McGill Ling-Lunch November 2012

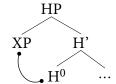
# Partial agreement and the direction of valuation\*

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## 1. The debate on the direction of valuation

Once upon a time...

(1) <u>THE SPEC-HEAD CONDITION</u> (Chomsky 1991, *a.o.*)
A head H<sup>0</sup> can enter into an agreement relation with a phrase XP <u>only if</u>
XP occupies [Spec,HP] (at some level of representation).



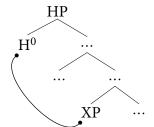
- An early embarrassment for Spec-Head: "expletive replacement" (e.g. Chomsky 1986)
- (2) There are likely [to be two boys in the garden].
  - Facts about (2):
    - a. [ $likely \gg two$ ], but not \*[ $two \gg likely$ ]
    - b. are is licensed only by plural (or 2nd-person) XPs
  - → Given (1), the agreement exhibited by (2) means that *two boys* (or something close to it<sup>1</sup>) is in [Spec,HP] (where H<sup>0</sup> is whatever head hosts the auxiliary, *are*)
    - but as noted by Lasnik & Saito (1991) and Den Dikken (1995), this makes exactly the wrong predictions w.r.t. scope

<sup>\*</sup>Thanks to Mark Baker, Marcel Den Dikken, and Maria Polinsky, for discussion and comments. They should not be held responsible for the views put forth in this talk, nor for any errors contained in it.

<sup>&</sup>lt;sup>1</sup>Koopman (2006) appeals to a growing body of work (Deal 2009, Hartmann 2005, Hazout 2004, Hoekstra & Mulder 1990, Kayne 2006, Moro 1991, 1997, 2007, Williams 1994, among others) suggesting that the 'expletive' in an example like (2) is base-generated much lower than its surface position—potentially, as low as the associate (*two boys*) itself. If this is true, then it is conceivable that the expletive enters into a Spec-Head relation with the associate before moving to its surface position, whereupon it is agreed with by the finite auxiliary. This is—at best—an argument that (2) is irrelevant to the discussion; it is decidedly not an argument in favor of Spec-Head over its alternatives.

While there are now alternative analyses of (2) on the market (e.g. Koopman 2006; see fn. 1), these data gave rise, historically, to a change in the theory of agreement:

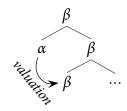
(3) <u>THE C-COMMAND CONDITION</u> (Chomsky 1995, *a.o.*) A head  $H^0$  can enter into an agreement relation with a phrase XP <u>only if</u>  $H^0$  c-commands XP (at some level of representation).



- On this view, (2) reveals something about the fundamental mechanism of agreement
  - more common examples like (4b) obscure this, only because of the ubiquitous movement of English subjects
- a. There are likely [to be two boys in the garden]. [=(2)]
  b. [Two boys]<sub>1</sub> are likely [to be t<sub>1</sub> in the garden].
- Other advantages:
  - o agreement in VSO languages
  - Long-Distance Agreement (LDA)

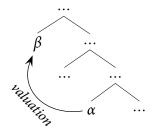
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- The formulations in (1) and (3) appeal to a primitive distinction between heads  $(X^0/X^{\min})$  and phrases  $(XP/X^{\max})$
- In the wake of Chomsky's (1994) *Bare Phrase Structure* proposal, there has been a shift away from recourse to such distinctions in syntax
- Following Chomsky (2000, 2001), we can recast the asymmetries embodied in (1) and (3) in terms of the *direction of valuation*
- (5) <u>THE SPEC-HEAD CONDITION: DOWNWARD VALUATION</u>
  A syntactic node  $\alpha$  can contribute its own feature values to a syntactic node  $\beta$  <u>only if</u>  $\alpha$  occupies [Spec, $\beta$ ] (at some level of representation).



#### (6) UPWARD VALUATION

A syntactic node  $\alpha$  can contribute its own feature values to a syntactic node  $\beta$  only if  $\beta$  c-commands $\alpha$  (at some level of representation).



**NOTE:** I follow Bittner & Hale (1996), Marantz (1991) and Yip et al. (1987), and others, who show that case does not arise by way of agreement; and Bobaljik (2008) and Preminger (2011a), who show that the causal interaction that does exist between case and agreement is precisely the opposite: it is case-marking (of a certain kind) that renders a noun-phrase eligible to be targeted for agreement (see also Bittner & Hale 1996:3).

The model in (6) was considered to be essentially correct until the last few years, which have seen several kinds of challenges to this model.

I will divide these challenges into two general sub-types:

- (i) Arguments from empirical domains that are not self-evidently about agreement
  - Pre-theoretically, I take 'agreement' to refer to:

Morpho-phonologically detectable co-variance between an argument and a verb or tense/aspect/mood marker, in Person, Number, and/or Gender/Noun-Class.

- The challenges in this sub-type involve empirical domains that do not fall under this definition, but which the authors take to be instances of agreement nonetheless
  - often without offering much support beyond a conceptual predisposition towards all long-distance dependencies arising via the same mechanism
- Examples include:
  - o noun-modifier concord (e.g. Baker 2008, Carstens 2000, Mallen 1997); negative concord (e.g. Zeijlstra 2004, 2008b); modal concord (e.g. Zeijlstra 2008a); fake indexicals (e.g. Kratzer 2009); and even deriving Binding Theory itself (e.g. Reuland 2011, Rooryck & Vanden Wyngaerd 2011)
- I am going to set these aside
  - and not for nothing: I find it methodologically dubious to take an empirical domain whose relation to agreement is debatable in the first place, and to draw conclusions from its behavior about the behavior of agreement per se
    - especially in instances where those conclusions are at odds with the behavior of actual agreement (see below)

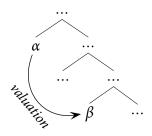
(French; Guasti & Rizzi 2002)

- (ii) Arguments from the behavior of agreement itself
  - A pattern that is often brought up in this context is the agreement alternation triggered by subject-verb/auxiliary inversion (i.e., SV versus VS orders) in Romance and Semitic:
- (7) a. Trois filles **sont arrivées**.

  Three girls are arrived.F.pl

  'Three girls arrived.'
  - b. Il **est arrivé** trois filles. It is arrived.M.sg three girls 'Three girls arrived.'
- (8) a. ?al-?awlaad-u **naam-uu/\*naam-a**. (Standard Arabic; Aoun et al. 1994) the-children-NOM slept-3pl/\*slept-M.3sg 'The children slept.'
  - b. **naam-a**/\***naam-uu** l-?awlaad-u. slept-M.3sg/\*slept-3pl the-children-NOM 'The children slept.'
    - one might take asymmetries of this sort to indicate that Spec-Head (5)—
       or something like it—is the "natural" or "basic" configuration for agreement
      - or that Spec-Head "reinforces" syntactic agreement, making the morphophonological expression of said agreement compulsory (Franck et al. 2006)
- Zeijlstra (2012:532–533) has recently done just that, taking data like (7–8) to indicate that the natural flow of valuation is downward, not upward
- (9) <u>DOWNWARD VALUATION</u> (Zeijlstra 2012)

A syntactic node  $\alpha$  can contribute its own feature values to a syntactic node  $\beta$  only if  $\alpha$  c-commands $\beta$  (at some level of representation).



• In examples like (7–8), the subject would be the node contributing values ( $\alpha$ ); and the (bolded) finite verb would be the node to which values are contributed ( $\beta$ )

#### • NOTES:

- a. traditional Spec-Head (5) is a sub-case of (9)
- b. (9) is the exact inverse of the upward-valuation model put forth by Chomsky (2000, 2001), in (6) above

- That Zeijlstra's (9) is not a generally viable theory of agreement proper has already been shown elsewhere (Polinsky & Potsdam 2001, Preminger 2012)
- In the remainder of today's talk, I would like to illustrate why data like (7–8) are exactly what one would expect on the standard view (i.e., *upward-valuation*, as in Chomsky 2000, 2001)

In order to present the argument in a meaningful way, we must first examine *partial agreement* in some detail.

# 2. Partial agreement, take 1: Baker (2011)

## 2.1. The empirical backdrop

2.1.1. Adjectival agreement, and why we should take it seriously

- (10) (Nosotras) somos gord-**as** / \* gord-**amos**. (Spanish) we-Fpl are.1pl fat-**Fpl** / \* fat-**1pl** 'We are fat.'
- Data like (10) might evoke a response along the following lines: "Well, sure, adjectives in Spanish only agree in NUMBER and GENDER; 'gordamos' is ungrammatical because that's a form that doesn't exist!" (strawman that I concocted)
- This sort of attitude implies that there is nothing much to explain here
  - and it is probably correct for certain cases:
- (11) The students are tall / \* talls.
- Clearly, not <u>every</u> language gives overt morphological expression to <u>every</u> feature that might conceivably reside on a given syntactic category
  - and sometimes, that is just an idiosyncratic fact about a given language's morphological system (a.k.a. "morphological richness")
- <u>Baker (2011):</u> There *is* something worth noting about the absence of PERSON agreement on adjectives, in examples like (10) (as well as (11))
  - In language after unrelated language, adjectives fail to agree in PERSON
    - even when verbs (in the same language) do agree in PERSON
  - The languages in Baker's sample include: Swahili (Bantu), Mayali (Australian), Syrian Arabic (Afro-Asiatic), Tariana (Arawakan), and Spanish (Indo-European)

[Baker 2008:13-26]

 $\Rightarrow$  So, for example, both the adjectives and the verbs in (12) fail to agree in one of the three  $\varphi$ -feature types:

(12) a. Nosotros esta**mos** list-**os**.

(Spanish)

(Spanish)<sup>2</sup>

we-Mpl are-1pl ready-M.pl

'We(M) are ready.'

b. Nosotras esta**mos** list-**as**.

we-Fpl are-1.pl ready-F.pl

'We(F) are ready.'

### (13) Spanish $\varphi$ -agreement

- a. adjectives: ✓ NUMBER, GENDER ✗ PERSON
  b. verbs: ✓ PERSON, NUMBER ✗ GENDER
- → but crucially:
  - · (13a) is a universal or near-universal
  - · (13b) is an idiosyncratic property of a handful of Western European languages

#### 2.1.2. The Person Case Constraint

NOTE: Baker purposefully distances himself from a discussion of the *Person Case Constraint* itself, instead focusing on a sub-case he calls *two-and-a-half agreement*. We will return to this distinction in §3.

- (14) a. Juan te lo envía Juan  $CL_{DAT}$ .2sg  $CL_{ACC}$ .3sg sends 'Juan sends it to you.'
- (15) a. \* Juan le te envía Juan  $CL_{DAT}$ .3sg  $CL_{ACC}$ .2sg sends 'Juan sends you to him.'
  - b. \* Juan le me envía Juan  $CL_{DAT}$ .3sg  $CL_{ACC}$ .1sg sends 'Juan sends me to him.'
  - c. Juan me le envía Juan  $CL_{DAT}$ .1sg  $CL_{ACC}$ .3sg sends 'Juan sends him to me.'
- (16) Juan me envía a la casa Juan CL<sub>ACC</sub>.1sg sends DAT the.Fsg house<sub>F</sub> 'Juan sends me to the house.'

<sup>&</sup>lt;sup>2</sup>Data from Luis Vicente (with some modifications).

### (17) THE PERSON CASE CONSTRAINT, OR PCC

If there is a(n argumental) dative (clitic), the accusative (clitic) must be 3rd-person.

**NB:** This is the so-called "strong" version of the PCC; there are also "weaker" versions, exhibited in other languages/dialects—e.g., *if any internal argument (clitic) is 3rd-person, it must be the accusative one.* This is the case in Catalan, for example.

### • Nevins (2011):

- the Person Case Constraint can be seen as a restriction on Person agreement that is essentially blind to NUMBER
- → crucially, there is no such thing as the *Number Case Constraint*
  - a restriction on NUMBER agreement that would be essentially blind to PERSON

### 2.1.3. Baker's two-and-a-half agreement pattern

(18) a. Xi-nēch-palēhui. 2sg.subj.imp-isg.obj-help 'Help me.' (Nahuatl [Uto-Aztecan])

- b. Xi-nēch-im-maca huēhuèxōlô.

  2sg.suBJ.IMP-1sg.OBJ-PL-give turkeys

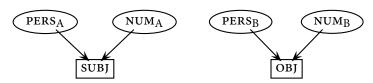
  'Cive me some turkeys' / \*'Cive me to some turk
  - 'Give me some turkeys.' / \*'Give me to some turkeys.'
- c. Ni-qu-im-maca huēhuèxōlô in n-ocnī-uh.

  1sg.subj-3.obj-PL-give turkeys PRT 1sP-friend-POSS

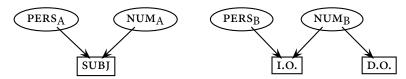
  'I give some turkeys to my friend.'
- d. Ni-qu-(\*im)-maca in xōchitl in cihuātl. 1sg.SUBJ-3.OBJ-(\*PL)-give PRT flower PRT woman 'I give the flower to the woman.'

[Launey 1981, via Baker 2011]

- <u>Baker (2011)</u>: Nahuatl verbs do more than agree with two arguments, but less than agree (fully) with three arguments
  - ⇒ hence, "two and a half"
- My visual representation of two-and-a-half agreement:
- (19) a. Nahuatl monotransitives



b. Nahuatl ditransitives



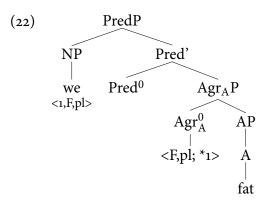
### 2.2. Summary, and central thesis

- Baker 2008, 2011: Agreement in PERSON is "fragile"
  - in the sense that if any kind of agreement "breaks down" or "gives up", it will be PERSON agreement
  - o this is so in adjectival agreement, and also in PCC/two-and-a-half patterns
  - ⇒ the two kinds of phenomena should be given a uniform account
- CLAIM: ' $\varphi$ -features' is a cover-term for a set that is actually not homogenous
- (20) <u>STRUCTURAL CONDITION ON PERSON AGREEMENT</u> (SCOPA)
  A category  $\alpha$  can bear [participant] **only if** a projection of  $\alpha$  merges with a (noun-)phrase that has that feature, and  $\alpha$  is taken as the label of the resulting phrase.
- Structurally speaking, this boils down to:
- (21) A head  $F^0$  can bear a [participant] feature **only if**  $F^0$  is in an *immediate m-command* relation with a (noun-)phrase bearing those features.

 $\frac{\text{Baker (2008):}}{\text{Baker (2008):}}$  This is because PERSON features on a functional head are, in essence, indexical anaphors, that must be bound in an extremely local manner.

### 2.2.1. Adjectival agreement

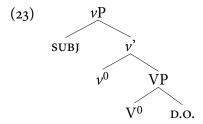
- Baker (2008, 2011; building on Baker 2003):
   Unlike verbs, adjectives never have *external arguments*
  - o in the sense of projecting an argument in the specifier of their 'extended lexical projection'
- Adjectival predication is mediated by a dedicated projection; call it PredP



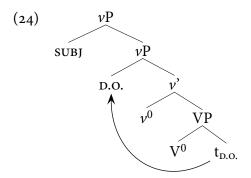
- since the subject of predication never merges directly with (a projection of)  $Agr_A^0$ , SCOPA rules out agreement in PERSON features with *we*
- NB: Note that this proposal, in itself, requires *downward valuation*—the issue under debate—to account for NUMBER and GENDER agreement. But we will see, shortly, an alternative that does not require this device.

#### 2.2.2. Ditransitives

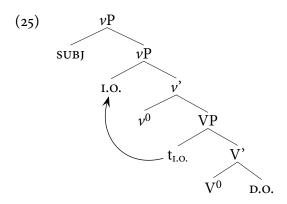
- In ditransitives, there is "one more argument" to project
- If object-agreement is a relation between  $v^0$  and the direct object, it follows from SCOPA that it could not be a relation that obtains with the direct object *in situ*, even in monotransitives



• Instead, it must involve movement of the direct object to a more local configuration with  $v^0$ :



→ But this means that in ditransitives, only the closest internal argument can be afforded this kind of super-local configuration:



Something, of course, must prevent the D.O. from *also* moving—to an additional specifier of  $v^0$ — where it too would be eligible for PERSON agreement under SCOPA. This is achieved by stipulation: "v has at most one EPP feature" (Baker 2011:885).

# 3. Partial agreement, take 2: Preminger (2011b)

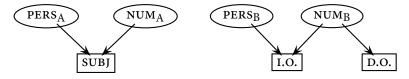
## 3.1. Two-and-a-half is just two

(26) a. Nahuatl monotransitives

[=(19)]



b. Nahuatl ditransitives



- Let  $\pi^0$  and  $\#^0$  denote syntactic probes for Person and Number, respectively
- Here is an alternative take on the two-and-a-half agreement pattern—e.g. in Nahuatl—
  - Nahuatl, in both monotransitive and ditransitive clauses, has the same four  $\varphi$ -probes:
    - a  $\langle \pi^0, \#^0 \rangle$  pair that probe the subject
      - $\cdot$  say, two successive heads in the structural location that we usually refer to as  $T^0$
    - a  $\pi^0$  that probes the highest argument in the VP
      - $\cdot\,$  the D.O., if it's the only argument in the VP
      - · the I.O., if the VP is ditransitive
    - a  $\#^0$  that probes the VP *omnivorously*

# (27) <u>OMNIVOROUS AGREEMENT</u> (Nevins 2011)<sup>3</sup>

Any scenario where the marked member of a given agreement paradigm (e.g. plural) can be triggered by the relevant feature whether it appears on the *subject* or on the *object*, or *both*.

- (28) a. Ja rat x-at/\* $\phi$ -axa-n ri achin. FOC you(sg.) PRFV-2sg/\*3sg.ABs-hear-AF the man 'It was you(sg.) that heard the man.'
  - b. Ja ri achin x-at/\* $\phi$ -axa-n rat. FOC the man PRFV-2sg/\*3sg.ABS-hear-AF you(sg.) 'It was the man that heard you(sg.).'

(Kaqchikel)

<sup>&</sup>lt;sup>3</sup>Interestingly enough, it is Nevins' (2011) contention that *omnivorous agreement* is only ever for NUMBER features, not for PERSON features. It is my contention (Preminger 2011a,b) that data like (28a-b) counter-exemplify this claim.

(29) a. Ja rje' x-e/\*φ-tz'et-ö rja'.
FOC them PRFV-3pl/\*3sg.ABS-see-AF him
'It was them who saw him.'
b. Ja rja' x-e/\*φ-tz'et-ö rje'.
FOC him PRFV-3pl/\*3sg.ABS-see-AF them
'It was him who saw them.'

Of course, this account of Nahuatl begs the question:

• Why is #0 the omnivorous one, and  $\pi^0$  the fully local one—rather than the other way around? We will see an answer shortly.

### 3.2. Problems with SCOPA

### 3.2.1. PERSON agreement at a distance

- Recall Baker's (2008, 2011) SCOPA, repeated below, and our equivalent formulation of it, also repeated below:
- (30) <u>STRUCTURAL CONDITION ON PERSON AGREEMENT</u> (SCOPA)
  A category  $\alpha$  can bear [participant] **only if** a projection of  $\alpha$  merges with a (noun-)phrase that has that feature, and  $\alpha$  is taken as the label of the resulting phrase. [=(20)]
- (31) A head  $F^0$  can bear a [participant] feature **only if**  $F^0$  is in an *immediate m-command* relation with a (noun-)phrase bearing those features. [=(21)]
- ⇒ Prediction: No Person agreement at a distance
  - → <u>Preminger (2011b):</u> that prediction is false
- (32) Ni altxa-tze-n probatu [na]-φ-u-te]<sub>aux</sub>.

  me(ABS) lift-NMZ-LOC attempted 1.ABS sg.ABS-√-3pl.ERG

  'They attempted to lift me.'

  (subject is *pro*<3pl.ERG>) [*Preminger 2009:627*]
  - the crucial question w.r.t. (32), from the perspective of SCOPA, is whether or not *ni* ("me(ABS)") has remained within the embedded nominalized clause

- (33) [Miren-entzat]<sub>PP</sub> [harri horiek]<sub>(ABS)</sub> altxa-tze-n ] probatu [d-it-u-zte]<sub>aux</sub>.

  Miren-BEN stone(s) those plABS lift-NMZ-LOC attempted 3.ABS-pl.ABS- $\sqrt{-3pl.ERG}$  "They have attempted to lift those stones for Miren." (subject is pro<3pl.ERG>)
- - the ABS argument in this construction <u>does</u> remain within the embedded clause
    - $\Rightarrow$  (32) counter-exemplifies SCOPA

### 3.2.2. A missed Person-Number generalization

- <u>Preminger (2011b)</u>: Another problem with SCOPA is that it obscures a generalization that exists across Person *and* NUMBER
- (36) það hefur(/\*hafa) fundist [einhverjum stúdent]<sub>DAT</sub> [sc tölvurnar] ljótar].

  EXPL have.3sg/\*have.3pl found some student.sg.dat the.comp's.pl.nom ugly

  'Some student finds the computers ugly.'

[Holmberg & Hróarsdóttir 2003:1000, with modifications]

- The generalization in question: *both* PERSON agreement and NUMBER agreement are more apt to fail at a distance than they are at close range
- (37) <u>RELATIVE APTITUDE FOR FAILED AGREEMENT</u> (RAFA)
  person at-a-distance » number at-a-distance (» any agreement at close range)
  [Preminger 2011b:922]
  - Crucially, RAFA (37) encodes more than the independent likelihoods of various agreement relations to fail;
  - → It reflects a set of per-utterance (or rather, per-target) implicational relations:
- (38) Given a structure  $\left[ [agr./tense/asp./verb]_{\alpha} \dots [DP]_{\beta} \right] \dots$ 
  - a. Number agr. between  $<\alpha$ ,  $\beta>$  disrupted  $\implies$  person agr. between  $<\alpha$ ,  $\beta>$  disrupted
  - b. Person agr. between  $\langle \alpha, \beta \rangle$  disrupted  $\implies$  number agr. between  $\langle \alpha, \beta \rangle$  disrupted

- So, for example, in a structure like the Icelandic (36), above:
  - PERSON agreement between the finite verb and the embedded nominative subject is also impossible, just like NUMBER agreement
- (39) það hefur//\*hef) fundist [einhverjum stúdent]<sub>DAT</sub> [scég ljótar].

  EXPL have.3sg/\*have.1sg found some student.sg.dat me.nom ugly

  'Some student finds me ugly.'
  - Compare this with, e.g., the PCC:
    - there is a restriction against PERSON agreement with the D.O. (in the presence of an I.O.), as shown in (40a) (repeated from above);
    - but no restriction on NUMBER agreement with the D.O. (even in the presence of an I.O.), as shown in (40b)
- (40) a. \* Juan le me envía [=(15b)] (Spanish) Juan  $CL_{DAT}$ .3sg  $CL_{ACC}$ .1sg sends 'Juan sends me to him.'
  - b. Juan le los envía Juan  $CL_{DAT}$ .3sg  $CL_{ACC}$ .3pl sends 'Juan sends them to him.'
    - ⇒ *no inverse implication* which is precisely what (38a-b) is meant to express

## 3.3. Deriving *RAFA*

Proposal:

• *RAFA* (37)—and the implicational relations it captures, (38a-b)—arise as the result of the way the relevant  $\varphi$ -probes are arranged along the clausal spine:

(41) 
$$\left[ \dots \right[ \#P \#^0 \left[ \piP \pi^0 \left[ \dots DP_T \dots \right] \right] \right] \dots \right]$$
 (where DP<sub>T</sub> is a putative agreement target)

- Suppose there is some syntactic obstruction separating  $\pi^0$  and DP<sub>T</sub>
  - such as an intervening nominal (e.g. a dative); or, a phase boundary

(42) a. [... [#P #0 [
$$_{\pi P}$$
  $\pi^0$  [... Intervener DP<sub>T</sub> ... ]]]...]
b. [... [#P #0 [ $_{\pi P}$   $\pi^0$  [... [ $_{phase}$  ... DP<sub>T</sub> ... ]...]]]...]

• This will prevent  $\pi^0$  from agreeing with DP<sub>T</sub>; now one of two things can happen:<sup>4</sup>

#### (i) NOTHING

The obstruction remains, and similarly prevents agreement between #0 and DP<sub>T</sub>

- as is the case in full-fledged *defective intervention* 

#### (ii) something

Probing by  $\pi^0$ , even though it was unsuccessful in reaching DP<sub>T</sub>, had syntactic consequences that effectively removed the obstruction — for example:

- clitic-doubling the intervener (Anagnostopoulou 2003, Béjar & Rezac 2003)
- agreeing with the phase-head, thereby allowing subsequent probing to look inside the phase in question
  - · following Rackowski & Richards (2005) and Richards & van Urk (2012)

(43) a. 
$$[ ... [_{\#P} \#^0 [_{\pi P} CL_i^0 - \pi^0 [ ... < INTERVENER>_i DP_T ... ] ] ] ... ]$$
  
b.  $[ ... [_{\#P} \#^0 [_{\pi P} \pi^0 [ ... [_{Dbesc} ... DP_T ... ] ... ] ] ] ... ]$ 

In these cases, probing by  $\#^0$  will be *successful* in targeting  $DP_T$  —

⇒ resulting in what we would descriptively call "partial agreement" (in NUMBER, but not in PERSON)

<sup>&</sup>lt;sup>4</sup>The expression 'X successfully targets  $DP_T$ ' is to be understood, in this context, as X successfully reflecting marked φ-features found on  $DP_T$  ([participant], [speaker], [plural], and so forth). It is, in my mind, an open question whether such a thing as "agreement with a 3rd-person/singular nominal" even exists, or these are simply descriptive terms we use to identify the morphology that surfaces when probes fail to find a target bearing marked features (see Nevins 2007, Preminger 2011a for somewhat dissenting views).

- •• Importantly, the converse pattern—where  $\pi^0$  can successfully target DP<sub>T</sub> but  $\#^0$  cannot—is predicted not to exist:
  - this would require an obstruction being introduced between  $\pi^0$  and  $\#^0$ ;
  - but  $\pi^0$  and  $\#^0$  are consecutive heads in the clausal spine, so this will generally be impossible; the only position for an obstruction that would block  $\#^0$  but not  $\pi^0$  is in [Spec, $\pi$ ]:

(44) 
$$\left[ \dots \left[ {_{\# P}} \ {^{\# 0}} \ \left[ {_{\pi P}} \ \underline{XP} \ \pi^0 \ \left[ \ \dots \ DP_T \ \dots \ \right] \ \right] \ \right] \dots \right]$$

- but  $\pi^0$  is not a thematic head, it does not introduce arguments of its own;
- $\Rightarrow$  the obstructing XP got to [Spec, $\pi$ ] via movement
  - movement which could only have been triggered by  $\pi^0$ , given that there are no intermediate heads
- XP was closer to  $\pi^0$  than DP<sub>T</sub> was (otherwise DP<sub>T</sub> would have moved instead)

(45) 
$$[ ... [_{\#P} \#^0 [_{\pi P} \underline{XP} \pi^0 [ ... t_{XP} ... [ ... DP_T ... ] ] ] ] ... ]$$

- $\Rightarrow$  XP would have intervened<sup>5</sup> in probing of DP<sub>T</sub> by  $\pi^0$ , as well
  - contradiction.
- And, of course, it could be the case that there was no obstruction to begin with—and so probing by both  $\pi^0$  and  $\#^0$  would go through unimpeded (a.k.a. "successful  $\varphi$ -agreement")
- On the other hand, merging  $DP_T$  in (the specifier of) the immediate complement of  $\pi^0$  would render an obstruction impossible
  - $\circ$  since there is no structural space between  $\pi^0$  and DP<sub>T</sub> for the obstruction to reside<sup>6</sup>

(46) a. 
$$[ ... [_{\#P} \#^0 [_{\pi P} \pi^0 [_{XP} DP_T [_{X'} ... ]]]] ] ... ]$$
  
b.  $[ ... [_{\#P} \#^0 [_{\pi P} \pi^0 [_{XP} DP_T [_{X'} ... ]]]]] ... ]$ 

### This derives:

- The fact that long-distance Person-agreement is more susceptible to disruption than long-distance NUMBER-agreement
- The fact that both are more susceptible to disruption than agreement at close range, whether in NUMBER or in PERSON

<sup>&</sup>lt;sup>5</sup>It is conceivable that one could get around this by appealing to finer derivational timing—i.e., that  $\pi^0$  would dislocate the intervener *prior* to probing for person features (along the lines of Müller 2009, for example). I assume that if this option is available to  $\pi^0$ , it is also available to  $\#^0$ —and thus  $\#^0$  would be able to move the intervener out of its [Spec, $\pi$ P] position prior to probing for number features, meaning that this supposed intervener would not actually disrupt  $\varphi$ -probing by  $\#^0$ , either. I therefore do not consider this possibility problematic for the line of argumentation pursued in the text.

<sup>&</sup>lt;sup>6</sup>This is so even if the category  $\alpha$  in [Compl, $\pi$ ] is phasal—since the XP in [Spec, $\alpha$ ] would be situated in the escape-hatch of the  $\alpha$  phase, and thus accessible to probing by  $\pi$ <sup>0</sup>.

#### Remember Nahuatl...?

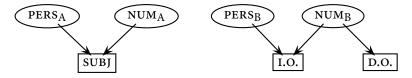
• We had an alternative account of the so-called *two-and-a-half* agreement pattern in Nahuatl that recast it as simple subject agreement + object agreement

(47) a. Nahuatl monotransitives

[=(19)]



b. Nahuatl ditransitives



- with the provision that object NUMBER is *omnivorous*, while object PERSON is not (and you were promised an account of this asymmetry)
- → We are now in a position to explain this apparent asymmetry between the Nahuatl object NUMBER probe and the object PERSON probe
  - o contra appearances, both are "omnivorous" in the relevant sense
    - i.e., both can in principle agree with either the D.O. or the I.O.
  - it's just that when  $\pi^0_{\text{OBJ}}$  probes, only the i.o. is accessible
    - e.g. because the 1.0. would intervene in relations targeting the structurally-lower D.O.
  - $\circ$  by the time  $\#^0_{OBJ}$  probes, such intervention no longer arises<sup>7</sup>
    - e.g. because Nahuatl "object agreement markers" are actually clitics, doubling the closest internal argument, whose cliticization is triggered by  $\pi^0_{\text{OBJ}}$

<sup>&</sup>lt;sup>7</sup>There is one potential problem with this approach: if the I.O. is *cliticized* as the result of probing by  $\pi_{OBJ}^0$ , then  $\#_{OBJ}^0$  should be able to target only the D.O., and not the I.O. (since cliticization should render the base position of the I.O. invisible). Note, however, that the plural marker -*im*- appears even in Nahuatl monotransitives, whenever their D.O. is plural (Mark C. Baker, p.c.). One possibility, then, is that Nahuatl  $\#_{OBJ}^0$  is able—for whatever reason—to target an  $X^0$  clitic as well as an XP; since  $X^0$ s are not interveners for structurally-lower phrasal categories,  $\#_{OBJ}^0$  in a ditransitive would be able to target either the clitic (corresponding to the I.O.) or the phrasal D.O., located lower in the structure. Crucially, the same would not be true for earlier probing by  $\pi_{OBJ}^0$ —since at that point, the I.O. would not yet have been cliticized, thus constituting a true phrasal intervener.

## 3.4. Adjectival agreement

- Recall: cross-linguistically, adjectives consistently fail to agree in Person, even when other categories (most notably, verbs) in the same language do
- At the root of Baker's treatment of this fact is following assumption:
  - The subject of adjectival predication is always base-generated outside of the maximal projection of the adjective (notably unlike verbal predication, for example)
- → This is a stipulation on "what is unique about adjectives"; suppose we replace this stipulation with a different one:
  - Adjectives <u>do</u> conform to the *Predicate-Internal Subject Hypothesis* (i.e., their external arguments are base-generated in their specifiers);
  - What is unique about them (relative to verbs, for example) is that they are enclosed in an EPP-less phasal category
- Within the theory of category-neutral roots (Marantz 1997, et seq.), adjectives would include an "adjectivizer" layer, which we can label *aP* 
  - on this view, it is this aP that would be phasal and EPP-less
- Holding constant the assumption, taken from Baker 2008 (see also Baker 2011:fn. 5), that adjectival  $\varphi$ -probes are located outside the adjectival projection proper
  - probing by the adjectival  $\pi^0$  would run into this phasal aP
  - $\Rightarrow$  preventing successful PERSON agreement with the *a*P-internal DP, but "unlocking" the *a*P phase (in the manner shown in (43b), above)
- → This has two important consequences:
  - (i) NUMBER (and GENDER) agreement with the *a*P-internal DP goes through unimpeded
    - which is the correct result
  - (ii) movement out of aP would be possible
    - o as illustrated by the existence of raising adjectives, this is again the correct result

(48) a. 
$$[ ... [_{\#P} \#_A{}^0 [_{\pi P} \pi_A{}^0 [ ... [_{aP} (phasal) ... DP_T ... ] ... ] ] ] ... ]$$
b.  $[ ... [_{\#P} \#_A{}^0 [_{\pi P} \pi_A{}^0 [ ... [_{aP} (phasal) ... DP_T ... ] ... ] ] ] ... ]$ 
c.  $[ ... [_{\#P} \#_A{}^0 [_{\pi P} \pi_A{}^0 [ ... [_{aP} (phasal) ... DP_T ... ] ... ] ] ] ... ]$ 

- The heads in question ( $\#_A^0$ ,  $\pi_A^0$ , and  $a^0$ , as well as the root—"A<sup>0</sup>"—itself) would then be spelled out together
  - through the same mechanisms responsible for similar morpho-syntactic fusing in the verbal domain (e.g., head-movement)

# 4. Partial agreement and the direction of valuation

- Recall (7–8), repeated here:
- (49) a. Trois filles **sont arrivées**. (French; Guasti & Rizzi 2002)
  Three girls are arrived. Three girls arrived.
  - b. Il **est arrivé** trois filles. It is arrived.M.sg three girls 'Three girls arrived.'
- (50) a. 7al-?awlaad-u **naam-uu/\*naam-a**. (Standard Arabic; Aoun et al. 1994) the-children-NOM slept-3pl/\*slept-M.3sg 'The children slept.'
  - b. **naam-a/\*naam-uu** l-?awlaad-u. slept-M.3sg/\*slept-3pl the-children-NOM 'The children slept.'
- **→** Importantly:
  - The difference between SV and VS—or more accurately, [S»V] and [V»S]—is not a difference between *full agreement* and *no agreement*;
  - It is the difference between *full agreement* and *partial agreement* 
    - where partial agreement may, in a given language, amount to no agreement at all
- We can see this even within Standard Arabic itself:
- (51) a. ?akal-at ṭ-ṭaalibaat-u (Standard Arabic; Benmamoun & Lorimor 2006:2) ate-3sg.F the-student.F.pl-NOM 'The students ate.'
  - b. \* ?akal-na ṭ-ṭaalibaat-u ate-3pl.F the-student.F.pl-NOM
- (52) a. ṭ-ṭaalibaat-u ʔ**akal-na** the-student.F.pl-NOM ate-3pl.F 'The students ate.'
  - b. \* t-taalibaat-u ?akal-at the-student.F.pl-NOM ate-3sg.F

- summarizing the Standard Arabic pattern:
- a.  $[V\gg S]$ : agreement in GENDER but not NUMBER
  - b. [S>V]: agreement in GENDER and NUMBER

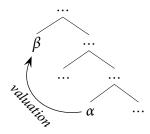
(abstracting away from PERSON)

→ This is **precisely what we would expect**—given the analysis of partial agreement presented in §3—on the standard, *upward-valuation* view (following Chomsky 2000, 2001)

### (54) UPWARD VALUATION

[=(6)]

A syntactic node  $\alpha$  can contribute its own feature values to a syntactic node  $\beta$  only if  $\beta$  c-commands $\alpha$  (at some level of representation).



- Here's why:
  - o if the finite verb is *above* the subject, then there is the possibility of syntactic obstruction in between the NUMBER/GENDER/PERSON probes and the subject DP
    - in the manner outlined in §3.3
    - and just as in §3.3, failed agreement by #0 can result in amelioration of the relevant obstruction (e.g. a phasal boundary, such as FP in (55) below)

(55) a. 
$$[ ... [ _{\Gamma P} \Gamma^0 [ _{\#P} \#^0 [ ... [ _{FP(phasal)} ... SUBJDP ... ] ... ] ] ] ... ]$$
 (where  $\Gamma^0$  is the GENDER probe)

b. [ ... [ 
$$_{\Gamma P}$$
  $_{\Gamma 0}$  [  $_{\# P}$   $_{\# 0}$  [ ... [  $_{FP}$  [  $_{Dbasell}$  ... SUBJDP ... ] ... ] ] ] ... ]

c. 
$$\left[ \dots \right[ \Gamma^0 \left[ \Pi^0 \left[ \Pi^0 \right] \dots \left[ \Pi^0 \left[ \Pi^0 \right] \dots \right] \dots \right] \right] \dots \right]$$

- · resulting in probing by  $\Gamma^0$  going through unimpeded
- → giving rise to agreement in GENDER but not NUMBER
- on the other hand, in order to move to a position *above* the finite verb, the subject must move across any such obstructions

(56) [SUBJDP [ ... [
$$_{\Gamma P}$$
  $_{\Gamma P}$  [#P # $^{0}$  [ ... [ $_{FP(phasal)}$   $_{SUBJDP}$  [ $_{F'}$  ...  $_{SUBJDP}$  ... ] ] ... ] ] ... ]]

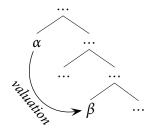
• once the subject has made it across all such obstructions, it is necessarily the case that agreement in both NUMBER and GENDER will go through unimpeded

[=(9)]

# 5. Postscript

- Certainly, Spec-Head and other *downward-valuation* approaches can also handle the Standard Arabic-type patterns illustrated in §4
- (57) <u>DOWNWARD VALUATION</u> (Koopman 2006, Zeijlstra 2012)

A syntactic node  $\alpha$  can contribute its own feature values to a syntactic node  $\beta$  only if  $\alpha$  c-commands $\beta$  (at some level of representation).



• e.g. by asserting:

- that the post-verbal position of subjects is above  $\Gamma^0$  (the Gender agreement head) and below #<sup>0</sup> (the Number agreement head);
- and the pre-verbal position of subjects is above both  $\Gamma^0$  and  $\#^0$
- Unto themselves, these Arabic-specific stipulations seem—to me—to be rather comparable to the Arabic-specific stipulations required on the account presented in §4
- → However, given that accounts that enforce *downward-valuation* have already been shown to be untenable (Polinsky & Potsdam 2001, Preminger 2012), it is good to see that there is no counter-argument from SV-VS asymmetries in favor of *downward-valuation* 
  - because that would have been very confusing.



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