

An argument for AGREE and Multiple Spell-out: Standard Arabic agreement asymmetries revisited

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Goal

- The goal of this paper is to provide an account of the classical subject-verb agreement asymmetries in some varieties of Arabic within a minimalist model that stresses the role of conditions at the PF and LF interfaces in the investigation of syntactic phenomena while allowing derivations to proceed cyclically in interaction with the interfaces.

1. Introduction: The facts

1.1 The subject-verb agreement asymmetry (SVAA) in Standard Arabic (SA)

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|---------|---------------|--------------|----------------|-----------------------|
| (1) (a) | ʔal-ʔawlad-u | qaraʔ-u | d-dars-a | ✓SV+full agreement |
| | the-boys-NOM | read 3plmas | the-lesson-ACC | |
| (b) | qaraʔa | l-ʔawlad-u | d-dars-a | ✓VS+partial agreement |
| | read 3sgmas | the-boys-NOM | the-lesson-ACC | |
| (c) | *ʔal-ʔawlad-u | qaraʔa | d-dars-a | *SV+partial agreement |
| | the-boys-NOM | read 3sgmas | the-lesson-ACC | |
| (d) | *qaraʔ-u | l-ʔawlad-u | d-dars-a | *VS+full agreement |
| | read 3plmas | the-boys-NOM | the-lesson-ACC | |

1.2 Partial agreement in VS orders is gender agreement

- | | | | |
|---------|---------------|---------------|----------------|
| (2) (a) | ʔal-fatayat-u | qaraʔ-na | d-dars-a |
| | the-girls-NOM | read-3plfem | the-lesson-ACC |
| (b) | qaraʔa-t | əl-fatayat-u | d-dars-a |
| | read-3sgfem | the-girls-NOM | the-lesson-ACC |

1.3 No asymmetry in Moroccan and Lebanese Arabic (Aoun et al 1994)¹

- | | | | | |
|---------|--------------|--------------|-----------------------|------|
| (3) (a) | lə-wlaad | nʕas-u | ✓SV+full agreement | (MA) |
| | the-children | slept.3pl | | |
| (b) | *nʕas | lə-wlaad | *VS+partial agreement | |
| | slept.3sg | the-children | | |
| (c) | nʕas-u | lə-wlaad | ✓VS+full agreement | |
| | slept.3pl | the-children | | |
| (d) | *lə-wlaad | nʕas | *SV+partial agreement | |
| | the-children | slept.3sg | | |

¹ Throughout the handout I will use SA for Standard Arabic, MA for Moroccan Arabic, and LA for Lebanese Arabic.

2.5 Main Problem: The CR analysis of FCA is, at best, language-particular

- Aoun *et al* (1994)'s analysis cannot be extended to languages with FCA where conjoined subjects in VSO structures pass the tests of semantic plurality:

2.5.1 Standard Arabic

2.5.1.1 The “together” test

- (19) ʒaʔa-t Hind-un wa ʕamr-un maʕan
 came-3sgfem Hind-NOM and Amr-NOM together

2.5.1.2 The reciprocal test

- (20) tuhibbu Hind-un wa ʔaxaw-a-ha baʕD-a-hum əl-baʕD
 love.sgfem Hind-NOM and brothers-NOM-her some-ACC-them the-some
 “Hind and her brothers love each other.”

2.5.1.3 The intransitive “meet” test

- (21) ʔiltaqa-t Hind-un wa ʔaxaw-a-ha f-əl-ħafl-i
 met.3sgfem Hind-NOM and brothers-NOM-her at-the-party-DAT
 “Hind and her brothers met at the party.”

2.5.2 Welsh (*Harbert and Bahloul 2002:60*)

2.5.2.1 The reciprocals test

- (22) (a) Es i a'm brawd gyda ein gilydd
 went.1sg I and-my-brother with each other
 (b) Cwrddais i a'm brawd ym Mharis
 met.1sg I and-my-brother in Paris

2.5.2.2 Object-preposition FCA with “between”

- (23) (a) cynnen rhyngof fi a thi
 strife between.1sg me and you
 (b) cwlwm o gariad sydd rhyngoch chwi a hi
 bond of love which-is between.2pl you and her

2.5.3 Czech (*Johannessen 1996*)

2.5.3.1 Strong “and” i (=both) test

- (24) Půjdu tam já i ty
 will-go.1sg there I.NOM and you.NOM.2SG
 “Both of you and I will go there.”

2.5.3.2 The “each” test

- (25) Po jednom jablku sndl Jan a Petr
 at-the-rate-of one.LOC apple-LOC ate.3sg John.NOM and Peter.NOM
 “John and Peter ate an apple each.”

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|--|
| (26) Conclusion: FCA constructions in SA, Welsh, and Czech cannot be derived from an underlying clausal conjunction structure. A Spec-head agreement approach to such constructions is therefore untenable. |
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3. On agreement with pronominals and the status of preverbal DPs

3.1 Lack of asymmetry in agreement with pronominal subjects in SA³

- (27) (a) (hum) qaraʔ-u d-dars-a ✓SV+full agreement
 they read 3plmas the-lesson-ACC
- (b) qaraʔ-u (hum-u) d-dars-a ✓VS+full agreement
 read 3plmas they-EV the-lesson-ACC
- (c) *qaraʔa hum-u d-dars-a *VS+partial agreement
 read 3sgmas they-EV the-lesson-ACC
- (28) **NOTE:** Since Arabic is a null subject language, overtiness of the pronominal subject is optional and is always associated with emphasis/contrastive focus effects.

3.2 FCA is “full” in VS structures with a pronominal first conjunct

- (29) (a) ʔiʔ-tu ʔana wa Hind-un (SA)
 came-1sg I and Hind-NOM
- (b) ʔiʔ-nna hunna wa ʔabaaʔ-u-hun (SA)
 came-3plfem they_{FEM} and fathers-NOM-their_{FEM}
- (30) **NOTE:** Overtiness of the pronominal here is obligatory and does not correlate with any emphasis/contrastive focus effects.

(31) Descriptive generalization #1:

Full agreement typically arises when the subject is (or includes) a pronominal, whether that pronominal is overt or null, and whether it occurs in pre- or postverbal position.

3.3 Parallelism between clitic-left-dislocated (CLLD) DPs and preverbal DPs in SV orders

- SV orders are traditionally taken to involve a “categorical” interpretation, as opposed to the “thetic” interpretation associated with VS orders, e.g., indefinite nonspecific NPs cannot occur preverbally:

- (32) (a) *walad-un kasara l-bab-a
 boy-NOM broke 3sgmas the-door-ACC
- (b) kasara walad-un l-bab-a
 broke 3sgmas boy-NOM the-door-ACC

Cf. Clitic-left-dislocated DPs:

- (33) (a) ʔal-kitab-u qaraʔa-**hu** Zayd-un
 the-book-NOM read 3sgmas-it Zayd-NOM
- (b) *kitab-un qaraʔa-**hu** Zayd-un
 book-NOM read 3sgmas-it Zayd-NOM

³ EV = epenthetic vowel.

- Extraction across preverbal DPs is disallowed:

- (34) (a) man Daraba Zayd-un
 who hit 3sgmas Zayd-NOM
 (b) *man Zayd-un Daraba
 who Zayd-NOM hit 3sgmas

Cf. Clitic-left-dislocated DPs:

- (35) (a) man qaraʔa haða əl-kitab-a
 who read 3sgmas this the-book-ACC
 (b) *man haða əl-kitab-u qaraʔa-**hu**
 who this the-book-NOM read 3sgmas-it

- Preverbal DPs may also co-occur with an overt pronominal in postverbal position (cf. 39), again a typical property of CLLD structures (cf. (34a) for example):

- (36) ʔal-ʔawlad-u qaraʔ-u **hum-u** d-dars-a
 the-boys-NOM read 3plmas they-EV the-lesson-ACC

3.4 Case properties of post- and preverbal DPs

- Postverbal DPs always appear with nominative case, whereas preverbal DPs appear with nominative case only in absence of any Case assigner (e.g., an overt C of the *ʔinna*-type or an ECM verb of the *want*-type). Consider:

- (37) qaraʔa l-ʔawlad-u d-dars-a
 read 3sgmas the-boys-NOM the-lesson-ACC

- (38) (a) ʔal-ʔawlad-u qaraʔ-u d-dars-a
 the-boys-NOM read 3plmas the-lesson-ACC

- (b) **ʔinna** l-ʔawlad-a qaraʔ-u d-dars-a
 C the-boys-ACC read 3plmas the-lesson-ACC
 "(I affirm that) The boys read the lesson."

- (39) (a) ʔarad-a Zayd-un ʔan ya-rʔial-a l-ʔawlad-u
 wanted-3sgmas Zayd-NOM C leave/IMPERF-3sgmas the-boys-NOM

- (b) ʔarad-a Zayd-un əl-ʔawlad-a ʔan ya-rʔial-uu
 wanted-3sgmas Zayd-NOM the-boys-ACC C leave/IMPERF-3plmas
 "Zayd wanted the boys to leave."

- In copular verbless constructions, default case is always nominative:

- (40) (a) Zayd-un fi-d-dar-i
 Zayd-NOM in-the-house-GEN

- (b) Zayd-un saʔiid-un
 Zayd-NOM happy-NOM

(41) Descriptive generalization #2:

While postverbal DPs are noncontroversially subjects, preverbal DPs seem to share the semantic and Case properties typically associated with topics/clitic-left dislocated elements.

3.5 SVAA revisited

- Given the descriptive generalizations in (31) and (41), I'd like to propose the following structural representations for the derivations of VS and SV orders:

(42) VS: [TP T+[v*+V] [_{v*P} DP t_{v*} [_{VP} t_V YP]]]

(43) SV: [TP DP T+[v*+V] [_{v*P} *pro* t_{v*} [_{VP} t_V YP]]]

3.5.1 Why is there always rich agreement on T in (43), but not in (42)?

- Because of the ***pro* identification requirement** (cf. Rizzi 1982, McCloskey 1986), now formulated as an interface condition (perhaps holding at PF):⁴

(44) A null element *pro* has to be identified at PF, where identification is established by a c-commanding complete ϕ -complex.

- In verbless copular constructions, where there is no verb, there is no means of identifying *pro* at the interface, hence *pro* can never be licensed, which is true:

(45) (a) Zayd-un fi-d-dar-i
 Zayd-NOM in-the-house-GEN
 (b) **pro* fi-d-dar-i
 in-the-house-GEN

- In past tense contexts, a copular verb obligatorily surfaces, hence subject drop is rendered possible:

(46) kana **pro* fi-d-dar-i
 BE 3sgmas in-the-house-GEN

3.5.2 Why is impoverished agreement possible in VS structures?

- (47) If there is no *pro*, then full agreement is not required, though by no means prohibited (cf. MA/LA), for interface convergence.

3.5.3 What about those cases where the subject is an overt pronominal?

- (48) These structures may also be argued to involve a *pro* subject, whose lexicalization is forced by interface conditions to save the derivation from crashing. Two cases are relevant here:

(a) **Case #1:** When *pro* carries a feature that cannot be realized on a null element, e.g., emphasis/focus, a rule of late insertion (as in (49) below for the sentences in (27a,b)) will Spell-out the pronominal ϕ -complex overtly, otherwise *pro* will remain “silent”:

(49) For *pro*_[3plmas, +EMPHASIS], insert “hum”.

(b) **Case #2:** In conjoined phrases such as “*pro* and DP,” *pro* will have to be lexicalized to satisfy the (interface) *condition on the parallelism of coordinate structures* (cf. 29).

⁴ I will ignore here pro-drop languages of the Chinese-type, where agreement morphology is null, hence cannot serve as an identifier for *pro*.

3.6 FCA Revisited: How do we account for FCA in SA under the current analysis?

(50) **Answer:**

(a) Full agreement with a postverbal pronominal first conjunct is required for *pro* identification at the interface. Obligatory lexicalization of *pro* follows from the parallelism constraint on coordinate structures.

Prediction: If *pro* can occur as a first conjunct, then we should expect it also to co-occur with a coreferential preverbal DP as well. This is true:

- (51) ʔal-fatay-at-u ʒiʔ-nna hunna wa ʔabaaʔ-u-hun (SA)
 the-girls-PL-NOM came-3plfem they_{FEM} and fathers-NOM-their_{FEM}

(b) Partial agreement with a postverbal first conjunct DP in SA is possible since default agreement will not violate any conditions at the interface, given the lack of *pro* in such structures.

Why should MA/LA differ from SA with regard to FCA?

- (52) Recall that in these dialects agreement is always full in both SV and VS structures (cf. 3). This should serve as a cue for learners to reanalyze “surface” first conjunct agreement as “deep” full agreement in a clausal coordination structure (cf. Harbert and Bahloul 2002).

3.7 Conclusions so far

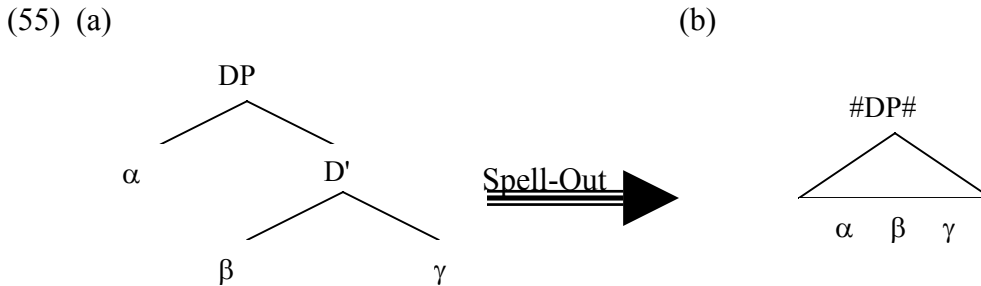
(53)

- (i) “Surface” SV constructions in SA are actually CLLD structures, with a base-generated *pro* in the VP-internal subject position and a base-generated DP in the VP-external subject position (SpecTP, by assumption).
- (ii) The subject-verb agreement asymmetry in SA may then be argued to follow from the effects of the null subject parameter:
 - (a) Full agreement is required to recover the ϕ -feature content of a base-generated *pro*. (SV structures in SA)
 - (b) Impoverished agreement cannot do so, hence confined only to cases where a lexical DP appears overtly. (VS structures in SA)
- (iii) Full agreement with postverbal lexical DP subjects, however, is not prohibited, since it is still compatible with interface conditions. (VS structures in MA/LA)
- (iv) Interface conditions operate on structural representations, fixing their deficiencies when possible (e.g., lexicalizing *pro* for the purposes of emphasis or for the purposes of parallelism in coordinate structures).

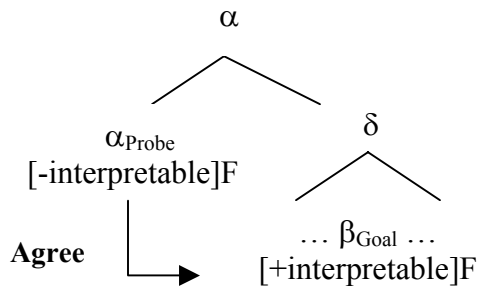
4. Agreement asymmetries in an Agree-based and Multiple Spell-out framework

4.1 Major assumptions

(54) Unlike in classical minimalism (Chomsky 1993, 1995), Uriagereka (1999, 2002) proposes a *Multiple Spell-out* (MSO) system whereby certain chunks of structure (specifically subjects and adjuncts, but not complements) are Spelled-out in a separate derivational cascade in the course of a single syntactic derivation, forming a linearized syntactic object, notated as #XP# below:



(56) Agreement is induced through the application of an operation **Agree**, which is a **head-head** relation that takes place at a distance (rather than in a Spec-head configuration) within a local search domain (Chomsky 2000, 2001a, 2001b):



(57) [There **T** seem [to be **two men** in the room]]



(58) For the purposes of Agree, assume heads are of two types: *primitive* or *derived*. Primitive heads are lexical (e.g., D, V, etc.), whereas derived heads are created through the application of *Multiple Spell-out* (MSO) to certain chunks of structure, along the lines in (54) and (55) above.

(59) Option of *pro*-support: In null subject languages a Spelled-out DP may be associated with an underspecified *pro* (perhaps made available by the numeration).

(60) Assume that Gender is not part of the ϕ -complex on T. Rather, Gender could be construed as a **CLASS** feature probing separately for the purposes of Agree (see Soltan 2001 and Ouhalla 2003).

- (61) In principle, then, T can appear with
- ϕ (for the traditional Person and Number features, which may also happen to be *default* values),
 - CLASS** (for what appears as Gender in many languages), or
 - EPP** (the requirement to be an occurrence of something, where an occurrence of α is a sister of α),
- (62) Parameterization of T: Presence of a particular feature on T or a particular combination of the three feature types in (61) is subject to (lexical) parameterization.

4.2 Derivations⁵

4.2.1 Deriving SV structures with full agreement in SA/LA/MA

- (63) Target structure: *The boys read the book.*
- $[_{v^*P} v^* [_{VP} \text{read the book}]]$
 - Spell-out “the boys” forming #DP# in a separate cascade.
 - Apply *pro*-support, Merging a *pro* with the same ϕ -features as #DP# in Spec v^*P :
 - $[_{v^*P} \textit{pro} v^* [_{VP} \text{read the book}]]$
 - Merge T: $[_{TP} T_{\phi/CLASS/EPP} [_{v^*P} \textit{pro} v^* [_{VP} \text{read the book}]]]$
 - Agree($T_{\phi/CLASS}$, *pro*).
 - EPP(T, #DP#): $[_{TP} \#DP\# T_{\phi/CLASS/EPP} [_{v^*P} \textit{pro} v^* [_{VP} \text{read the book}]]]$
 - Merge C: $[_{CP} C [_{TP} \#DP\# T_{\phi/CLASS/EPP} [_{v^*P} \textit{pro} v^* [_{VP} \text{read the book}]]]]]$
 - At the interface, *pro* is identified by rich T, and the derivation converges.

4.2.2 Deriving partial agreement in VS orders in SA

- (64) Target structure: *Read the boys the book.*
- $[_{v^*P} v^* [_{VP} \text{read the book}]]$
 - Spell-out “the boys” forming #DP# in a separate cascade.
 - Merge #DP# in Spec v^*P :
 - $[_{v^*P} \#DP\# v^* [_{VP} \text{read the book}]]$
 - Merge $T_{\text{default}/CLASS}$: $[_{TP} T_{\text{default}/CLASS} [_{v^*P} \#DP\# v^* [_{VP} \text{read the book}]]]$
 - Agree($T_{\text{default}/CLASS}$, #DP#).
 - Merge C: $[_{CP} C [_{TP} T_{\text{default}/CLASS} [_{v^*P} \#DP\# v^* [_{VP} \text{read the book}]]]]]$

4.2.3 Deriving full agreement in VS orders in LA/MA

- (65) Same derivation as in (64), except that these languages allow a T with a ϕ -complex without an EPP feature:

- (66) $[_{CP} C [_{TP} T_{\phi/CLASS} [_{v^*P} \#DP\# v^* [_{VP} \text{read the book}]]]]]$
| Agree \wedge

⁵ Assume verb raising to v^* and T throughout, perhaps an operation of the phonological component driven by the affixal properties of functional heads.

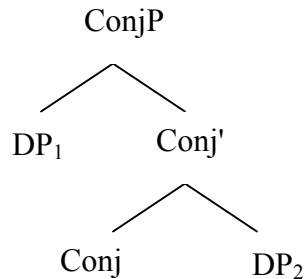
Some consequences of the proposed analysis of SVAA

- (67) If optional EPP can be reduced to the semantic interface (cf. Chomsky 2001a), we have an explanation why its licensing in SV orders results in an LF reflex of categoricalness, whereas its absence in VS orders results in the default thetic interpretation.
- (68) Indefinite nonspecific NPs cannot be associated with *pro*, which is inherently a D head, hence their exclusive occurrence in postverbal position.
- (69) If SpecTP is an A'-position, wh-extraction across a #DP# in SpecTP is blocked by familiar minimality considerations. Wh-extraction across a #DP# in Specv*P is permissible, though.
- (70) A #DP# in postverbal position will always be assigned nominative case under Agree with T. A #DP# in preverbal position will be assigned default nominative case, unless a lexical or structural Case-assigner is available in the structure, e.g., an overt C or an ECM verb:⁶
- (71) $[_{CP} \text{?inna} [_{TP} \text{\#DP\# } T_{\phi/\text{CLASS/EPP}} [_{v^*P} \text{pro } v^* [_{VP} \dots]]]]$
└ Case ──┐

4.2.4 Deriving agreement with conjoined subjects

4.2.4.1 A couple of further assumptions

- (72) Conjoined phrases are hierarchically organized (Munn 1992, Kayne 1994):



- (73) **Feature resolution rules** (FRRs) apply to determine the ϕ -features of ConjP, e.g., first person + second person = first person; second person + third person = second person; masculine + feminine = masculine; etc., cf. Corbett (1983, 2000).

4.2.4.2 Deriving full agreement in SV structures with conjoined subjects in SA/MA/LA

- (74) Target structure: *Mary and John read the book.*

Same derivation as in (63) with *pro*-support and a Spelled-out #ConjP#:

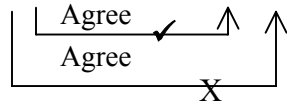
- (75) $[_{TP} [_{\text{\#ConjP\#}} \text{DP}_1 [_{\text{Conj}' } \text{Conj } \text{DP}_2]] T_{\phi/\text{CLASS/EPP}} [_{v^*P} \text{pro } v^* [_{VP} \text{V } \text{DP}]]]$
└ Agree ──┐

⁶ This is a simpler analysis than one in which Case is multiply assigned with a mechanism of overriding whereby a later assigned Case annuls an earlier assigned Case, as proposed in Soltan (2002).

4.2.4.3 Deriving FCA in VS structures with conjoined subjects in SA

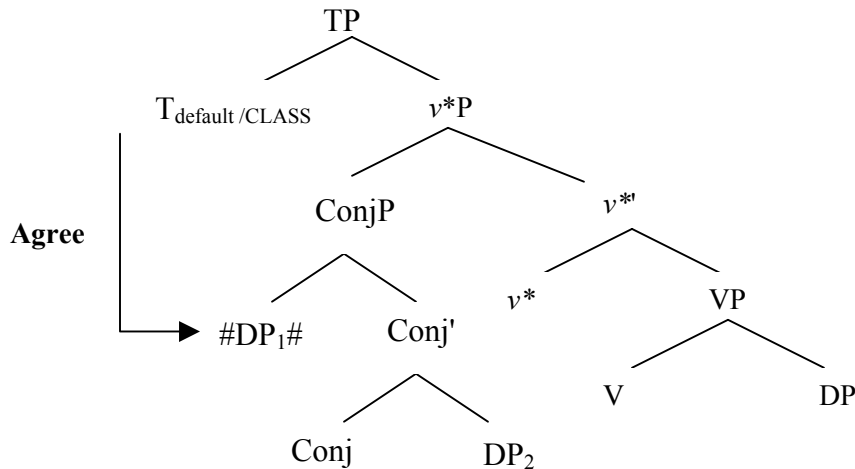
(76) Target structure: *Read Mary and John the book.*

(77) $[_{TP} T_{\text{default/CLASS}} [_{v^*P} [_{\#ConjP\#} DP_1 [_{Conj'} Conj DP_2]] v^* [_{VP} V DP]]]$



(78) Suppose that FRRs in some languages may apply at a later point during the derivation, say the next higher phase if Chomsky’s (2001a:13) assumption about evaluation/interpretation of derivational steps is correct. Then, Spell-out of ConjP may be delayed to that point, and Agree may take place between T and the first conjunct #DP₁#:

(79)



(80) When C is Merged, FRRs apply to compute the ϕ and CLASS features of the whole #ConjP#, at which point licensing of elements denoting semantic plurality (e.g., plural reflexives, reciprocals, “both,” “each,” etc.) takes place.

4.2.4.4 Deriving FCA in VS structures with a pronominal first conjunct in SA

(81) $[_{TP} T_{\phi/CLASS} [_{v^*P} [_{ConjP} pro [_{Conj'} Conj DP_2]] v^* [_{VP} V DP]]]$



(82) Since the morphology is rich enough to identify *pro*, the derivation should converge at the interface.

(83) But coordinate structures are also subject to the parallelism constraint. To avoid a violation of such a condition, lexicalize *pro*.

(84) On the other hand, if *pro* has been derivationally associated with a Spelled-out #DP#, we Merge that #DP# in SpecTP for EPP licensing, giving rise to the following representation (cf. (51)):

(85) $[_{TP} \#DP_1\# T_{\phi/CLASS/EPP} [_{v^*P} [_{ConjP} pro [_{Conj'} Conj DP_2]] v^* [_{VP} V DP]]]$

4.2.4.5 A final question: How are English-type languages different?

- (86) English-type languages have an obligatory EPP feature on T. If Move is contingent on Agree (as Chomsky 2001a, 2001b argues), then FCA will always result in a violation of the *coordinate structure constraint*, formulated here as a violation of the parallelism constraint on coordinate structures. Such languages will thus only allow agreement with the mother node of a ConjP, i.e., with #ConjP#.
- (87) **Prediction:** If in English-type languages, EPP on T can be satisfied by another means than moving the Agreeing Goal (typically by an existential expletive), then FCA should be rendered possible, which is true:
- (88) There is a man and a woman in the room.

5. Conclusions

- (89) The subject-verb agreement asymmetry in SA is simply a consequence of whether the structure contains a *pro* or not, presence of *pro* always requiring full agreement for interface convergence.
- (90) FCA, on the other hand, is the result of FRRs applying at a later point in the derivation, hence allowing the syntax to manipulate the internal structure of the ConjP before Spell-out applies. Extraction out of ConjP, however, remains impossible, since it would incur a violation of the parallelism constraint on coordinate structures.
- (91) Both SVAA and FCA facts seem to lend support to a theory of agreement in terms of an Agree relation between heads rather than in a Spec-head configuration.

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