

First Conjunct Agreement is an Illusion *

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Abstract

Natural languages exhibit two patterns of conjunct agreement (CA). Some languages show only first conjunct agreement (FCA; e.g., Arabic). Other languages show *last* as well as first conjunct agreement, i.e. closest conjunct agreement (CCA; e.g., Hindi-Urdu). Based on empirical facts, I argue that FCA is an illusion. I propose that a defective null *pro* is what is responsible for the partial agreement seen in FCA-languages. In a left-to-right derivation (Phillips 2003; Bruening 2014), *pro* is able to value its unvalued features by agreeing with the linearly closest NP before it Agrees with the verb, resulting in what appears to be illusive conjunct agreement. Thus, genuine conjunct agreement is CCA, which indicates that linear proximity is a requirement of conjunct agreement, not just a factor.

Keywords: Closest Conjunct agreement, Conjunct Agreement, Coordination, Linear Order, Little *Pro*

1 Introduction

Natural languages exhibit two patterns of conjunct agreement (CA). Some languages show only first conjunct agreement (FCA; Arabic, Hebrew, Irish, Welsh, Finnish, Brazilian Portuguese, English, and others). Other languages show *last* as well as first conjunct agreement, i.e. closest conjunct agreement (CCA; Hindi, Tsez, Croatian, Serbian, Slovenian, and others).

A number of properties make the status of FCA questionable. For example, in most FCA-languages, the partial agreement exhibited in FCA may also occur in absence of coordination. On the basis of this and some other facts, I argue that FCA is an illusion, and propose that the agreement seen is a result of regular subject-verb agreement with a defective null *pro*. In a left to right derivational model, I show that *pro* values its features by agreeing with the linearly closest NP, which happens to be the initial conjunct.

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The proposal made leads to the conclusion that true conjunct agreement is only *closest* conjunct agreement. Linear order is not a mere factor of conjunct agreement, as implied by previous literature (Benmamoun, Bhatia, and Polinsky 2009; Fuß 2014; Marušič, Nevins, and Badecker 2015). Linear order is *the condition* on conjunct agreement. Section 2 reviews conjunct agreement and presents the facts that show that the partial agreement seen in FCA-languages is not conjunct agreement. In section 3, I propose an account of the facts. Section 4 is the conclusion.

2 Conjunct Agreement: The Facts

It has long been noted that in many languages the initial conjunct may control agreement on an element that precedes the coordinate complex (McCloskey 1986; Muhammad (1990); Doron 2000; Aoun, Sportiche, and Benmamoun 1994; Munn 1999; Soltan 2007; Larson 2013, among many others; for a recent review see Al Khalaf 2015, Ch.3). The phenomenon was referred to as first conjunct agreement (FCA). The phenomenon was noted mainly in languages that allow free order of the subject and the verb, such as Arabic and Hebrew.¹ For instance, FCA in Arabic occurs when a coordinate subject appears post-verbally, whereas resolved agreement occurs when it appears pre-verbally:

- (1) a. sa-taktubu almudi:ratu wa musaʿidu:=hunna taqri:ran
 FUT-write.3F.S the.manager.F.P and assistant.M.P=3F.P a.report
 ‘The managers (feminine) and their assistants will write a report.’
- b. sa-taktub=na ʔantunna wa fari:qu=kunna taqri:ran
 FUT-write=2F.P 2F.P and team=2F.P a.report
 ‘You (feminine plural) and your team will write a a.report.’

A number of proposals have been put forth to derive FCA. Aoun *et al.* (1994) argues that conjunct agreement is in fact regular subject-verb agreement within larger clausal coordination that has undergone ellipsis. Munn (1999) challenges this analysis providing empirical evidence that shows that when conjunct agreement applies, coordination cannot be clausal. He argues that conjunct agreement is facilitated by a structural prominence of the first conjunct: it is hierarchically higher, so it is more accessible to syntactic operations like agreement. Another line of thought derives first conjunct agreement from late operations (Soltan 2007; Larson 2013). Soltan (2007) proposes that FCA occurs when agreement occurs with the initial conjunct before the rest of the coordinate is merged.

¹ Conjunct agreement is not restricted to subject-verb agreement. It also occurs within phrases. Phrasal conjunct agreement is beyond the scope of this squib.

While analyses that hinge on the hierarchical prominence of the initial conjunct, and those that derive the phenomenon from late operations seem to capture the facts in a language like Arabic, they run into problems when we consider facts of conjunct agreement cross-linguistically. Recent work reveals that in a number of languages, the final as well as the initial conjunct may act as an agreement controller if it is linearly the closest conjunct to the agreeing element. The phenomenon has been dubbed closest conjunct agreement (CCA, due to Benmamoun *et al.* 2009). These languages include Balkan languages such as Slovenian and Croatian, in Germanic languages such as Dutch (van Koppen 2007) and Bavarian (van Koppen 2012; Fuß 2014), and in Hindi-Urdu, an Indo-Aryan language (Benmamoun *et al.* 2009; Bhatt and Walkow 2013).

- (2) Rina-ne gaa-yii ek ghazal aur ek nazam thii
 Rina-ERG sing-PFV.F a ghazal.F and a nazam.F be.PST.F.SG
 ‘Rina has sug a ghazal and a nazam.’ (Hindi-Urdu; Bhatt and Walkow 2013, 962, (16a))

In 2, the object appears between two agreeing elements; the initial conjunct values the agreement features of the element that precedes the coordinate complex, whereas the final conjunct controls the agreement of the element the follows it.²

Given the role of linear order in conjunct agreement, it is unclear why FCA-languages do not allow the final conjunct to control agreement when it is the closest to the agreeing element, as with pre-verbal subjects for instance, and that resolved agreement applies instead. In addition, a number of facts about FCA-languages make a conjunct agreement analysis less likely. First, the partial agreement associated with FCA is not restricted to sentences that involve coordinate subjects. It can actually appear in absence of coordination. This is true for many languages, including, among others, Arabic (Muhammad 1990), Irish (McCloskey 1982, 1986), Welsh (Borsley 2009), and English (Morgan 1972).

- (3) ?allaf-at al-muʿallim-at riwayah
 write-3F.SG the-teacher-F.PL a.novel
 ‘The teachers (Fem) wrote a novel.’ (Arabic; Al Khalaf 2015, 138, (302b))

- (4) Gwelodd y bachgen/bechgyn ddraig.
 see.PAST.3SG the boy/boys dragon
 ‘The boy/boys saw a dragon.’ (Welsh; Borsley 2009, 227, (5))

- (5) a. There is thirty men waiting in line.
 b. There is a man and a woman waiting in line.

²Bhatt and Walkow (2013) show that when simultaneous FCA and LCA apply, the agreement features must match.

In addition, in many FCA-languages, conjunct agreement has a fixed value for NUMBER, namely SINGULAR, even when the initial conjunct is plural. It is not clear how conjunct agreement could exclude the number value from agreement. Some examples follow:

- (6) rafaD-at alʕamilat qanu:na alʕamali aljadi:d
 reject-3FS the.workers.F law the.labor the.new
 ‘The workers (feminine) rejected the new labor law.’
- (7) Gwelodd y bachgen/bechgyn a Megan ddraig.
 see.PAST.3SG the boy/boys and Megan dragon
 ‘The boy/boys saw a dragon.’ (Welsh)

However, in those languages, conjunct agreement is full (in all phi features) when the initial conjunct is a pronoun. It is unclear how any analysis of conjunct agreement distinguishes between pronominals and nominals without applying some ad hoc mechanisms. Below are examples from a number of FCA-languages.

- (8) Ja sitten oon mä ja kaksi muu-ta tyttö-ä.
 And then be.1SG I and two other-PART girl-PART
 ‘And then there is me and two other girls.’ (Finnish; Crone 2015, (4))
- (9) (Welsh; Borsley 2009, 227, (4b); Borsley *et al.* 2007, 205, (22))
- a. Gwelon nhw ddraig.
 see.PST.3PL they dragon
 ‘They saw a dragon.’
- b. Gwelais [i a Megan] geffyl.
 see.PAST.1S I and Megan horse
 ‘Megan and I saw a horse.’
- (10) u-ba:ta: ʔatta: w-ziqne yiʕra:ʕel ʕel melek miʕrayim wa-ʔamartem ʕela:w
 and-will.come.2MS you and-elders (of)Israel to king (of)Egypt and-will.say.2MP to.him
 ‘And thou shalt come, thou and the elders of Israel, unto the king of Egypt, and ye shall say unto him...’ (Biblical Hebrew; Naudé 1991)

Furthermore, FCA is optional, and resolved agreement may apply instead as shown below for Hebrew and Finnish. This is a challenge of any analysis in terms of conjunct agreement.

- (11) wa-ykah^anu: ʔelʕa:za:r w^ʔ-ʔi:ʕa:ma:r
 and-served.3MP Eleazar and-Ithamar
 ‘Eleazar and Ithmar executed the priest’s office.’ (Biblical Hebrew; Doron 2000, footnote 10)
- (12) Tätä ol-emme odotta-neet minä ja ystävä-ni jo kauan.
 This be-1PL wait-PTC.PL I and friends-POSS.1SG already long
 ‘My friends and I have already waited for this for a long time.’ (Finnish; Crone 2015, (10a))

The facts above indicate that FCA is an illusion; it is a general form of partial agreement. I provide an analysis of this form of agreement below.

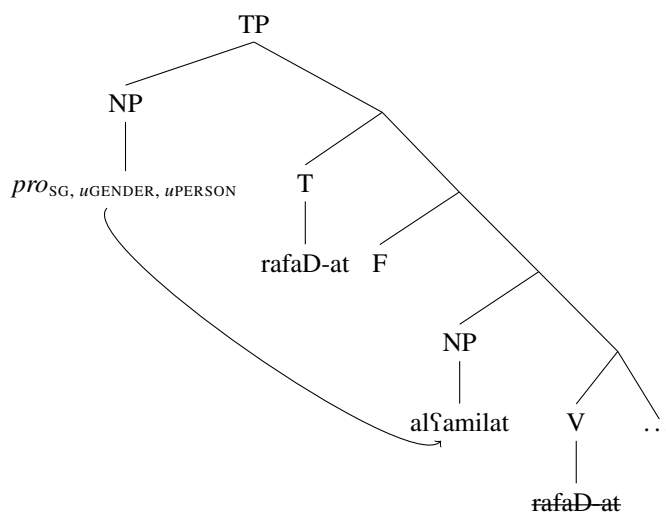
3 A New Analysis of FCA: Defective *pro*

My starting point is the fact that all the FCA-languages under consideration are pro-drop languages. This was shown to be true for Arabic by (Muhammad 1990), for Biblical Hebrew by (Naudé 1991), and for Finnish by Vainikka and Levy (1999) and Holmberg (2005).

I argue that FCA is an illusion. The partial agreement is rather a larger phenomenon that targets coordinates and non-coordinates. I propose that a defective null *pro* is what controls the partial agreement on the verb. I propose that *pro* is able to value its unvalued features by agreeing with the linearly closest NP, which happens to be the initial conjunct when the subject is a coordinate complex. The analysis is couched in terms of left-to-right derivations (Phillips 1996; 2003; Bruening 2014; Al Khalaf and Bruening 2016; Bruening and Al Khalaf 2016a, 2016b, among others) where structures are constructed from left to right.

For illustration, consider example (6) where agreement occurs with a non-coordinate subject. The derivation starts from left to right by merging a defective null *pro* that is valued for number (SINGULAR) and unvalued for person and gender. Following Benmamoun (2000), I assume that V moves to T, and that the subject starts in VP. The derivation proceeds by merging V. Upon the merger of the subject, *pro* values its person and gender by agreeing with it.

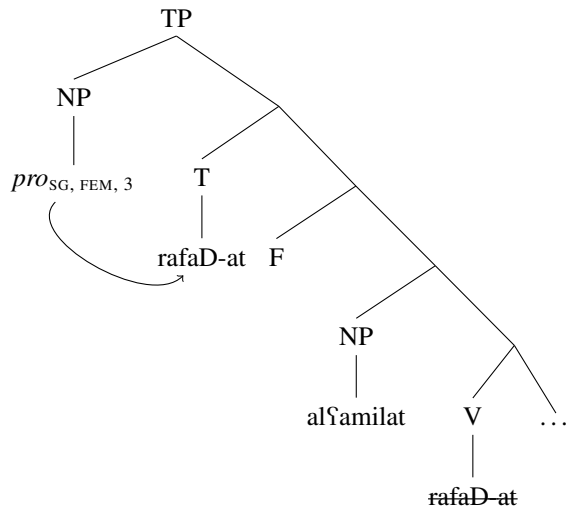
(13)



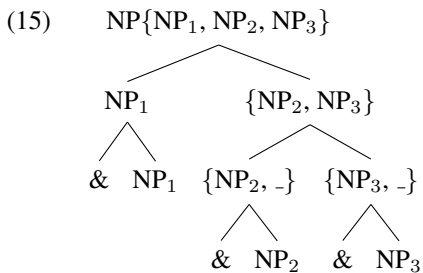
Then, the verb values its features via AGREE with *pro*. I assume the thematic subject is licensed by a functional head (F) that occupies a position intervening between T and the subject. This functional head

assigns a ‘default’ case to the subject which is NOMINATIVE.

(14)



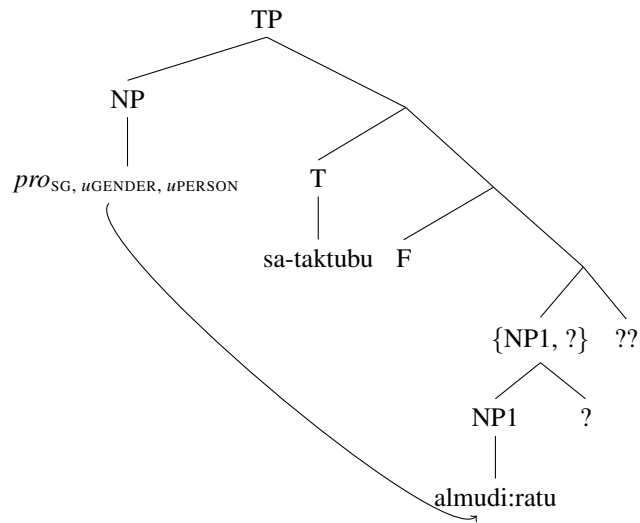
Turning to partial agreement with coordinate subjects, as in the pair in (1), no special assumptions need to be made for partial agreement here. It can be derived following the same analysis. The analysis does not hinge on a specific structure for coordination. But I adopt the structure proposed by Al Khalaf (2015) which builds on Collins’ (2002) Set Merge and Dalrymple and Kaplan’s(2000) set union algorithm for resolved features. The structure is a binary branching structure in which the coordinator does not project a special phrase, but adjoins to each conjunct. This coordinator triggers a special operation called the Set Label which labels the coordinate complex with a set of the categories of its conjuncts. Below is a schema of this structure.



I assume that the set label undergoes category resolution in the same way the phi features of the conjuncts do (see Al Khalaf and Bruening 2016 for discussion of category resolution in terms of selection.) I show the resolved category outside the braces to the left. The coordinate resolved features are copied to the resolved category.

To illustrate the pattern of agreement in 1b, the derivation starts by merging the subject, then T, as shown in 16. At this point, two potential heads probe for agreement, T and *pro*. At the point the first conjunct is merged, grammar has to decide which of these heads will agree with this it.

(16)



Following Walkow (2013), I assume that case checking the coordinate complex is accomplished by agreeing with the highest projection that dominates the conjuncts which then allows case to spread to all of the conjuncts, resulting in them being licensed. Another assumption that needs to be made here is that heads that check phi features (e.g. *pro*) require to value their features as soon as possible, while heads that check case as well as phi features can wait until the whole coordinate complex has been constructed. Thus, *pro* will agree with the initial conjunct upon its merger. The partial agreement seen occurs when *pro*, which is now valued for all phi features, agrees with the verb.

Another possibility the grammar allows is for *pro* to wait until the whole coordinate has been derived. In such case, *pro* could agree with the whole coordinate, i.e. with the resolved agreement features. This possibility explains the optionality of partial agreement across FCA-languages.

As for the full agreement seen with pronominals, it should be noted that, at least in Arabic, in this context the pronouns are optional, that is when partial agreement applies the pronouns can be left out. This is true for coordinate and non-coordinate subjects:

(17) qaddam-u (hum) aS-Sadi:qa al-jadi:d li-al-ʕaʕilah
introduced-3MP they the-friends the-new to-the-family
'They introduced the new friend to (their) family.'

(18) waSa1-u (hum) wa ʔabnaʕi=him ʕila makani alhafl
arrive-3MP (they) and sons=3MP to place ceremony
'They and their sons arrived at the ceremony's location.'

I hypothesize that the full agreement seen in these contexts is a result of subject verb agreement with a (non-defective) *pro* which is valued for all features. I further hypothesize that the pronouns are clitics that

carry the agreement features of *pro*.

4 FCA and Number Sensitive Items (NSIs): A Conclusion

The proposal is supported by the behavior of number sensitive items (NSIs) in Arabic. Aoun *et al.* (1994) show that NSIs are incompatible with conjunct agreement. They take this to indicate that conjunct agreement is derived by phrasal coordination plus ellipsis. Munn (1999) argues that Aoun *et al.*'s analysis misses the distinction between semantic plurality and syntactic plurality. He argues that the inability to license NSIs in the examples provided by Aoun *et al.* provide is due to the lack of semantic plurality in these examples. He shows that when this requirement is met, NSIs can be licensed (19b):

(19) (Munn 1999, 650, (17))

- a. *mša ʔumar w saʔid məžmuʔin
left.3SG Omar and Said together
'Omar and Said left together.'
- b. mšitu ntuma w ana məžmuʔin
left.2PL you.PL and I together
'You and I left together.'

Munn's conclusion is compatible with the analysis proposed above. In 19a, *pro* is prevalued as singular, which explains the inability to license *məžmuʔin* 'together'. In 19b, where the initial conjunct is a pronoun, *pro* enters the derivation valued as plural.

The proposal made leads to the conclusion that genuine conjunct agreement is only *closest* conjunct agreement. Linear order is not a mere factor of conjunct agreement, as implied by previous literature; linear order is *the condition* on conjunct agreement.

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