Chapter 8

Rethinking (un)agreement

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The labelling algorithm proposed by Chomsky (2013) has consequences overlapping with formal agreement and is taken as a starting point for developing a new analysis of sentences with plural DPs as subjects of verbs with 1PL or 2PL agreement in Spanish and some other languages.

1 Interpretable agreement features

In most languages, a finite verb with a plural DP as its subject must be in its 3PL form. The contrast in (1) exemplifies this for Italian:

(1) Italian
   a. I giocatori vanno a Parigi.
      the players go.3PL to Paris
   b. * I giocatori andiamo a Parigi.
      the players go.1PL to Paris

The standard assumption is that this follows from (2):

(2) a. Person and number features on a verbal functional head, e.g. I, are uninterpretable and unvalued.
   b. Hence, they must be valued under Agree with a DP.

But it is a priori conceivable that person and number features on I could be interpreted as imposing a semantic restriction on the applicability of the verbal predicate, e.g. *andiamo a Parigi* 'go.1PL to Paris' in (1b) might translate as in (3), where [x = 1PL] restricts the range of the λ-expression:

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(3) λx [x = 1PL]. x go to Paris

If so, (1b) would translate as (4), which would be okay as long as *i giocatori* 'the players' happens to denote a set of individuals containing the speaker, since x = 1PL means that the argument of (3) must denote a set containing the speaker plus "others":

(4) λx [x = 1PL]. x go to Paris (the players)

But nothing stops a 3rd person DP from denoting a set containing the speaker:

(5) We are the champions.

So, taking person and number features on I to be interpretable as in (3) seems to yield the incorrect prediction that (1b) should be fine, and therefore one might be led back to (2). But this leaves open the question why UG should rule out the option illustrated by (3).

Also, Spanish (and some other languages) allows sentences like (1b):

(6) Los jugadores vamos a París.
the players go.1PL to Paris
'We players are going to Paris.'

The 'we players' part of the translation, i.e. the entailment that the set of individuals denoted by *los jugadores* 'the players' includes the speaker, would follow from construing the verbal predicate as in (3).

Sentences like (6) are sometimes classified descriptively as instances of "unagreement".

2 Labelling and agreement

A route to an analysis of the Spanish (6) based on (3) which still excludes the Italian (1b) is suggested by the approach to labelling taken by Chomsky (2013):

(7) If the syntactic object X is built by merging Y and Z, the label of X is a set of features associated with the head closest to the root of X.

There are two cases to consider:

(8) a. X = [A [$_{BP}$ … B …]] (A is the head closest to the root)
b. X = [[$_{AP}$ … A …] [$_{BP}$ … A …]] (no head is closest to the root)

Taking "closest" to be defined in terms of asymmetric c-command, (8a), where A is a head, is unproblematic. But in (8b), where two phrases have been merged, neither head c-commands the other. To provide a label for X in (8b), Chomsky (2013) proposes that the tie is resolved as in (9):

(9) a. In (8b), the label of X is the set of features shared by the heads A and B.
b. If A and B have no feature in common, (8b) is unlabelled, hence ill-formed.

Adding a Specifier to IP is an instance of (8b):

(10) X = [[$_{DP}$ … D …] [$_{IP}$ I …]] (no head closest to the root)

Hence, an IP can have a subject DP analyzed as SpecIP just in case D and I share some feature F leading to:

(11) X = [$_{FP}$ [$_{DP}$ … D_F …] [$_{IP}$ I_F …]]

Thus, labelling imposes a requirement similar to agreement as induced by (2) without invoking a distinction between interpretable and uninterpretable features.

This leads to the suggestion in (12) for (1b) vs. (6):

(1b) Italian
I giocatori andiamo a Parigi.
the players go.1PL to Paris

(6) Spanish
Los jugadores vamos a París.
the players go.1PL to Paris
'We players are going to Paris.'

(12) a. The Italian (1b) corresponds to an instance of (9) where D and I have no feature in common.
b. The Spanish (6) corresponds to an instance of (9) where D and I have a feature F in common, as in (10).

But what is F?

3 The feature composition of 1/2PL pronouns and Agr

I will adopt the following partially uncontroversial general assumptions:

(13) a. *We* means 'the speaker plus others'
b. *We* has two features, a person feature π and a feature #
c. # introduces a set S of individuals (the 'others')
d. π (= 1 or 2) adds the speaker or the hearer to S

How many values π should have and what exactly they are, will be immaterial to what follows. The value for π in 1st and 2nd person pronouns will simply be given as 1 (= the speaker) or 2 (= the hearer). (13d) may be thought of in the following way: π introduces the singleton set {1} or {2}, and # introduces another set S of individuals, and when π and # co-occur, the union of the two sets is formed and used as the restriction on x as in (3). (In §4, I suggest that # does not occur in singular 1/2 pronouns, and in this case, π alone determines the restriction on x.)

To this I add:

(14) 1PL and 2PL verbal inflections (on I) are composed just like *we* and *you*, i.e. have the same two features π and #, both interpretable as in (3) above.

The link to labelling provided by (7) suggests that the Spanish (6) is grammatical because of (15):

(6) Los jugadores vamos a París.
the players go.1PL to Paris
'We players are going to Paris.'

(15) The Spanish (6) corresponds to an instance of (9) where D and I have a feature F in common, as in (10).

Taking a DP like *los jugadores* 'the players' to have the feature #, but not a π feature, we then have:

(16) (6) = $[_{\#P}\ [_{DP}\ \ldots\ D_{\#}\ \ldots\ ]\ [_{IP}\ I_{\#}\ \ldots\ ]]$

Correspondingly, we can exclude the Italian (1b) via (17):

(1b) I giocatori andiamo a Parigi.
the players go.1PL to Paris

(17) In Italian, π and # associated with verbal inflection behave as a unit with respect to labelling.

That is, the label of X = (1b) might be the feature complex consisting of both π and #, but not only #:

(18) a. * (1b) = [$_{\{\pi\#\}P}$ [$_{DP}$ … $D_{\#}$ …] [$_{IP}$ $I_{\{\pi,\#\}}$ …]]
b. * (1b) = [$_{\#P}$ [$_{DP}$ … $D_{\#}$ …] [$_{IP}$ $I_{\{\pi,\#\}}$ …]]

But since the DP *i giocatori* 'the players' does not have the person feature π, D does not share {π, #} with I in (18a), and so the required labelling is disallowed.

4 Plural vs. singular

The Spanish (6) has no singular counterpart:

(6) Los jugadores vamos a París.
the players go.1PL to Paris
'We players are going to Paris.'

(19) * El jugador voy a París.
the player go.1SG to Paris

So, what is wrong with (20)?:

(20) (19) = [$_{\#P}$ [$_{DP}$ *el*$_{\#}$ *jugador*] [$_{IP}$ *voy*+ $I_{\#}$ *a París*]]

One might adopt (21) as an axiom:

(21) The feature # only co-occurs with π in the plural forms of pronouns and verbal inflections.

The singular interpretation of *yo* 'I' and *tú* 'you (sg.)' then follows from π = 1 or 2 by itself only denoting a single individual.

But one might also decide to take 'others' seriously in '*we* = the speaker plus others', restricting the # combining with π to denote sets not containing the speaker:

(22) In pronouns, # cannot introduce a set containing the speaker or the hearer.

By (14), (22) extends to verbal inflections.

Then, even if # can denote singletons, as in (23), π acting on the denotation of # in accordance with (13) will create a plurality, i.e. {1, y}, since y ≠ 1:

(23) λx [x = π(#)]. x go to Paris
| |
y ↛ {1, y}

(13) c. # introduces a set S of individuals (the 'others')
d. π (= 1 or 2) adds the speaker or the hearer to S

By assumption, this makes the verbal predicate applicable only to DPs denoting pluralities, which *el jugador* 'the player' does not.

(22) is also instrumental in ruling out sentences where a 1PL or 2PL subject co-occurs with a verb with 3PL inflection: since the 3PL inflection contains # but not π (= 1 or 2), and # can only introduce a set S not containing the speaker or the hearer, the x introduced by λx can only range over sets not containing the speaker or the hearer when the verbal inflection is 3PL, hence not over sets associated with 1PL or 2PL subject pronouns. (Merging a 1PL subject with an IP with 2PL verbal inflection is ruled out because 2PL inflection, like 2PL pronouns, does not denote sets containing the speaker so that π = 2 in the 2PL inflection also restricts λx to range over sets not including the speaker.)

From the perspective of this analysis, the grammaticality of sentences similar to (19) in Greek is unexpected. But as observed by Höhn (2016), such sentences differ from the Greek counterparts of (6) by imposing specific requirements on the noun inside the singular subject, suggesting that they call for a special account in any event.

5 *otros*

The strong forms of Spanish *we* and *you* (pl.) contain *otros*/*otras* 'other':

(24) *we* = *nosotros*, *you* (pl.) = *vosotros*

The strong forms of *I* and *you* (sg.) do not:

(25) *I* = *yo*(**otro*), *you* (sg.) = *tú*(**otro*)

Taking *otro*(*s*) 'other' to relate to # we can see it as an overt reflex of (22):

(22) In pronouns, # cannot introduce a set containing the speaker or the hearer.

That is:

(26) In combination with π (= 1/2), *otro*(*s*) reflects the presence of # introducing a set containing only individuals 'other than the speaker/hearer'.

Then, the forms with *otro* in (25) are excluded the same way as (19):

(19) * El jugador voy a París.
the player go.1SG to Paris

Again, the interaction between (22) and (13d) will force **yootro* and **túotro* to denote a plurality, and we may assume that this is only possible with the plural pronouns *nos* 'we, us' and *vos* 'you (pl.)':

(13) c. # introduces a set S of individuals (the 'others')
d. π (= 1 or 2) adds the speaker or the hearer to S

Notice that this leads to the conclusion that singular 1st/2nd pronouns and inflections cannot have the feature #. So, (21) does hold, but for a reason:

(21) The feature # only co-occurs with π in the plural forms of pronouns and verbal inflections.

As regards spell-out, I take it that 1st/2nd pronouns and verbal inflections take the plural form if and only if # is present in the structure.

6 DP-internal 1/2PL pronouns

Spanish also has:

(27) a. nosotros los jugadores
we the players
'we players'
b. vosotros los jugadores
you the players
'you players'

But these have no singular counterparts:

(28) * yo / tú el jugador
I you.SG the player

Consider the labelling of X = (27a) taking the pronouns to be phrasal:

(29) (27a) = [$_{\#P}$ [*nos*$_{\#}$ *otros*] [$_{DP}$ *los*$_{\#}$ *jugadores*]]

The labelling in (29) is legitimate for the same reason as the labelling of (6) in (30), since # can be used as a label independently of π in Spanish:

(6) Los jugadores vamos a París.
the players go.1PL to Paris
'We players are going to Paris.'

(30) (6) = [$_{\#P}$ [$_{DP}$ *los*$_{\#}$ *jugadores*] [$_{IP}$ *vamos*+I$_{\#}$ *a París*]]

Consider now an attempt to label (28) as in (31), taking *yo* 'I' to be phrasal as well:

(31) (28) = [$_{\#P}$ [*yo*] [$_{DP}$ *el*$_{\#}$ *jugador*]]

(31) presupposes that # can co-occur with π in the singular 1st and 2nd person pronoun. But we have concluded that this is not the case:

(21) The feature # only co-occurs with π in the plural forms of pronouns and verbal inflections.

Hence, merging *yo* (or *tú*) with a DP results in a structure that cannot be labelled.

Italian cannot have forms like (27):

(32) a. * noi i giocatori
we the players
b. * voi i giocatori
you.PL the players

This is for the same reason that Italian does not allow (1b):

(1b) I giocatori andiamo a Parigi.
the players go.1PL to Paris

The attempt to label (1b) as in (18a) fails because the D does not have the feature π, hence is not {π, #}, while (18b) fails because of (17):

(18) a. * (1b) = [$_{\{\pi\#\}P}$ [$_{DP}$ … D$_{\#}$ …] [$_{IP}$ I$_{\{\pi,\#\}}$ …]]
b. * (1b) = [$_{\#P}$ [$_{DP}$ … D$_{\#}$ …] [$_{IP}$ I$_{\{\pi,\#\}}$ …]]

(17) In Italian, π and # associated with verbal inflection behave as a unit with respect to labelling.

Correspondingly, the forms in (32) are excluded, if we generalize (17) to (33) as already suggested by (14):

(33) In Italian, π and # associated with verbal inflection or a pronoun behave as a unit with respect to labelling.

(34) a. * (32a) = $[_{\{\#,\#\}P}$ [*noi*$_{\{\pi,\#\}}$] $[_{DP}$ $i_{\#}$ *giocatori*]] (*noi* and D don't share π)
b. * (32a) = $[_{\#P}$ [*noi*$_{\{\pi,\#\}}$] $[_{DP}$ $i_{\#}$ *giocatori*]] (because of (33))

This leaves open the question of how one is to analyze the Italian *noi/voi giocatori* 'we/you (pl.) players'. But if we adopt Höhn's (2016) idea that *noi* and *voi* sit in D here, there is no labelling problem, since D is a head merging with a phrase (NP) bringing us into scenario (8a) where A (here the pronoun) does not have to share any feature with B (here N). This line of analysis provides a link back to (33): if *noi* and *voi* can be heads, the two features π and # must bundle together on the same head, e.g. D, and this may explain why # cannot be used for labelling separately from π.

To exclude **noi/voi i giocatori* 'we/you the players' vs. the Spanish *nosotros/vosotros los jugadores*, we must then say that the position above D filled by the pronoun in Spanish must be in SpecDP (deviating from Höhn's analysis) and can only be filled by a phrasal constituent, and if *noi, voi* (parsed as non-branching phrases) are merged in SpecDP, the outcome cannot be labelled. (As for **io/tu giocatore* 'I/you player', it may be that D must be associated with a feature bundle containing #, which, as we have seen, cannot be part of a 1/2 SG pronoun.)

On this analysis, Spanish would differ from Italian by associating π and # with different heads. (Adherence to the labelling algorithm assumed in §2 then requires that # is higher than π.) If so, *nosotros* and *vosotros* are phrasal and cannot be in D, but can be in a Spec position above D. If D cannot be silent, this excludes **nosotros/vosotros jugadores* 'we/you players' in Spanish.

7 Comparison with a different analysis

Höhn (2016) (who also refers to earlier work by Hurtado 1985 and Ackema & Neeleman 2013) offers a different account of the apparent case of "unagreement" in the Spanish (6) by proposing that (6) is to be analyzed as (35a) with an unpronounced counterpart of the overt *nosotros* 'we' that appears in (35b):

(6) Los jugadores vamos a París.
the players go.1PL to Paris
'We players are going to Paris.'

(35) a. [$_{IP}$ [$_{PersP}$ NOSOTROS [$_{DP}$ los jugadores]] [$_{IP}$ vamos a París]]
b. [$_{IP}$ [$_{PersP}$ nosotros [$_{DP}$ los jugadores]] [$_{IP}$ vamos a París]]
we the players go.1PL to Paris

Then, *(19) correlates directly with *(28):

(19) * El jugador voy a París.
the player go.1SG to Paris

(28) * yo / tú el jugador
I you.SG the player

And the Italian (1b) is ungrammatical because Italian does not allow (32a):

(1b) Italian
I giocatori andiamo a Parigi.
the players go.1PL to Paris

(32a) noi i giocatori
we the players

Taking the Spanish (6) to have the structure in (35a), Höhn concludes that unagreement is an illusion.

But Höhn has nothing to say about:

(36) a. What excludes (28)?
b. What excludes (32a) in Italian?

The line of analysis followed here, however, has led to answers to the two questions in (36), based on the labelling algorithm in Chomsky (2013), with no recourse to agreement. My analysis also ties grammatical (19) to ungrammatical (28), like Höhn's analysis, and relates grammatical (6) in Spanish to grammatical (27) and ungrammatical (1b) in Italian to ungrammatical (32a). This suggests that unagreement is an illusion because agreement also is an illusion (in the range of cases considered here).

8 A potential extension

Bosque & Moreno (2013) discuss a peculiar fact about interrogative infinitival clauses in Spanish. Like English, Spanish allows the fairly unexciting type of sentence exemplified in (37):

(37) a. No sabemos cuando ir a París.
not know.1PL when go to Paris
'We don't know when to go to Paris.'
b. pro_i no sabemos [$_{CP}$ cuando [$_{IP}$ PRO_i ir a París]]

But unlike English and, apparently, most other languages, Spanish also has infinitival interrogatives like (38):

(38) No sabemos quiénes ir a París.
not know.1PL which.PL go to Paris
'We don't know which ones of us will go to Paris'

The ungrammatical English counterpart of (38) is supposed to be ungrammatical because the trace (or lower copy) of the wh-phrase is not in a case-marked position:

(39) a. * We don't know [$_{CP}$ [$_{whP}$ which ones]$_i$ [$_{IP}$ **t**$_i$ [$_{IP}$ to go to Paris]]]
b. * We don't know [$_{CP}$ [$_{whP}$ which ones]$_i$ [$_{IP}$ PRO [$_{IP}$ to go **t**$_i$ to Paris]]]

In (39a), the trace is in the subject position of the infinitival clause. In (39b), it is in a lower position, e.g. Spec*v*P or the object position, but still presumably not case-marked. So, the question is how the Spanish (38) overcomes this problem.

Sentences like (38) have two properties in common with sentences like (6). The first has to do with the meaning of (38). The denotation of the matrix subject restricts the domain of *quiénes* 'which ones' as indicated by 'which ones **of us**' in the translation of (38). This holds even when *quiénes* is accompanied by an overt restriction as in (40):

(40) No sabemos quiénes de los jugadores ir a París.
not know.1PL which.PL of the players go to Paris
'We don't know which ones of the players will go to Paris.'

(40) entails that the speaker is one of the players.

This recalls the fact that (6) entails that the speaker is one of the players:

(6) Los jugadores vamos a París.
the players go.1PL to Paris
'We players are going to Paris.'

The second property is revealed by the contrast between (38) and (41), which is ungrammatical even though run-of-the mill infinitival interrogatives like (37a) allow the subject to be 1st/2nd SG:

(41) * No sé quién ir a París.
not know.1SG which one go to Paris

This recalls the fact that (6) also has no singular counterpart:

(19) * El jugador voy a París.
the player go.1SG to Paris

This suggests that the analysis of (38) should be assimilated to the analysis of (6), a link also suggested by Bosque and Moreno.

To capture the two properties of (38) just mentioned, we might begin by reanalyzing PRO as a covert counterpart of the "agreement" inflection on finite verbs, while continuing to require that the subject of the infinitival clause (in SpecIP) must be unpronounced. This is indicated by the strike-through in (42) proposed as a partial analysis of (37a):

(42) no sabemos$_{1PL}$ [$_{CP}$ cuando$_i$ [$_{IP}$ ~~DP~~ [$_{IP}$ ir-PRO$_{1PL}$ a París t$_i$]]]

I will also assume that PRO must have the same features as the inflection on the matrix verb, i.e. π (= 1) and #, as indicated by the subscripted 1PL in (42). For the infinitival IP to have a label, the unpronounced DP must then also have the feature π (= 1) in addition to # in a language like Italian or English. In Spanish, however, this need not be the case, since Spanish allows the # of 1/2 PL inflections and pronouns to be used as a label independently of the π.

In light of this, consider (43) (similar to (39a) as a representation of the Spanish (40):

(43) no sabemos$_{1PL}$ [$_{CP}$ [$_{whP}$ quiénes de [$_{DP}$ los jugadores]] [$_{IP}$ ~~DP~~ [$_{IP}$ ir-PRO$_{1PL}$ a París]]]

The ~~DP~~ in (43) is now to be taken as the of trace the DP *los jugadores* 'the players', which combines with *quiénes* 'which ones' only after movement to SpecCP, as in Sportiche (2005). Therefore, the labelling of the infinitival IP only depends on the feature # of *PRO*$_{1PL}$ being able to be used as a label independently of the π. Since Spanish allows this, (43) is fine as far as labelling is concerned for exactly the same reason (6) is.

Similarly, (41) is ungrammatical for the same reason as (19). The infinitival IP remains unlabelled in (44), because π does not combine with # in singular pronouns or inflections:

(44) * no sé$_{1SG}$ [$_{CP}$ [$_{whP}$ quién de [$_{DP}$ los jugadores]]] [$_{IP}$ ~~DP~~ [$_{IP}$ ir-PRO$_{1SG}$ a París]]]

The fact that (40) entails that the speaker is one of the players, follows from PRO_{1PL} making the predicate *ir a París* applicable to DP only if *DP* in (44) denotes a plurality including the speaker, i.e. for the same reason *los jugadores* 'the players' must denote a set containing the speaker in (6).

Finally, the case problem may be resolved if we take the covert DP in SpecIP to be case-marked in (42) and the following representations, where PRO acts as verbal inflection, effectively treating this covert DP as PRO itself has been treated in classical analyses of control infinitivals.

To exclude the English (45) along with (39a) and their equally ungrammatical counterparts in many other languages, e.g. Italian, we must now also assume that PRO has a π feature even when π does not have the value 1 or 2:

(45) * They don't know $[_{CP}\ [_{whP}$ which ones$]_i\ [_{IP}\ \mathbf{t}_i\ [_{IP}$ to go to Paris]]]

Then, (45) is also excluded because no label can be provided for the infinitival IP in (45) in a language where # combining with π cannot be used for labelling independently of π.

The assumption that *PRO* can have a $\pi \neq 1$ or 2 is based on the conjecture that *PRO* is like a reflexive pronoun in conjunction with the common assumption that reflexive pronouns such as Romance and Slavic 3rd person reflexives like *se*/*si* form a natural class with the 1st and 2nd person pronouns (*me*/*mi*, *te*/*ti*) to the exclusion of non-reflexive "3rd person" pronouns and determiners (no π in the analysis developed here).

Quite obviously, this is just a sketchy beginning of a story line that might bring (6) and (38) together, and it rests on extra assumptions in need of justification and refinement in addition to the hypotheses appealed to in the preceding sections. Even more importantly, it remains to be seen whether (6) and (38) cluster cross-linguistically as tightly as my proposal would predict.

9 A conclusion of sorts

Throughout, I have argued that a set of otherwise puzzling facts can be made sense of, building on the idea that the person and number features associated with verbal inflection are really interpretable as in (3). This represents a clear break with mainstream thinking about subject/verb agreement.

It remains to be seen whether agreement along the lines of (2) is still necessary for other cases of agreement such as adjective or participle agreement. But the fact that Chomsky's (2013) theory of labelling largely predicts the effects of (2) makes this unlikely.

Finally, I have led contrasts between Spanish and other languages back to an assumption about the relation between the two features π and # of pronouns and inflections: in Spanish, # can be used for labelling independently of π, but in Italian and most other languages this is not possible. A suggestion as to why Spanish and Italian behave differently in precisely this way has been offered at the end of §6, but it is not unlikely that there are better ways of understanding what exactly it means to say that the two features come prepackaged in Italian in a way they do not in Spanish.

Abbreviations

1	first person	PL	plural
2	second person	SG	singular
3	third person		

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