Variable agreement

1. "Semantic" vs. "syntactic" agreement

"Semantic agreement is a particular instance of agreement mismatch:
In the most straightforward cases **syntactic agreement** (sometimes called 'agreement *ad formam*', 'formal agreement' or 'grammatical agreement') is agreement consistent with the form of the controller (*the committee* has *decided*). **Semantic agreement** (or 'agreement *ad sensum*', 'notional agreement', 'logical agreement' or 'synesis'*)* is agreement consistent with its meaning (*the committee* have *decided)*. The distinction between syntactic and semantic agreement links to Steele's definition… in that the covariance involves a 'semantic or formal property' of the controller.

The terms syntactic and semantic agreement are used only when there is a potential choice."

(Corbett 2006: 155)

In Minimalism, what is called *syntactic* agreement is the agreement with the morphological form of the DP. Since the theoretical model allows for the presence of silent elements, it is plausible to expect that underlyingly different probe-goal relations may result in the same surface agreement. What is referred to as *semantic* agreement is agreement with a structure which is either larger or smaller than the DP that appears in the surface form.

1.1. Pluringulars (den Dikken 2001)

Let us examine the English word *committee* (*crew* behaves the same way).

(1) a. The committee has decided [=what you call 'syntactic agreement']
b. The committee have decided [=what you call 'semantic agreement']

difference in DP-internal agreement

(2) a. This committee has/have decided
b. *These committee has/have decided

associate in existential constructions

(3) a. There's/are lots of people holding a meeting in this room
b. There's/*are a committee holding a meeting in this room

difference in predicational structure

(4) a. The most argumentative committee is theirs
(i) the most argumentative committee belongs to them
(ii) their committee is the most argumentative committee
b. The most argumentative committee are theirs
(i) the most argumentative committee belongs to them
(ii) *their committee is the most argumentative committee

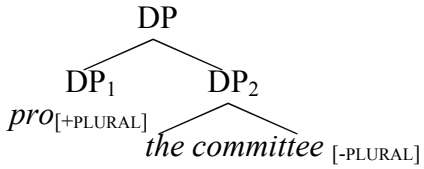
difference in person binding

(5) a. The committee consider themselves/*ourselves indispensable
b. We, the committee, consider ourselves indispensable
c. ??Our committee considers ourselves indispensable

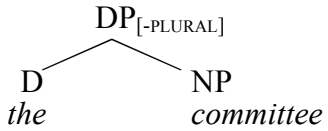
1.2. Accounting for the differences in agreement

Words like *committee* represent a pronominally headed structure:

(6) a.



b.



This structure accounts for (2): (i) the pronoun cannot be combined with a demonstrative (cf. **these they*, **they these*); (ii) plural *these* cannot act as the demonstrative for the common NP headed by *committee*, since *committee* is morphologically singular:

(7) *[$_{DP1}$ {these *pro*[+PLUR]} [$_{DP2}$ committee]]

Also accounts for (3): pronouns in general cannot be associated with *there* because of the definiteness effect in existentials.

> (Exception: "list readings" like *Well, there's me/you/ him/her/us/them*; these cases are irrelevant since here the pronoun never triggers plural agreement with the finite verb.)

Plural pronouns cannot be predicates (**the children are they*); therefore, (6) accounts for differences in predicational structure (4), where only the structure in (6b) can appear predicatively.

Null pronominals tend to be 3rd person, esp. for plurals; this accounts for the differences in binding, (5). If the person of the null pronominal is specified, as in (5b), then a non-3rd person interpretation is possible. Without the pronominal layer, this binding is impossible or unlikely, as shown in (5c).

Additional data point: agreement attraction.

(8) a. The education of my neighbour's children is under threat
b. The education of my neighbour's children are under threat [attraction]

Pronouns cannot trigger agreement attraction:

(9) a. the identity of the convicts are to be kept a secret
b. *the identity of them are to be kept a secret

Prediction: *committee* nouns cannot trigger agreement attraction

(10) a. The educational background of the committee is a secret
b. *The educational background of the committee are a secret

In sum, differences in agreement reflect principled differences in structure: plural agreement occurs when the nominal expression's structure is as in (6a); singular agreement occurs when the nominal expressions's structure is as in (6b).

2. Archi: Numerical phrases

2.1. Data. Normally, numerals require the head noun to be in the singular, and agree with it in gender and number independently of case (11). However, numeral phrases headed by nouns which denote humans allow "semantic agreement" on the verb (12).

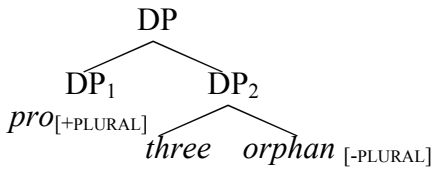
(11) os **i‹w›di-li** **i‹w›di-t'u** łib-aw kulu lo
one ‹I.SG›be.PST-EVID ‹I.SG›be.PST-NEG three-I.SG orphan lad(I)[I.SG]
'Once upon a time there were three orphan boys.' (lit.: 'well, there was or there was not' – standard beginning of a tale) (T2:1) (your ex. (1))

(12) os **e‹b›di-li** **e‹b›di-t'u** łib-aw kulu lo
one ‹I/II.PL›be.PST-EVID ‹I/II.PL›be.PST-NEG three-I.SG orphan lad(I)[I.SG]
'Once upon a time there were three orphan boys.' (your ex. (2))

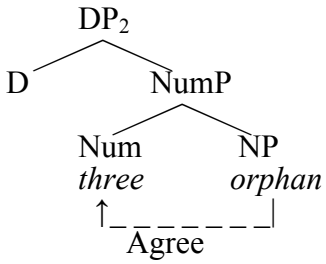
Note that the noun here remains in the singular, and the numeral agrees with it, while the verb takes singular agreement in (11) and plural ("semantic") agreement in (12).

2.2. Accounting for the data. Archi numerical phrases can include a null pronominal, which is [+human]; if such a pronominal is present, it triggers plural agreement. The numeral is part of the lower DP (DP_2), so it attaches lower than the pronoun and agrees with the morphologically singular DP (13b).[1]

(13) a.



b.



Based on your data (variation in agreement is possible only with human nouns) the (null) pronominal in (13a) has to be [+human].[2]

[1] In all the structures below, I represent Archi noun phrases as DPs despite the absence of overt determiners; this is done just for uniformity, and nothing in particular hinges on this representation (one could use NPs instead). Text in blue signals suggestions for further data checking.

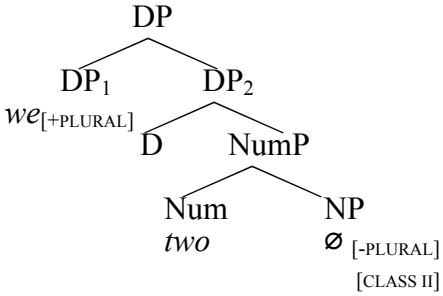
[2] It is not uncommon for the pronominal to be constrained as animate or human; the same tendency appears in English pluringulars. Compare:
(i) The committee who/?/*which have been in session since 9am….
(ii) The committee which/*who has been in session since 9am…

The pronominal can actually be expressed, as your example (3) shows:

(14) a. nen q'ʕwe‹r›u **q'oc'o-li** **q'iʕjdi-li**
1PL.EXCL two‹II.SG› [1PL]reconcile.PFV-CV [1PL]sit.PFV-EVID
'we two (girls) had made up (by then) and were sitting there...' (literally: 'we two having reconciled were sitting') (=your (3))
b. [[$_{DP}$ nen q'ʕwe‹r›u]$_i$ [*pro*$_i$ q'oc'oli] q'iʕjdili]

The expression *nen q'ʕwe‹r›u* probably has the following structure:

(15)



The embedded clause has a null pronominal co-indexed with *nen q'ʕwe‹r›u,* so it is also plural. Since the matrix expression includes an overt pronoun, we expect [*nen q'ʕwe‹r›u*] to function as a constituent (intervening lexical material should not be possible; [*nen q'ʕwe‹r›u*] should be separable from the verbs and may also appear on the right):

(16) **q'oc'o-li** **q'iʕjdi-li** nen q'ʕwe‹r›u
[1PL]reconcile.PFV-CV [1PL]sit.PFV-EVID 1PL.EXC two‹II.SG›

In (17), the structure is likely to be different from (14); *nen* is in the matrix clause, and *q'ʕwe‹r›u* is in the embedded clause. To test this, you need to try (18a,b):

(17) a. nen q'ʕwe‹r›u do-q'c'o-li q'iʕjdi-li
1PL.EXCL two‹II.SG› II.SG-reconcile.PFV-CVB [1PL]sit.PFV-EVID
'we two (girls) had made up (by then) and were sitting there...' (your ex. (5))
b. [nen [q'ʕwe‹r›u do-q'c'o-li] q'iʕjdi-li]

(18) a. [q'ʕwe‹r›u do-q'c'o-li] nen q'iʕjdi-li
two‹II.SG› II.SG-reconcile.PFV-CVB 1PL.EXCL [1PL]sit.PFV-EVID
'we two (girls) had made up (by then) and were sitting there...' (your ex. (5))
b. [nen q'iʕjdi-li] [q'ʕwe‹r›u do-q'c'o-li]

In (19) (your ex. (6)), the matrix expression, which contains a pronoun, is expected to agree as if the pronoun were not there, and the result is expectedly ungrammatical. You should check if this agreement is possible in the absence of *nen.*

(19) *nen q'ʕwe‹r›u **q'oc'o-li** **q'a‹r›di-li**
1PL.EXCL two‹II.SG› [1PL]reconcile.PFV-CVB ‹II.SG›sit.PFV-EVID
'we two (girls) had made up (by then) and were sitting there...' (your ex. (6))

An intriguing case is (20) (your ex. (4)):

(20) nen q'ʕwe‹r›u **do-q'c'o-li** **q'a‹r›di-li**
1PL.EXCL two‹II.SG› II.SG-reconcile.PFV-CVB ‹II.SG›sit.PFV-EVID
'we two (girls) had made up (by then) and were sitting there...' (your ex. (4))

My prediction is that here, *nen* is appositive, and there should be a break between *nen* and *q'ʕwe‹r›u*. It is also predicted that, unlike (14), *nen* and *q'ʕwe‹r›u* in (20) do not form a constituent and should be separable. On a more conservative side, we can predict that *nen* and *q'ʕwe‹r›u* should be separable in all the contexts and never inseparable in a context like (20) (=(4)).

3. Archi: Nominal predicates

3.1. Data. When the predicate is a noun which bears a different gender than that of the subject, the copula can agree either with the subject or with the predicate nominal:

(21) to-r ħajwan d-i
that-II.SG.ABS animal(III)[SG.ABS] II.SG-be.PRS
'She's an animal (pejorative).' (your ex. (30))

(22) to-r halhaʁ-du-b č'an b-i
that-II.SG.ABS real-ATTR-III.SG sheep(III)[SG.ABS] III.SG-be.PRS
'She is a real sheep.' (= she is very stupid) (your ex. (31))

Note that the adjective must agree in gender with the predicate nominal regardless of the copula agreement:

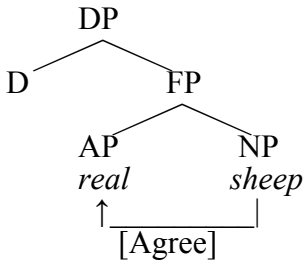
(23) a. to-r **halhaʁ-du-b** č'an d-i
that-II.SG.ABS real-ATTR-III.SG sheep(III)[SG.ABS] II.SG-be.PRS
'She is a real sheep.' (= she is very stupid) (your ex. (32))

b. *to-r halhaʁ-du-r č'an b-i
that-II.SG.ABS real-ATTR-**II.SG** sheep(III)[SG.ABS] III.SG-be.PRS
'She is a real sheep.' (= she is very stupid) (your ex. (33))

c. *to-r halhaʁ-du-r č'an d-i
that-II.SG.ABS real-ATTR-**II.SG** sheep(III)[SG.ABS] II.SG-be.PRS
'She is a real sheep.' (= she is very stupid) (your ex. (34))

3.3. Accounting for the data. The matching of features on the adjective and the predicate nominal is not surprising, because this concord occurs low in the noun phrase:

(24)



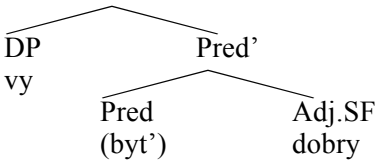
Thus, the analysis is the same as what we used for numerical phrases (see (13)). You can further test the data by combining adjectives and numerals; they should all agree with the lower NP.

Concerning the agreement contrast between (21) and (22) (your examples (30) and (31)), there is not enough data to formulate firmer predictions. You need to build minimal pairs using the exact same predicative nominal; you also need to try these sentences with generic subjects (the lack of an event variable is a good test case for interpretational difference in equational sentences). Below I outline a couple of possibilities, but they are based on general ideas about equational sentences, not on Archi facts.

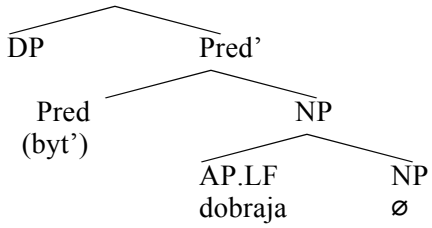
First, it is possible that the contrast between such sentences would reveal some subtle distinctions within equational predication, or that it could be similar to the contrast between Russian short-form (25a) and long-form (25b) predicative adjectives (see Bailyn 2012: 68-70 for details). Russian agreement facts can be used to show that when the long form appears, there is a null noun phrase modified by the adjective.

(25) a. Vy smel-y
you brave.SHORT.FORM-PL
You are brave.' (property-ascribing)
b. Vy smel-aja
you brave.LONG.FORM-FEM
You are a brave person.' (classifying)

(26) a.



b.



Second, you could try information structure and try to probe it with more flexible scenarios. For example, if the constructions you describe can also be used to say things like "The mother is the doctor" and "The daughter is the patient" then you can set up some nice contexts like playing doctor.

Context 1: Mother and daughter are playing doctor. In the morning, the mother was the doctor, but then they switched, and in the afternoon,

(27) The daughter was the doctor.

Context 2: Mother and daughter are playing doctor. In the morning, the mother was the doctor, but then they switched, and in the afternoon,

(28) The mother was the patient.

In these sentences, doctor/patient are the predicate nominals, and mother/daughter are the subjects. In context 1, New Information Focus is on the subject. In context 2, New Information Focus is on the predicate.

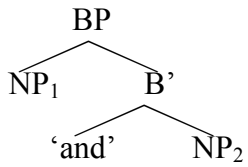
These are just a couple possibilities, and there could be others; the issue is rather open-ended, so it is hard to predict all the options.

4. Agreement with conjoined NPs

"The key choice is between agreement with one conjunct (syntactic agreement) and agreement with all (semantic agreement)" (seminar materials).

4.1 Phrasal coordination. In a formal analysis, the "choice" signals structural ambiguity. When the verb agrees with the entire conjoined phrase, the structure may be as follows (BP=Boolean phrase):

(29)



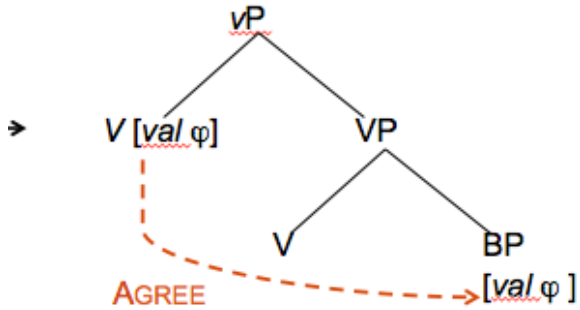
In order to determine if this structure is hierarchical, as represented, you need to check for binding; NP1 binds NP2 but not the other way around. Thus if 'Ali and his father' is acceptable, but 'his father and Ali' is not, the structure is likely to be as in (29).

The number of the Boolean phrase is plural, and its gender is determined by resolution rules that you mention:

(30) a. If there is a conjunct referring to a human, use gender I/II agreement
b. Otherwise use gender III/IV agreement

The verb straightforwardly agrees with that BP under Agree. Thus, what you call "semantic agreement" is agreement with BP. This agreement is freely available in Archi; the examples provided show that it is independent of word order.

(31)



4.2. Clausal coordination. What is called "syntactic" agreement seems more limited. It depends more on the nature of the conjunction (easier with 'and' than with 'or'), animacy, and crucially, on the position of the verb: the verb has to be in a non-sentence-final position. Your speakers suggest that such agreement alternates with instances when there are two verbs present:

(32) ušdu-wu **χᶜe** **i‹w›t:i-li** došdur-u **χᶜe** **e‹r›t:i-li**
brother(I)[SG.ABS]-and cold ‹I.SG›become.PFV-EVID sister(II)[SG.ABS]-and cold ‹II.SG›become.PFV-EVID
'Brother and sister got cold.' (your ex. (12))

Going from (32) to (33) is straightforward, via ellipsis of the second verb:

(33) ušdu-wu **χᶜe** **i‹w›t:i-li** došdur-u ~~**χᶜe e‹r›t:i-li**~~
brother(I)[SG.ABS]-and cold ‹I.SG›become.PFV-EVID sister(II)[SG.ABS]-and
'Brother and sister got cold.' (your ex. (11))

Gapping is often directional (languages allow either forward gapping, as in English and Russian, or backward gapping, as in Japanese and Turkish). The data suggest that directionality is present in Archi as well; it allows forward gapping only.

(34) a. John read "Harry Potter", and Mary ~~read~~ "War and Peace".
b. *John ~~read~~ "Harry Potter", and Mary read "War and Peace".

Thus, "syntactic" agreement is due to verb gapping (or conjunction reduction); unlike the agreement with the BP, this agreement follows from the coordination of two clauses with subsequent deletion of the verb in the second clause. The two NPs are only seemingly conjoined. In fact, they are constituents of two separate clauses where the second verb is deleted, just as in English or Russian. In this structure, the verb which is visible (not deleted) agrees with its ONLY absolutive argument.

4.3 Some predictions.

Distributives. All other factors being equal, the distributive reading is incompatible with coordination with conjunction reduction (clausal coordination). So, if you test something like "Ali lifted the box and the bag with one hand", only phrasal coordination is expected. This means that gapping should be impossible.

(35) a. Ali lifted [the box and the bag] with the same/one hand
b. * Ali lifted [the box] with the same/one hand and ~~lifted~~ [the bag] with the same/one hand

Collective predicates. Gapping cannot occur in those contexts that force NP coordination:

(36) a. [A car and a truck] are similar
b. *A car is similar, and a truck ~~is similar~~
(37) a. [The queen and the king] are an old couple
b. *The queen is an old couple, and the king ~~is an old couple~~

5. Conclusions.

(i) On the account presented here, there is no issue of interface or variable agreement. Different agreement patterns result from different structural configurations which are not always visible on the surface; a more detailed analysis of underlying patterns allows us to distinguish between the different configurations. In particular, what is described as "semantic" agreement follows from the presence of a pronominal expression in the DP structure; at least in some cases in Archi, such a pronominal may be overt, which makes Archi a particularly compelling case in support of such an analysis. "Syntactic" agreement follows when the agreement goal does not include a pronominal in its structure.

(ii) Concord between the numeral/adjective and the noun happens low in the structure and predictably reflects the morphology of the noun.

(iii) The syntax of predicate nominals needs to be investigated further.

(iv) Apparent agreement with a single conjunct can be reduced to gapping; this result is consistent with findings in other languages, for instance Hindi (Polinsky 2012). The apparent CCA in Archi is rather limited in comparison to other languages of the family, for example, Tsez (Bhatia et al. 2010).

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