoing the agreement switch.¹³ Both these repair strategies come about as result of Pattern A derivational order, where the anaphor fails to successfully value the unvalued features of *v* and thereby resulting in the AAE.

4.5 *Deriving the AAE violation in Tamil*

As we have already seen in section 3.1, Tamil seems to have just one set of agreement values that occur as suffixes after the tense morpheme. This fact suggests that there is just one agreement probe on T and it can be further confirmed by enriching the verbal complex to include aspectual elements. As shown in (72), the perfective verb appears bare and the agreement value still occurs only as a suffix to the tense marker.

- (72) a. Kohli Meena.v-ai paartu kond-iru-nt-aan
 Kohli(M).NOM Meena(F)-ACC see.PERF VOICE-BE-PST-3SGM
 ‘Kohli had been seeing Meena.’
 b. Meena-ukku Kohli kidaitu kond-iru-nt-aan
 Meena(F)-DAT Kohli(M).NOM get.PERF VOICE-BE-PST-3SGM
 ‘Meena had been getting Kohli.’

¹³In Shona, the features of *v* have to be satisfied so that it doesn’t seek to probe upwards in order to get a value from the subject. It should however be noted that even though *v* fails to get valued by the anaphor, it still gets its uninterpretable feature checked. Therefore, I assume that *v* is satisfied by the mere checking relation since the failed valuation has an option at a later stage to be interpreted as default agreement. If the failed valuation is interpreted as default agreement, then we would expect the default agreement to show up not just with the anaphors but also in other cases where there is no suitable goal to value the probe’s features. This prediction is confirmed since, as we have already seen in section 2.1, the same class 8 marker *zvi-* shows up as a default agreement even when the object is a conjunct DP made of nouns belonging to different noun classes. Similarly, the same morpheme occurs in the subject agreement slot, when the subject is not a proper DP but rather a clause. The relevant examples are repeated below.

- (i) nda-ö-zvi-tor-a [sadza no-mu-riwo]
 SM.1.SG-PST-OM.8-take-FV Sadza.5 and-3-relish
 ‘I took them (sadza and relish).’
 (ii) [Ku-tsav-ir-a mu-mba ma-zuva e-se] zva-ka-kosh-a
 INF-sweep-APPL-FV house day every SM.8-RPST-important-FV
 ‘Sweeping the house every day was important.’ (Storoshenko 2016:17 (22))

Given this ready-made means to interpret the checked and unvalued features of the probe, where the absence of a feature by itself corresponds to a class 8 marker, Shona prefers to resort to default agreement. In the absence of any such means, the checked and unvalued features of the probe in Kutchi Gujarati resort to agreement switch.

If v is also an agreement probe, then it is expected for the perfective verb to exhibit agreement as we have seen in the case of Kutchi Gujarati. The fact that there is no agreement value on the perfective verb might suggest that T is the only agreement probe in the language. Further evidence for it can be again shown in a construction that involves certain indefinite interpretations of the object, in which case the accusative case of the object can be optionally dropped. In such case as shown in (73), it is possible to have two unmarked arguments in a sentence. However, even in such case there is no object agreement but only the subject agreement suffixed to T . All these facts suggest that T is the only agreement probe in the language.

- (73) Kohli idli sapittu kond-iru-nt-aan
 Kohli(M).NOM idli(N) eat.PERF kol-BE-PST-3SGM
 'Kohli had been eating idli'

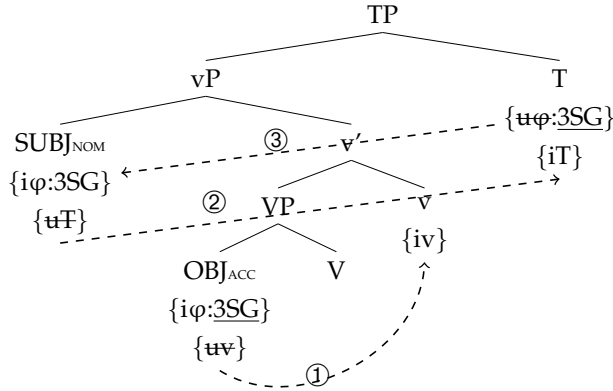
Implementing the presence of subject agreement and the absence of object agreement in terms of an upward Agree approach, I assume the following feature specification with the DPs and the functional head.

(74)

Functional heads	DP
$T = \{iT\}, \{u\varphi: _ \}$	$DP_{NOM} = \{uT\}, \{i\varphi: 3SG\}$
$v = \{iv\}$	$DP_{ACC} = \{uv\}, \{i\varphi: 3SG\}$

The difference in the feature representation between T and v , where only T is specified for $\{u\varphi: _ \}$ feature, allows us to capture the fact that T is the only agreement probe but not v . However, both T and v with their $\{iT\}$ and features $\{iv\}$ involve in case checking relations. Having these feature representations, agreement in the nominative-accusative construction would work as illustrated in (75). In this structure, it is first the $\{uv\}$ feature of the object that probes upward to check its feature against the $\{iv\}$ feature of v and this checking relation is not followed by the reverse checking relation because v doesn't have a $\{u\varphi: _ \}$ feature. The functional head T , on the other hand, undergoes reverse checking when the $\{uT\}$ feature of the subject is checked against its $\{iT\}$ feature because T has the $\{u\varphi: _ \}$ feature that needs to be checked and valued.

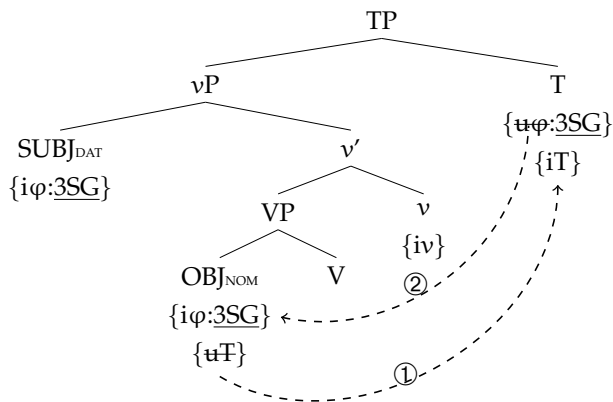
(75)



In addition to nominative-accusative construction, Tamil also has dative-nominative construction. I assume that the dative subject, being an experiencer only bears an interpretable and valued feature $\{i\phi:3SG\}$ and there is no uninterpretable case feature associated with it because the dative case is not a structural case. The nominative object, as usual, is merged in the structure with $\{i\phi:3SG\}$ and $\{uT\}$ features.

With these feature representation, the derivation unfolds as illustrated in the structure in (76). The $\{uT\}$ feature of the nominative object cannot be checked against v because there is a feature mismatch between the $\{uT\}$ feature of the object and the $\{iv\}$ feature of v . Therefore, the $\{uT\}$ feature of the object can only be checked against T , which has the corresponding $\{iT\}$ feature. When this checking relation happens, reverse checking and valuation is licensed such that the $\{u\phi:-\}$ feature of T is checked and valued by the nominative object. In this derivation, the dative subject does not participate in any of the checking or valuation relations because there is no uninterpretable case feature associated with it. When there is no case relation, it cannot establish the prior upward checking relation with T and consequently, there is no reverse checking and valuation either.

(76)

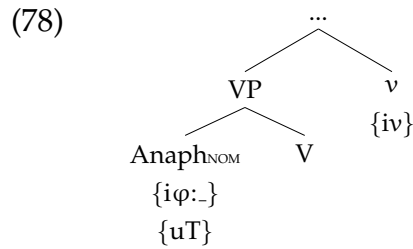


Having established these basic agreement mechanisms for both nominative-accusative and dative-nominative constructions, I will now turn to the AAE facts in Tamil, where I have already shown that it is the anaphor *taan* that controls agreement, especially when the anaphor occurs as a nominative object under the dative subject. The relevant examples are repeated below.

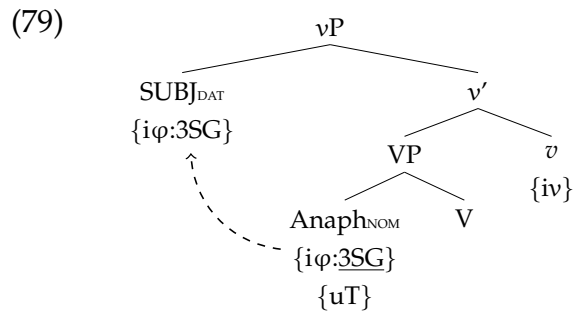
- (77) a. Kohli_i-ukku taan_i tirumba kidai-t-aan
 Kohli(M)-DAT REFL.NOM again get-PST-3SGM
 'Kohli_i got himself_i back again.'
- b. Meena_i-ukku taan_i tirumba kidai-t-aal
 Meena(F)-DAT REFL.NOM again get-PST-3SGF
 'Meena_i got herself_i back again.'

Given that this construction involves the dative subject and the nominative object, the derivation of the anaphor *taan* controlling the agreement would proceed along the same lines as (76). The relevant steps are enumerated below.

Step 1: In the first step of the derivation, the anaphor is merged into the structure with the $\{i\phi:-\}$ and $\{uT\}$ features. The anaphor, being in the nominative case, cannot check its $\{uT\}$ against $\{iv\}$ feature of v and hence, there is no Agree established at this point.

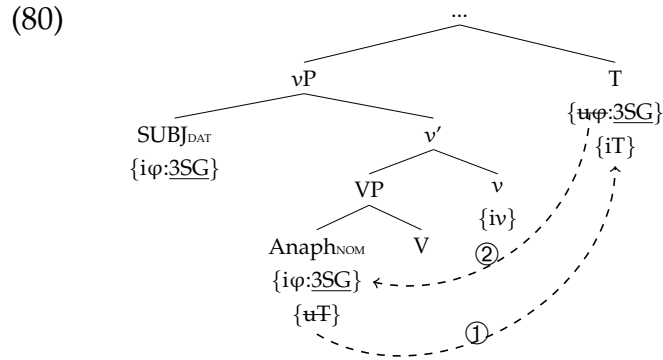


Step 2: When the derivation is built up to the vP , the subject DP merges in the structure with $\{i\phi:3SG\}$. Now, in accordance with Strict Cycle Condition, the unvalued feature of the anaphor probes upwards in order to have its features valued by the dative subject as shown in (79).



Step 3: Finally, T merges in the structure with the $\{u\phi:-\}$ and $\{iT\}$ features. This allows the $\{uT\}$ feature of the anaphor to probe upwards to check its feature against the $\{iT\}$

feature of T. This upward checking relation licenses the reverse checking and valuation of $\{u\phi:_\}$ feature of T with the anaphor. At this point in the derivation, the anaphor can not only check the $\{u\phi\}$ feature of T, but can also value them as it had already acquired the value from the subject in step 2.



In this derivation, the dative subject and T can never enter into an Agree relation because, as we have already seen, there is no uninterpretable case feature associated with the dative subject. When there is no case relation, it cannot establish the prior upward checking relation with T and consequently, there is no reverse checking and valuation. The big advantage of an upward Agree approach that I am pursuing in this paper is precisely this, because under downward Agree (Chomsky 2000, 2001) or bidirectional Agree (Adger 2003; Pesetsky and Torrego 2007; Carstens 2016) approaches, there is a need for an explanation for why the dative subject agrees with the anaphor but not with T. The upward Agree approach offers a natural explanation in terms of the restriction imposed on the downward relation unless there is a prior upward relation.

Now coming back to the derivation from (78) to (80), an important thing to be noted is that the subject DP that acts as an antecedent to the anaphor is merged before the functional head T agrees with the anaphor. As a result of this order, the anaphor will have already acquired the required ϕ -features to control agreement when T probes. This order conforms to the Pattern B (repeated as (81) below), which derives a violation of the AAE.

(81) Pattern B: Antecedent \succ Agr probe \rightarrow AAE violation

4.6 *Deriving the AAE violation in standard Gujarati*

The agreement facts in standard Gujarati can be compared with that of Kutchi-Gujarati as they both are closely related languages. In deriving the AAE facts in Kutchi-Gujarati, we established that there are two different agreement relations in the language, where

T agrees with the subject and v agrees with the object. The evidence for this analysis came from the future perfect tense in Kutchi-Gujarati that exhibited the nested pattern of agreement, where the auxiliary agrees with the subject and the perfective verb agrees with the object.

- (82) Hu chokra-ne jo-y-a ha-is
 1SG boys-ACC see-PERF-PL AUX-FUT.1SG
 'I will have seen the boys.' Kutchi Gujarati (Grosz and Patel-Grosz 2014:11 (9b))
-

If we compare (82) with a similar construction in standard Gujarati, it can be shown that there is no nested pattern of agreement because the auxiliary doesn't agree with the subject rather it agrees with the object along with the perfective verb (83).

- (83) mene chokra-ne jo-y-a ha-se
 I-ERG boys-DOM see-PERF-PL AUX-FUT.3
 'I will have seen the boys' Gujarati (Kinjal Joshi p.c.)
-

In fact it is always the case in standard Gujarati that both the verb and the auxiliary agree with one and the same argument. As already shown in (83), when the subject is ergative, both the verb and the auxiliary agrees with the object. In the imperfective aspect, when the subject is nominative, both the verb and auxiliary agrees with the subject as in (84).

- (84) hū ker.i-ne kap.ū ch.ū
 1SG.NOM mango(F)-ACC eat.1SG be.PRES.1SG
 'I am eating a mango.' (Suthar 2005:2 (3))
-

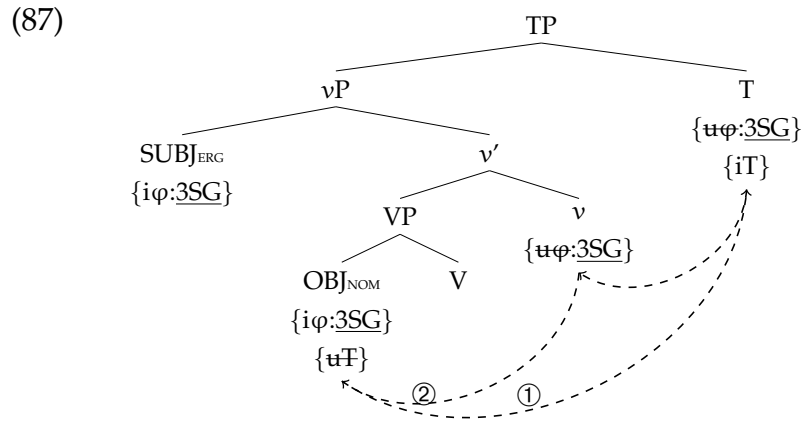
These agreement facts in Gujarati are very similar to Hindi as reported in Bhatt (2005), where the agreement is with the highest unmarked argument and both the verb and the auxiliary agree with one and the same argument:

- (85) Rahul kitaab parh-taa thaa
 Rahul(M) book(F) read-HAB-MSG be.PST.MSG
 'Rahul used to read the book.' Hindi (Bhatt 2005:759 (2a))
-

- (86) Rahul-ne kitaab parh-ii th-ii
Rahul(M)-ERG book(F) read-PERF.FSG BE-PST-FSG
‘Rahul had read the book.’ Hindi (Bhatt 2005:759 (2b))

Bhatt (2005) models this agreement in Hindi by having just one agreement probe on T that tries to agree with the subject. When subject is marked with the ergative case, T agrees with the object. Though v by itself is not a probe, Bhatt treats the agreement value on v as ‘parasitic’ agreement as a consequence of T agreeing with the object.

Following Bhatt, I assume that standard Gujarati also involves just one agreement probe on T that agrees with the object and modeling this fact in an upward Agree approach that I am pursuing in this paper, we have an agreement mechanism as represented in the structure as in (87), which is almost same as the one that we saw for the dative-nominative construction in Tamil. In this structure, the $\{uT\}$ feature of the object probes upward in order to check its feature against the $\{iT\}$ feature of T. This upward checking relation licenses the revers checking, where the $\{u\phi: _ \}$ of T is checked and valued by the object. When the valuation happens on T, I assume that v also has its features co-valued though v by itself is not a probe.



With this agreement mechanism in standard Gujarati, where object agreement is with T rather than with v , would give us the desired result for AAE. The relevant AAE examples, where the anaphor *potaa* controls ϕ -covarying agreement on the verb are repeated below in (88).

- (88) a. Raaje_i potaa_i-ne sandov-yo
Raj(M)-ERG REFL-DOM involved-MSG
‘Raj_i involved self_i.’

- b. Sudhaa_i-e potaa_i-ne sando-vi
 Sudha(F)-ERG REFL-DOM involved-FSG
 'Sudha_i involved self_i.' (Mistry P 2000:344 (19))

Since the agreement mechanism and the AAE facts in standard Gujarati are identical to Tamil, the derivational steps indicating how the anaphor comes about to control the agreement will also proceed along the same lines as we have already seen with Tamil. The agreement probe T is merged after the subject, with the result being that the anaphor will have first undergone Agree with the subject before it undergoes Agree with T. Therefore, the anaphor has already acquired the φ -features by the time it enters into an Agree relation with T. Thus, it becomes possible for the anaphor to control the agreement in standard Gujarati.

4.7 Deriving the AAE violation in Ingush and Archi

Finally, let us consider how to derive the AAE violations in Ingush and Archi. As we did for Tamil and standard Gujarati, we need to establish how many agreement probes are there in these languages and what they agree with. The analytic tense in Kutchi Gujarati exhibited two different agreement values on the verb and the auxiliary and this suggested that there are two different probes in the language. The similar construction in Tamil and standard Gujarati showed only just one set of values on both the verb and the auxiliary, and this suggested there is only one agreement probe in these languages. The same analytic tense in Ingush (89) and Archi (90) patterns with Tamil and standard Gujarati by having just one set of values on both on the verb and the auxiliary.

- (89) aaz gazat dieshazh dy
 1SG.ERG newspaper(D).ABS D.read D.PROG
 'I am reading a newspaper.' Ingush (Nichols 2011:49 (168))
-

- (90) laha-s dija w-ak:u-r-ši w-i
 child(II).SG.OBL-DAT father(I).SG.ABS I.SG-see-IMPERF-CVB I.SG-BE.PRES
 'A girl sees (her) father.' Archi (Chumakina and Bond 2016:92 (30))
-

These facts again suggest that there is only one agreement probe on T that establishes an Agree relation with the object. As a result, in the construction involving anaphors, it is the subject that is merged before the agreement probe T, which is a Pattern B order. As expected, the anaphor indeed controls the agreement.

To sum up this section, we have seen that all those languages that violate the AAE conform to Pattern B derivational order and all those languages that follow the AAE conform to the Pattern A derivational order and this is exactly what is predicted from the proposal.

5. Further Consequences

In the last section, I have shown that the Anaphor Agreement Effect and its violations are simply the predicted outcome of derivational timing. Accordingly, the Pattern A predicts the AAE and the Pattern B predicts AAE violations.

- (91) a. Pattern A: Agr probe \succ Antecedent \rightarrow AAE holds
 b. Pattern B: Antecedent \succ Agr probe \rightarrow AAE violation

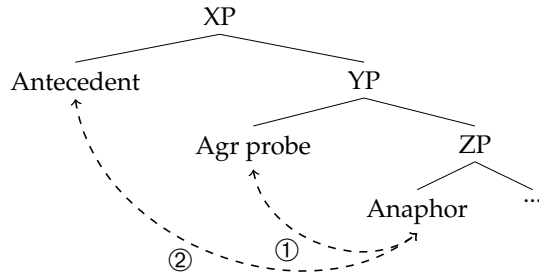
Given the Strict Cycle Condition, Pattern A should necessarily be the pattern, where the AAE is expected to hold without any exceptions and similarly, Pattern B should necessarily be the pattern, where the AAE is expected to be violated. If we were to find languages where the opposite was true, i.e. where the AAE is violated in Pattern A and the AAE holds in Pattern B, then such an outcome would falsify my proposal. I will refer to these two problematic orders as Pattern \bar{A} as in (92a) and Pattern \bar{B} as in (92b).

- (92) a. Pattern \bar{A} : Agr probe \succ Antecedent \rightarrow AAE violation
 b. Pattern \bar{B} : Antecedent \succ Agr probe \rightarrow AAE holds

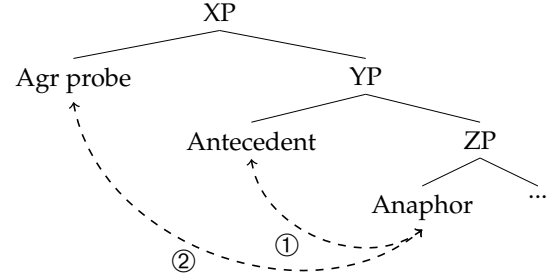
In the Pattern \bar{A} , as illustrated in (93), Agree between Agr Probe and Anaphor precedes Agree between the anaphor and its antecedent. In the former Agree relation, the anaphor would not have any features to value the Agr probe's features and therefore would not be able to control agreement. However, even in this order, if we found a language in which the anaphor still manages to control agreement, then it would be problematic for my analysis.

Similarly, in the Pattern \bar{B} , as illustrated in (94), Agree between the anaphor and the antecedent precedes Agree between Agr probe and the anaphor. In the former Agree relation, the anaphor would have acquired the features values from its antecedent and therefore it can control agreement. However, if it was possible to find a language with this order where the anaphor does not control agreement, then it again poses challenge to the proposed analysis.

(93) Pattern \bar{A} :



(94) Pattern \bar{B} :



Now the question with regard to these problematic patterns is that are there languages that exhibits these patterns? The answer is both yes and no and in this section, I will take up each of these patterns in turn.

5.1 Pattern \bar{A}

We have already seen in Tamil that the anaphor *taan* can occur as a nominative object. In addition, it can also function as a long distance anaphor, where it can occur as a subject of an embedded clause and can then refer to the matrix subject as shown in (95).

- (95) Banu_i [taan_i satat-ai sapi-t-aal-nu] so-n-aal
 Banu(F) REFL rice-ACC eat-PST-3SGF say-PST-3FSG
 'Banu_i said that self_i ate the rice.'

In the above sentence, the agreement inflection on the embedded verb is ϕ -covarying and corresponds to the features of the matrix subject. However, locality constraints would prevent any sort of Agree relation between them. Therefore, the only candidate that is local and seems to control agreement is the anaphor *taan* (Selvanathan and Kim 2008). If it turns out that it is indeed the anaphor that controls agreement, then (95) will correspond to the Pattern \bar{A} . This is because, in the derivation of these sentences, the Agr probe in the embedded clause merges first in the structure much before the antecedent which is in the matrix clause. However, agreement with the anaphor in the embedded clause is ϕ -covarying resulting in an AAE violation and thereby, the derivational order of this sentence seem to conform to the Pattern \bar{A} (repeated as (96) below).

- (96) Pattern \bar{A} : Agr probe \succ Antecedent \rightarrow AAE violation

Therefore, the agreement configuration in (95) representing the Pattern \bar{A} poses serious challenge to the proposed analysis. However, Sundaresan (2018) point out that in cases like (95), it is neither the anaphor not its antecedent that controls the agreement on the

embedded verb. In her analysis, the anaphor in (95) is in a perspective sensitive context, where the antecedent of the anaphor always denotes an individual who holds a mental and spatio-temporal perspective relative to some minimal predication containing the anaphor. This perspectivity is syntactically encoded by having a perspective phrase above the TP headed by a null pronoun or *pro*. As such the source of agreement on the embedded verb is this *pro* (as shown in (97)), which is born with a full set of valued φ -features.

- (97) Banu_i [*pro*_i [_{TP} taan_{i,*j} saatat-ai sapi-t-aal-nnu]] so-n-aal
 Banu(F) *pro* REFL rice-ACC eat-PST-3SGF-COMP] say-PST-3FSG
 'Banu_i said that self_{i,*j} ate the rice.'

The main role of this *pro* is to facilitate a long-distance anaphoric relation between the anaphor and its antecedent at LF and the impression that it controls agreement is only incidental. One of the main pieces of evidence for the presence of *pro* comes from the indexical shift¹⁴ cases in (98), where the embedded verb exhibits 1SG agreement, even though neither the anaphor nor its antecedent is specified for the 1SG features.¹⁵ Therefore, Sundaresan proposes that agreement is triggered by *pro*, which also entails that the shifted 1st-person indexical is *pro*.

- (98) Banu_i [*pro*_i [_{TP} taan_{i,*j} saatat-ai sapi-t-**een**-nu]] so-n-aal
 Banu(F) *pro* REFL rice-ACC eat-PST-1SG-COMP] say-PST-3FSG
 'Banu_i said that self_{i,*j} ate the rice.'

If *pro* is the agreement controller (rather than the anaphor), the agreement configuration in (97) and (98) is parallel to the agreement switch strategy in Kutchi Gujarati, where the target of agreement is switched from the anaphor to the subject as in (67) (repeated as (99) below).

- (99) John_i potha_i-ne jo-y-o
 John REFL-ACC see-PERF-MSG
 'John_i saw himself_i.'

(Patel-Grosz 2014:4 (9))

¹⁴Indexical shift refers to the cases, where the the 1st-person forms are evaluated against the speech index introduced by a selecting speech predicate, rather than against the utterance context (Schlenker 2003; Anand 2006).

¹⁵The anaphor *taan*, generally, can never take 1st person antecedent and therefore, it can also not control the 1SG agreement. Similarly, the antecedent is specified for the 3rd person feature, so it can also not control 1SG agreement.

Therefore, the agreement configuration in the context of long distance anaphor *taan* is not Pattern \bar{A} but rather Pattern A (repeated as (100) below), where the AAE in fact holds.

(100) Pattern A: Agr probe \succ Antecedent \rightarrow AAE holds

5.2 Pattern \bar{B}

In section 1, we have seen agreement facts in Icelandic, where the agreement is only with the nominative argument and it can occur either as a subject or as an object and in both the cases, it can control agreement.

- (101) a. Við lásu bókina
we.NOM read.1PL book.ACC
'We read the book.'
(Sigurðsson 1996:6 (14a))
- b. Henni leiddust strákar
she.DAT bored.3PL boys.NOM
'She found the boys boring.'
(Sigurðsson 1996:3 (1))

Now if we consider that there is only one agreement value on the verb and it consistently tracks the nominative argument, then it makes the case for viewing the functional head T as the only agreement probe, where it tries to agree with the subject and if subject is marked with the dative case, it would then agree with the nominative object. And when T seeks to agree with the anaphor in the object position, it represents the Pattern B derivational order and it is expected for the anaphor to control the agreement. However, such a sentence with the anaphor in the agreement controlling position is ruled out as ungrammatical in Icelandic.¹⁶

- (102) *Konunum_i leiddust SIG_i
Women.DAT bored.3PL REFL.NOM
'Women_i were bored with themselves_i'
(Halldór Sigurðsson p.c.)

The above case is an instance where the AAE actually holds and yet it is an order, where the antecedent merges first in the structure before the agreement probe. Therefore, Icelandic represents Pattern \bar{B} (repeated as (103) below) derivational order.

(103) Pattern \bar{B} : Antecedent \succ Agr probe \rightarrow AAE holds

The order of derivation in Pattern \bar{B} and its AAE outcome again poses challenge to the proposed analysis. However, if we take a closer look at the reason for the ungrammaticality of (102), which is the anaphor controlling agreement, then we would expect the

¹⁶The anaphor SIG in (102) is not actually the nominative form of the anaphor and I am using this form as a filler to denote what the form would be in the nominative.

same sentence to be grammatical when the agreement with the anaphor results in default agreement rather than φ -covarying agreement. However, such a sentence is still ruled out as ungrammatical as shown in (104).

- (104) *Konunum_i leiddist SIG_i
 Women.DAT bored.3SG REFL.NOM
 'Women were bored with themselves' (Halldór Sigurðsson p.c.)

This ungrammaticality is unexpected given the fact that Icelandic optionally allows default agreement with the nominative object as shown in (105).

- (105) Henni leiddist strákar
 she.DAT bored.3SG boys.NOM
 'She found the boys boring.' (Sigurðsson 1996:20 (48a))

Therefore, it becomes clear that the ungrammaticality of (104) and (102) is not because of the presence or absence of agreement with the anaphor. Instead, what it seems to suggest is the absence of nominative anaphor in Icelandic, which is responsible for the ungrammaticality of these sentences.

Further evidence to show that it is the absence of nominative anaphor that causes ungrammaticality rather than agreement comes from one of the types of infinitive constructions in Icelandic, which occurs as an embedded clause with a overt dative subject and a nominative object as shown in (106).

- (106) Mér virðist [stráknum líka þessir bílar]
 1SG.DAT seem.3SG boy.DAT like.INF these cars.NOM
 'It seems to me that the boy likes these horses.' (Watanabe 1993:417 (5.29))

In the above sentence, the embedded verb *líka* 'to like', being an infinitive verb, never inflects for agreement and even in this type of infinitive construction, where there is no requirement of agreement, the nominative form of an anaphor is still ruled out.

- (107) *Mér virðist [stráknum_i líka SIG_i]
 1SG.DAT seem.3SG boy.DAT like.INF REFL.NOM
 'It seems to me that the boy_i likes himself_i.' (Halldór Sigurðsson p.c.)

All these pieces of evidence points out there is a gap in the case inflectional paradigm in the language that lacks the nominative form of an anaphor as illustrated in (108) (Maling 1984; Everaert 1991; Taraldsen 1995).

(108)

Case	Pronoun	Anaphor
Nom	hún	
Acc	hana	sig
Dat	henni	sér

Therefore, the independent absence of the nominative form of an anaphor in the language leads to an apparent Pattern \bar{B} effect in Icelandic rather than agreement with the anaphor.

6. Alternative approaches

6.1 Rizzi (1990)

Rizzi's (1990) own account to explain the AAE involves making use of the contrasting requirements of Principle A and Principle B of the Binding Theory. In this approach, Rizzi maintains the assumption prevalent in the GB era that agreement morphemes are pronominal and are therefore subject to Principle B of the Binding Theory. The anaphor, as standardly assumed, is subject to Principle A. Accordingly, if a sentence has both an anaphor and agreement, then it leads to contrasting binding requirements, where the anaphor has to be bound within its local domain and the (pronominal) agreement should be free within its local domain. Since both of these conflicting requirements can never be simultaneously met, the anaphor can never control agreement.

Though this approach accounts for the AAE, it obviously cannot account for the AAE violations that we have seen in languages like Tamil, standard Gujarati, Archi and Ingush. In these languages the anaphor can control agreement and thus, the contrasting binding requirements of Principle A and Principle B would have to be simultaneously met. This contradiction between the AAE following languages and the AAE violating languages with regard to the principles of the Binding Theory makes Rizzi's proposal untenable.¹⁷

6.2 Shiraki (2004) and Tucker (2010)

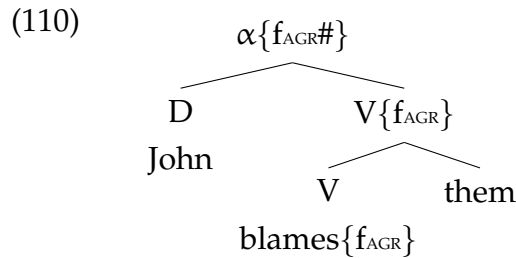
Following Neeleman and Weerman's (1999) theory of argument marking, Shiraki (2004) offers an alternative explanation of the AAE. Neelman & Weerman's theory of argument marking has its roots in the GB tradition, where it is assumed that arguments need to be licensed in order to receive appropriate θ -roles at LF. Nichols (1986) develops this idea by adding that argument licensing need not be uniform in that it can be licensed either by case or by an agreement. In the case of the sentence in (109), the subject *John* is not licensed

¹⁷In addition to the Binding Theory account, Rizzi (1990) had one more account based on referential hierarchy between anaphors, pronouns and R-expressions. However, this account also suffers the same problem as it cannot account for an AAE violation.

by case but through its agreement relation with the verb. The object *them* is licensed not by agreement but by accusative case.¹⁸

(109) John blames them.

For Shiraki, this licensing relation between the argument and the functional head either through agreement or case licensing is formally represented by a relation *R*. This relation *R* is encoded in syntax in terms of the projection and satisfaction of the function *f*. To illustrate how exactly this projection and satisfaction of function works, let us consider argument marking of the subject *John* in (109), whose formal syntactic representation is given in the structure in (110).

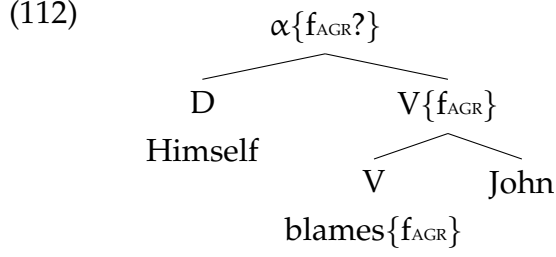


In the above structure, the verb *blame* would project its function $\{f_{AGR}\}$ to its mother node and this function is recursively projected upward until it reaches the node which immediately dominates the subject *John* (α in (110)). The function $\{f_{AGR}\}$ is thereby satisfied at the α node. Since the function projected by the verb is satisfied by the subject, the subject is formally argument marked by the agreement. And when the argument is marked by the agreement, the relation *R* is obtained from the verb to the DP.

Shiraki derives the AAE in a similar way to argument marking. He assumes that anaphors lack the required φ -features to satisfy the function $\{f_{AGR}\}$ of the verb and, as a result, the anaphor cannot control the agreement on the verb. To illustrate this, consider the example in (111), whose representation is given in (112).

(111) *Himself_i blames John_i.

¹⁸In this theory, zero marking of nominative case is taken to be default case. This zero marking of nominative case cannot license the argument.



Assuming that the anaphor is in nominative case in (111), it needs to be argument marked by agreement. So when the $\{f_{AGR}\}$ function projected from the verb moves to the α node, it cannot be satisfied by the subject anaphor *himself* because the anaphor lacks the φ -features. This failure to satisfy the function $\{f_{AGR}\}$, leaves the subject anaphor without argument marking and as a result, the sentence is ruled out.

A general problem for the theory of argument marking is that it predicts that arguments should be licensed either by case or by agreement. However, if an argument is both case marked and undergoes agreement, then such an argument is argument-marked twice. This doubly argument-marked DP is an undesirable redundancy given the general economy consideration. As we have already seen Kutchi Gujarati example in (16b) (repeated as (113) below), where it is the case marked object that controls agreement.

- (113) Mary John-ne jo-y-o
 Mary John-ACC see-PERF-MSG
 'Mary saw John.'
 (Patel-Grosz 2014:2 (2))

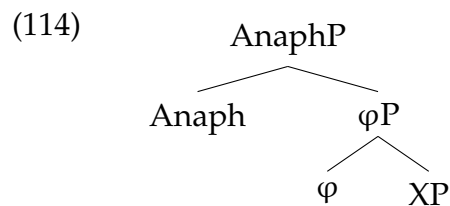
Apart from this general problem of the theory, Shiraki's specific implementation of the AAE, where it is posited that anaphors can never satisfy the function $\{f_{AGR}\}$, predicts that there should be no language with an anaphor controlling the agreement on the verb, which may run into problem in the light of counter-examples to AAE. For these reasons, Argument marking is also not the right approach to give complete account of the AAE.

Another important contribution to the study of the AAE within the theory of Agree comes from Tucker (2010). At the outset, Tucker's approach to derive the AAE is very similar to the one that I had implemented for the derivation of default agreement in Shona in section 4.3. In fact, Tucker's approach operates with the same intuition that the anaphor is something that lacks φ -features. In other words, the anaphor is itself a φ -probe which makes it impossible to value the unvalued features of another probe. However, the main drawback of Tucker's approach is that it fails to take into account of the larger empirical picture of the AAE. We have seen that the repair strategies that languages employ to overcome the violation of an AAE are not just the default agreement but also the agree-

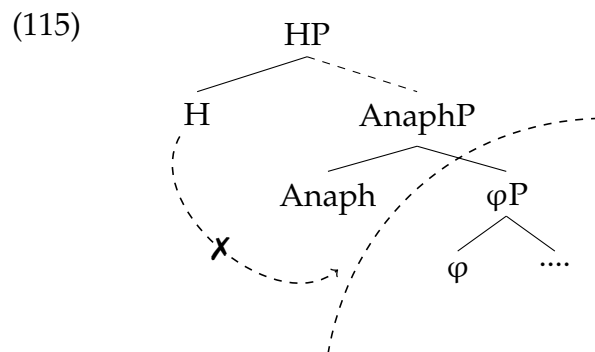
ment switch as in Kutchi Gujarati. In addition, we have seen empirical facts from the languages where there is an AAE violation. Tucker's approach falls short of accounting for these facts associated with the AAE.

6.3 Preminger (2019)

A recent proposal to account for the AAE is from Preminger (2019), where he argues against the timing based analysis that I have proposed in this paper and proposes an 'encapsulation' analysis. In this approach, Preminger begins with a basic assumption that anaphors are born with an inherently specified φ -features and they are hosted as φ P as shown in (114).



Given this structure, in the case of an agreement, when an external probe seeks to agree with an anaphor, Preminger proposes that it is this encapsulation layer right above the φ P layer that prevents Agree as illustrated below.



The question with regard to this structure is what the encapsulation follows from and why only anaphors have it but not any other nominals. Even if we go with Preminger's proposal that the encapsulation layer does exist for the anaphors, the question is how to then account for the AAE violating languages. In such case, the only option is to go back on the proposal and let the encapsulation be parametrized such that those languages that follow the AAE have the encapsulation layer and those languages that violate the AAE do not have the encapsulation layer. This is precisely what Preminger has concluded as well. Although this approach derives the AAE and the AAE violation, the lack of independent

evidence to support for the presence or absence of encapsulation layer undermines the approach.

In addition, I have shown in Tamil, that it is the same anaphor *taan* that controls agreement when it occurs in object position but not when it is in subject position. In Preminger's approach, an anaphor in a given language such as Tamil *taan* can be parametrized either with an encapsulation layer or without it and it cannot do the both simultaneously. In the ligh of this, Preminger's approach cannot account for all the facts associated with the AAE .

7. Conclusion

In this paper, I have established that there is a strong empirical evidence not just for the AAE but also for violations of it. These exceptions proved Rizzi's (1990) initial claim that the AAE is a universal phenomenon to be too strong. Further, to account for the differences between the AAE following languages and the AAE violating languages, I proposed a timing based derivational analysis that predicts both when the AAE holds and when its violated . Accordingly, in a derivation, where the agreement probe merges in the structure before the antecedent as in Pattern A, the system predicts the AAE to hold without any violation. In the other derivational order, where the antecedent merges in the structure before the agreement probe as in Pattern B, the system predicts the AAE to be violated.

- (116) a. Pattern A: Agr probe \succ Antecedent \rightarrow AAE holds
 b. Pattern B: Antecedent \succ Agr probe \rightarrow AAE violation

As predicted, those languages that had the AAE like Shona and Kutchi Gujarati have the Pattern A derivational order with *v* as an agreement probe agreeing with the anaphor in the object position. When Agree happens, the antecedent is not yet merged in the subject position. Therefore, the anaphor would not yet have any ϕ -features to control agreement. Failed Agree with the anaphor is repaired in at least two ways, by default agreement in Shona and agreement switch in Kutchi Gujarati.

On the other hand, when it comes to those languages that had the AAE violations like Tamil, standard Gujarati, Archi and Ingush, they all have the Pattern B derivational order as they had *T* as their agreement probe agreeing with the anaphor in the object position. When *T* is merged, the antecedent is already present in the structure. Therefore, the anaphor would have already undergone Agree with its antecedent and acquired its ϕ -features and subsequently, when *T* agrees with the anaphor, the unvalued features of *T* can be successfully valued by the anaphor. Thus whether or not a language is subject to

the AAE or not follows entirely from independent properties of the language, that is, the position the Agr probe relative to the antecedent for the anaphor.

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