

إلى الأستاذ الدكتور عوني عبد الرؤوف، العالم الفاضل، والمعلّم الجليل، والصديق العزيز. تعجز تراكيب اللغة عن وصف اعتزازي بكم، وامتناني لكم، وتقديري لشخصكم الكريم. فضلك عليّ في العلم والمعرفة غزير، والجلوس بين يديك والاستماع إليك ما له نظير. أطيب تحياتي في العيد الثماني¹.

**العناصر التركيبية مع أمثالها "تتوافق":
دراسة لغوية لتراكيب النفي في العربية الفصحى**

أسامة سلطان – جامعة ميدلبري

يقدم هذا البحث دراسة تحليلية لتراكيب النفي في العربية الفصحى من منظور ما يسمّى بالبرنامج الاختزالي للنظرية اللغوية *The Minimalist Program*، ويناقش في هذا الصدد تراكيب النفي باستخدام "لا" (و"أخواتها" إذا جاز التعبير)، و"ليس"، و"ما". ويعرض النصف الأول من البحث للدراسات التوليدية السابقة لتراكيب النفي مشيراً إلى بعض المشكلات التي تواجه مثل هذه الدراسات ليس فقط من الناحية النظرية، ولكن أيضاً من حيث قدرتها على شرح الحقائق اللغوية المتعلقة بالنفي في العربية الفصحى، في حين يقدم النصف الثاني من الدراسة تحليلاً جديداً يقوم على تطبيق مبادئ وفرضيات البرنامج الاختزالي، وخاصة فكرة "التوافق" *Agree* بين العناصر اللغوية في التراكيب، بهدف تفسير الخصائص الصرفية والتركيبية المختلفة لظواهر النفي في العربية الفصحى. ويتميز التحليل المقدم هنا بتفادي المشكلات التي تواجه الدراسات السابقة، وإلى جانب ذلك يفسر بعض الظواهر الأخرى ذات الصلة، مثل النفي في الجمل الاسمية، والنفي في تراكيب المضارع المنصوب، وكذلك الخصائص الصرفية لأفعال الأمر.

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Heads of a feather “Agree” together: On the morphosyntax of negation in Standard Arabic

Usama Soltan

Middlebury College

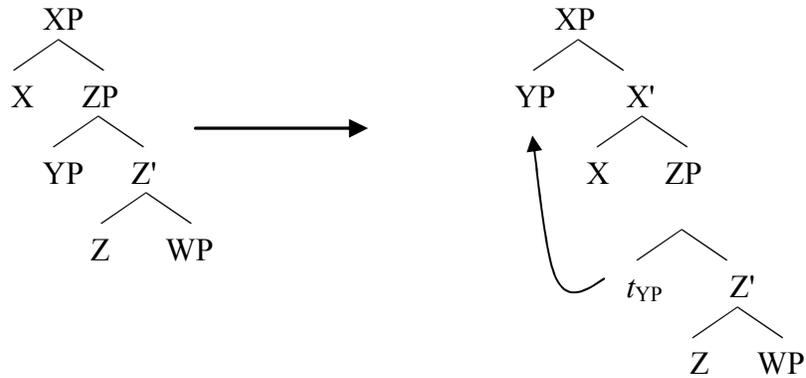
Abstract Head movement (HM) has always posed a problem to the minimalist program because of its apparent incompatibility with formal feature licensing considerations. Using categorial features (e.g., [N] and [V]) to motivate HM is a “coding” of the problem rather than an explanation. In addition, categorial features create what is called a “traffic rule” problem in syntactic derivations. It has been recently suggested, therefore, that HM be part of the phonological component (Chomsky 2001a; Boeckx and Stjepanović 2001). In this paper, I revisit the morphosyntactic properties of the negation paradigm in Standard Arabic (SA), where HM has been typically proposed (Ouhalla 1991, 1993; Benmamoun 2000), and argue instead for an alternative analysis whereby certain properties of the negation paradigm follow from minimalist mechanisms of formal feature licensing (in particular, the operation *Agree*), while other properties follow from morphophonological considerations. The proposed division of labor between syntax and morphophonology is then shown to have several empirical advantages, while facing none of the theoretical problems typically associated with HM. If correct, the analysis provides further support for an Agree-based minimalist syntax, since head movement (or at least the type involved in relations between functional heads) can now follow from the operation independently needed for formal feature licensing in the grammar.

1 Introduction: Head movement in the minimalist program

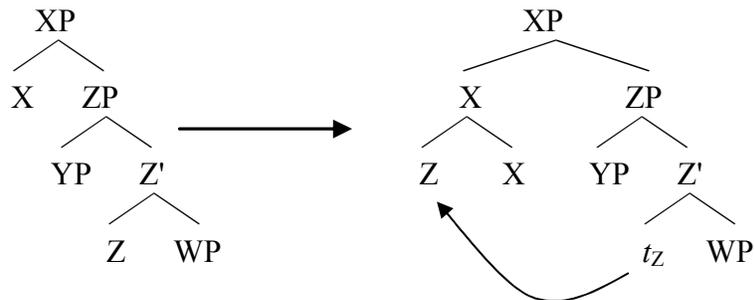
Since the inception of the Government-Binding (GB) framework (Chomsky 1981), different movement operations were considered as instances of a single operation of *Move α* . But instantiations of this operation have been often noted to exhibit different behavior. In this respect, XP-movement and X^0 -movement (the latter typically called *head movement*) have characteristically behaved differently with regard to the general properties and constraints on movement operations. Consider the

abstract illustrations of how XP-movement and X⁰-movement change structures, as shown in (1) and (2), respectively (HM = head movement):

- (1) a. A pre-XP-movement structure: b. A post-XP-movement structure:



- (2) a. A pre-HM structure: b. A post-HM structure:

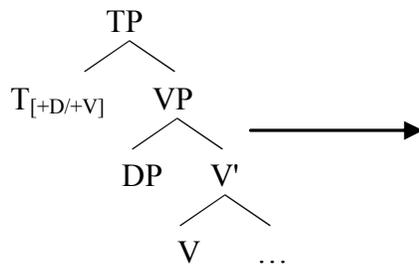


Within the minimalist program, however, the derived structure in (2b) has always been problematic, for several reasons.

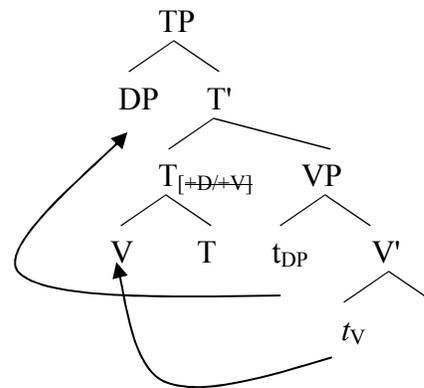
First, HM violates the *Extension Condition* (EC) in the sense of Chomsky (1995), which states that movement operations have to target the root of the tree. Second, HM creates a *non-uniform* chain in the sense of bare phrase structure theory (Chomsky 1995, Chap.4): The trace of Z in (2b) is a minimal category, but Z itself is both minimal and maximal, therefore violating chain uniformity. Perhaps the most serious problem

with HM within the minimalist framework is that the operation just does not seem to be minimalistically driven by formal feature licensing. Using categorial features (e.g., [+V] for verbal features, or [+D] for nominal features), as proposed in Chomsky (1993, 1995), has come to be seen as a “coding” of the problem rather than an explanation of it. In addition, categorial features have been argued to create a “traffic rule” problem, as noted in Chomsky (2001a). For example, in the pre-movement structure in (3a) below, if T has both a [+D] and [+V] feature, the standard way of licensing these features is for a DP (e.g., *the boy*) to move to SpecTP to license the [+D] feature, and for a verb (e.g., *ate*) to move to T to license the [+V] feature, as shown in the post-movement structure (3b):

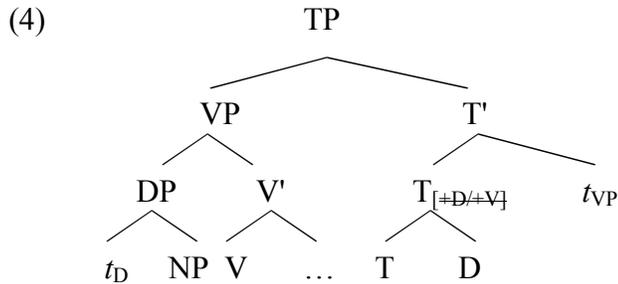
(3) a. The pre-movement structure:



b. The post-movement structure:



As it turns out, however, there is another viable way for checking the categorial features of T in (3a): Move a VP to SpecTP to check the [+V] feature, and move a D head to T to check the [+D] feature, thereby generating the unwanted post-movement structure in (4):



While movement of a VP to SpecTP (as in VOS languages for example) and of D to T (as in cliticization in Romance and similar languages) have been suggested in the literature, the co-occurrence of both operations as in (4) is not empirically attested.² What we need then is a way to regulate feature licensing in structures such as (3a), such that only (3b), but not (4), emerges as the post-movement structure.

Finally, it has been pointed out that while XP-movement is typically assumed to potentially have semantic effects (e.g., raising allows anaphor binding to take place, as in “*The boys_i seem to each other [t_i to like Mary]*”), HM, by contrast, does not seem to be associated with similar effects, e.g., verb raising in French and its lack thereof in English do not seem to correlate with any semantic differences that the two languages have, which again seems to suggest that perhaps the two operations are not of the same type (cf. Chomsky 2001a).

To solve the problems associated with HM, one suggestion has been to eliminate HM from the syntax and treat it instead as an operation of the morphophonological component, perhaps driven by the affixal

² The relevant language would be one in which tense is realized on the D head of the subject DP, with the verb appearing in a non-tensed form. As far as I know, no such language exists.

properties of the relevant functional heads (Chomsky 2001a; Boeckx and Stjepanović 2001). While this might escape the theoretical problems mentioned above, it still requires empirical validation. In essence, we need to make sure that all the phenomena treated under syntactic HM before still follow under the morphophonological HM approach.

In this paper, I revisit the morphosyntactic properties of the Standard Arabic negation paradigm, a classical HM phenomenon, showing that a syntactic analysis of the facts is still possible if we extend the realm of the operation *Agree* to include relations holding not only between heads and substantive categories, but also between functional heads and other functional heads in syntactic representations. Significantly, the proposed analysis will not face any of the above mentioned theoretical problems associated with HM, while accounting at the same time for a range of empirical facts in the language.

The paper is organized as follows. In Section 2, I present the morphosyntactic facts of clausal negation in SA. In Section 3, I discuss Benmamoun's (2000) analysis of negation in Arabic dialects, pointing out a few problems with his analysis concluding, contra Benmamoun, that in Arabic dialects, the negation morpheme Neg is structurally higher than (T)ense. In Section 4, I discuss a morphophonological approach to negation in SA and point out a few problems with it. In Section 5, I present an Agree-based analysis of the SA negation facts. Section 6 discusses theoretical and empirical consequences that further support the proposed analysis. In Section 7, I sum up the conclusions of the paper.

2 The facts: Negation paradigms in SA

There are three strategies for clausal negation in SA: (a) negation with tense-inflecting *laa* (which takes different forms depending on the tense of the clause), (b) negation with ϕ -inflecting *laysa* (which shows agreement in person, number, and gender), and (c) negation with non-inflecting *maa*. I discuss each below, with examples and the morphosyntactic properties associated with each.

2.1 Tense on Neg and ϕ on V: The case of *laa* and its variants

The negation particle *laa* in SA is tense-inflecting. Depending on the tense of the clause, it will surface as *lam* (for negation in the past), *lan* (for negation in the future), or *laa*, the elsewhere form. This is illustrated in the data below:³

- | | | | | |
|--------|------------|---------------------------------|----------|---------------------|
| (5) a. | <i>laa</i> | <i>ya-qraʔ-u</i> | Zayd-un | <i>ʔal-kitaab-a</i> |
| | Neg | IMPER-read 3sgmas-IND | Zayd-NOM | the-book-ACC |
| | | “Zayd is not reading the book.” | | |
| b. | <i>lam</i> | <i>ya-qraʔ-Ø</i> | Zayd-un | <i>ʔal-kitaab-a</i> |
| | Neg | IMPER-read 3sgmas-JUS | Zayd-NOM | the-book-ACC |
| | | “Zayd did not read the book.” | | |
| c. | <i>lan</i> | <i>ya-qraʔ-a</i> | Zayd-un | <i>ʔal-kitaab-a</i> |
| | Neg | IMPER-read 3sgmas-SUB | Zayd-NOM | the-book-ACC |
| | | “Zayd will not read the book.” | | |

³ I will use the following abbreviations in the paper, particularly in the glosses of the Arabic data: 1, 2, 3 = first, second, and third person; mas = masculine; fem = feminine; sg = singular; du = dual; pl = plural; NOM = nominative; ACC = accusative; DAT = dative; IND = indicative; SUB = subjunctive; JUS = jussive; FUT = future; IMPER = imperfective; Asp = aspect; T = tense; C = complementizer; Neg = negation particle; SUBJ = subject; OBJ = object; IMP = imperative.

2.2 ϕ -agreeing Neg without adjacency: The case of *laysa*

In the so-called present tense contexts, an alternative way of negating the clause is by means of the negation particle *laysa*,⁴ which inflects for agreement, as shown in (8).⁵

- (8) a. *laysa* *Zayd-un* *yu-ħibb-u* *ʔal-qiraaʔat-a*
 Neg 3sgmas *Zayd-NOM* *IMPER-like* 3sgmas-IND *the-reading-ACC*
 “Zayd does not like reading.”
- b. *laysa-t* *Hind-u* *tu-ħibb-u* *ʔal-qiraaʔat-a*
 Neg 3sgfem *Zayd-NOM* *IMPER-like* 3sgfem-IND *the-reading-ACC*
 “Hind does not like reading.”
- c. *las-naa* *nu-ħibb-u* *ʔal-qiraaʔat-a*
 Neg 1pl *IMPER-like* 1pl-IND *the-reading-ACC*
 “We do not like reading.”

Notice here that *laysa*, unlike *laa*, does not require adjacency with the verb, as shown by the possibility of having a DP between *laysa* and the main verb in (8a) and (8b). Notice also that *laysa* cannot occur in non-present-tense contexts, as the ungrammaticality of the two sentences in (9) indicates:

- (9) a. **las-tu* *qaraʔ-tu* *ʔal-kitaab-a*
 Neg 1sg *read* 1sg *the-book-ACC*
 “I didn’t read the book.”
- b. **las-tu* *sa-ʔa-qraʔ-u* *ʔal-kitaab-a*
 Neg 1sg *FUT-IMPER-read* 3sgmas-IND *the-book-ACC*
 “I won’t read the book.”

⁴ Semantically, there seems to be more emphasis associated with verbal negation with *laysa*, compared to *laa*. I will not discuss this here, however.

⁵ The negation particle *laysa* is typically treated as a (defective) verb in Arabic traditional grammar, because it behaves like verbs with regard to agreement, and it shows the often discussed subject-verb agreement asymmetry associated with word order alternation in SA.

2.3 Non-inflecting Neg: The case of *maa*

A third negation particle in SA is *maa*, which does not inflect for tense or agreement, is compatible with all verb forms (10a-c), and does not impose adjacency requirements on the following verb (11a-b):

- (10) a. *maa qaraʔa Zayd-un ʔal-kitaab-a*
 Neg read 3sgmas Zayd-NOM the-book-ACC
 “Zayd did not read the book.”
- b. *maa yu-ħibb-u Zayd-un ʔal-qiraaʔat-a*
 Neg IMPER-love 3sgmas-IND Zayd-NOM the-reading-ACC
 “Zayd does not like reading.”
- c. *maa sa-yu-safir-u Zayd-un ʔad-an*
 Neg FUT-IMPER-love 3sgmas-IND Zayd-NOM tomorrow-ACC
 “Zayd is not traveling tomorrow.”
- (11) a. *maa Zayd-un qraʔa ʔal-kitaab-a*
 Neg Zayd-NOM read 3sgmas the-book-ACC
 “Zayd did not read the book.”
- b. *maa ʔaadat-an na-naam-u mubakkir-an*
 Neg usually-ACC IMPER-sleep1pl-IND early-ACC
 “We do not usually go to bed early.”
- c. *maa ʔad-an sa-nu-safir-u*
 Neg tomorrow-ACC FUT-IMPER-travel 1pl-IND
 “We will not travel tomorrow.”

2.4 Descriptive generalizations

Clausal negation in SA can be summarized in the following descriptive generalizations:

- (12) a. *laa* inflects for Tense and forms a morphological compound with the verb, which appears in the non-tensed imperfective form.

- b. *laysa* inflects for ϕ -agreement, occurs only in present tense contexts, and does not form a morphological compound with the verb.
- c. *maa* does not inflect for tense nor ϕ -agreement, is compatible with all tense forms, and does not form a morphological compound with the verb.

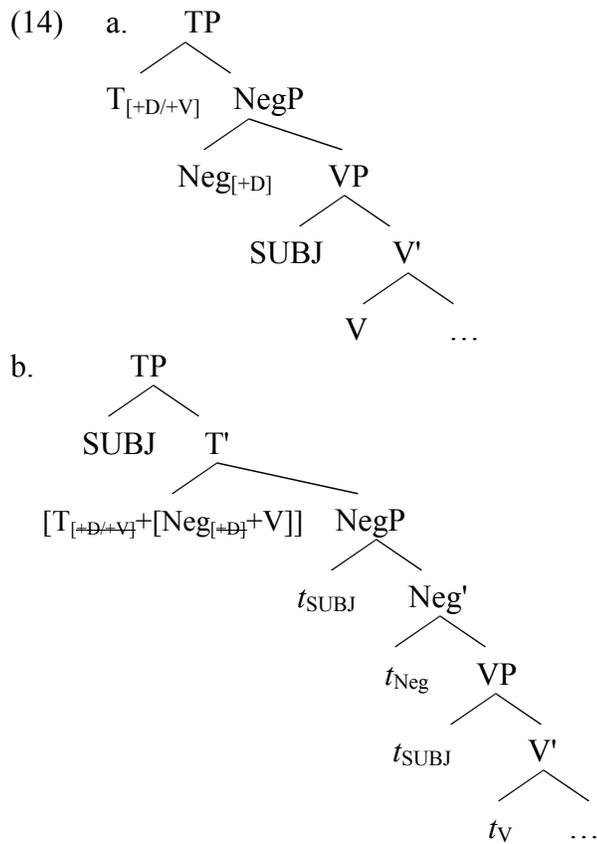
3 A head movement analysis of SA negation

The standard analysis of tense-inflecting negation in SA is in terms of head-to-head movement between T and Neg (Ouhalla 1991, 1993; Shlonsky 1997; Benmamoun 2000). Since T and Neg merge, the tense feature of the clause will appear on Neg, rather than on the verb, thereby accounting for why the verb has to appear in its non-tensed imperfective form. For illustration, I present and discuss Benmamoun's (2000) analysis of the tensed negatives here.

Benmamoun makes three crucial assumptions in his discussion of negation in SA:

- (13)
- a. First, T is higher than Neg in the clausal hierarchy in SA.
 - b. Second, $T_{[Past]}$ and $T_{[Future]}$ have a [+V] feature that requires checking by verb raising to T, whereas $T_{[Present]}$ does not have such feature, hence no V-to-T raising is required.
 - c. Third, Neg has a [+N] feature that requires checking by a nominal.

Given these assumptions, V in past and future tense contexts raises to T, adjoining to Neg on the way (due to minimality considerations), thereby forming the complex [Neg+V]+T]]. Since it is a Neg complex that adjoins to T, the tense feature appears on Neg, not on the V contained within the Neg complex, as desired. By contrast, in present tense contexts, V raises only to Neg, but no farther than that, and both Neg and V will appear in their default forms in this case. A derivation is given in (14) below:



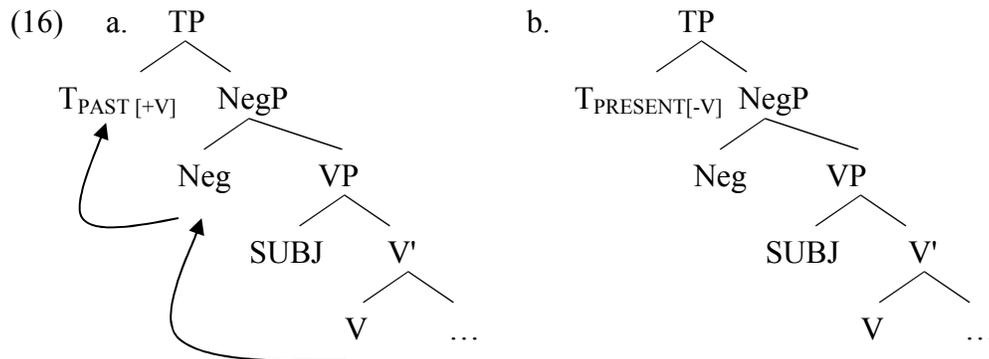
Benmamoun relies on negation facts from modern Arabic dialects such as Egyptian Arabic (EA) to motivate his assumption that T is higher

than Neg in Arabic dialects. In these dialects, there are typically two negation markers: circumfixal *ma...š* and the non-affixal morpheme *miš*.

Examples from EA are given below for illustration:

- (15) a. xaalid ma-ʔaraa-š əl-kitaab
 Khalid Neg-read (Past).3sgmas-Neg the-book
 “Khalid did not read the book.”
- b. xaalid miš bi-yə-ʔraa l-kitaab
 Khalid Neg ASP-IMPER-read.3sgmas the-book
 “Khalid is not reading the book.”

Benmamoun’s account for the contrast in (15) is based on the main background assumption in (13b) regarding the difference in verb-raising in structures with present T and those with non-present T. Now, given that Neg is lower than T under Benmamoun’s analysis, the verb is predicted to merge with Neg on its way to T in past tense contexts, as shown in (16a), but not so in present tense contexts, since, by assumption, there is no verb raising in the latter, as shown in (16b):



As it turns out, there is a range of data from these Arabic dialects that show that this analysis cannot account for all the facts. First, in EA,

present tense forms can actually occur with the circumfixal Neg, such that (15b) is interchangeable with (17) below:

- (17) xaalid ma-bi-yə-ʔraa-š ʔal-kitaab
 Khalid Neg-ASP-IMPER-read.3sgmas-Neg the-book
 “Khalid is not reading the book.”

If Benmamoun is correct about Neg being lower than T and about present tense T being [-V], then the grammaticality of sentences such as (17) remains a mystery.

Furthermore, in EA, the independent Neg morpheme *miš* has to precede the future verb form, contrary to what Benmamoun’s analysis predicts:

- (18) xaalid miš (f-əl-ʔaalib) ʔa-yə-ʔra l-kitaab
 Khalid Neg (probably) FUT-IMPER-read 3sgmas the-book
 “Khalid won’t probably read the book.”

In fact, what (18) shows is that Neg must be higher than T in clause structure.

Similarly, in at least one dialect of EA spoken in the Shareqeyya province, *miš* can actually occur with past tense verb forms:

- (19) xaalid miš ʔara l-kitaab
 Khalid Neg read (Past) 3sgmas the-book
 “Khalid did not read the book.”

If T in past tense contexts has a [+V] feature, it is not clear then why in this dialect non-affixal Neg appears.

Furthermore, even in those EA dialects where sentences like (19) are ungrammatical, the independent Neg morpheme does in fact occur with past tense verb forms in negative yes-no questions:

- (20) miš xaalid ʔara l-kitaab?
 Neg Khalid read (Past) 3sgmas the-book
 “Didn’t Khalid read the book?”

If Neg is lower than T, the structures in (18), (19), and (20) are simply underivable.

I conclude then that Neg is higher than T in Arabic clause structure, and that the dialectal variation observed in the modern dialects may follow from whether V moves to T only, thereby giving us the non-affixal morpheme, or to T then Neg, thereby giving us the circumfixal morpheme. Notice, however, that if Neg is higher than T, then we need to explain the ungrammaticality of the SA examples in (21) below, where tense is realized on V, rather than on Neg (cf. the data in (6)):

- (21) a. *laa qraʔa Zayd-un ʔal-kitaab-a
 Neg read (Past) 3sgmas Zayd-NOM the-book-ACC
 “Zayd did not read the book.”
- b. *lam qraʔa Zayd-un ʔal-kitaab-a
 Neg read 3sgmas (Past) Zayd-NOM the-book-ACC
 “Zayd did not read the book.”
- c. *lan sa-ya-qraʔ-a Zayd-un ʔal-kitaab-a
 Neg FUT-IMPER-read 3sgmas-SUB Zayd-NOM the-book-ACC
 “Zayd will not read the book.”

4 Deriving tensed negatives in the morphophonology

Another approach to clausal negation in SA is to treat it as a purely morphophonological phenomenon that does not involve any syntactic operations. Assume, for example, that the sentence we are interested in is the SA example in (5b), repeated in (22) below, where past tense is realized on Neg, while the verb appears non-tensed, but with ϕ -features and the jussive marker:

- (22) lam ya-qra?-Ø Zayd-un ʔal-kitaab-a
 Neg_{PAST} IMPER-read 3sgmas-JUS Zayd-NOM the-book-ACC
 “Zayd did not read the book.”

We may assume that the syntax has built the structural representation in (23) below, ignoring irrelevant details:

- (23) [_{NegP} Neg [_{TP} T_{[+Past]ϕ} [_{VP} ... V ...]]]

Now, the question is: How does HM take place in this instance, so we derive the surface structure in (22)? One possible account is as in (24):

- (24) a. Move T to Neg:

$$[\text{NegP } [\text{Neg}+\text{T}_{[+Past]\phi}] [\text{TP } [\text{VP } \dots \text{V } \dots]]]$$

- b. Move V to the [Neg+T] complex:

$$[\text{NegP } [[\text{Neg}+\text{T}_{[+Past]\phi}]+\text{V}] [\text{TP } [\text{VP } \dots]]]$$

- c. Spell-out [+Past] on Neg and ϕ on V, forming [Neg_[+Past]]+V _{ϕ}].

A few questions arise, however, with regard to (24). First, we do need to make sure that T moves to Neg prior to V moving to the whole complex;

otherwise, we would generate the bad sentences in (21). Also, even with the correct output of morphophonological HM, we do need to explain why V realizes the ϕ -features on T, but not the tense feature. Alternatively, why can't Neg realize both the ϕ -features and tense associated with T? In addition, despite the similarity between tensed Neg and ϕ -agreeing Neg, we are forced to treat them differently: the former in the morphophonology, the latter in the syntax, thereby missing a traditionally noted generalization. Also, under this analysis, the occurrence of temporal cases on verbs can only be treated as lexical, despite its regularity. Finally, in embedded clauses of the so-called subjunctive type (*ʔal-muDaariʔ ʔal-manSuub*), tensed negatives are not possible, as the data in (25) below show:

- (25) a. ʔarad-a Zayd-un ʔalla (=ʔan+laa)
 wanted 3sgmas Zayd-NOM C+Neg_{Present}
 ya-rʔhal-a ʔamr-u
 IMPER-leave 3sgmas-SUB Amr-NOM
 “Zayd wanted Amr not to leave.”
- b. *ʔarad-a Zayd-un ʔallam (=ʔan+lām)
 wanted 3sgmas Zayd-NOM C+Neg_{Past}
 ya-rʔhal-a ʔamr-u
 IMPER-leave 3sgmas-SUB Amr-NOM
- c. *ʔarad-a Zayd-un ʔallan (=ʔan+lan)
 wanted 3sgmas Zayd-NOM C+Neg_{Future}
 ya-rʔhal-a ʔamr-u
 IMPER-leave 3sgmas-SUB Amr-NOM

The question now is: How can we account for the facts in (25) in morphophonological terms?

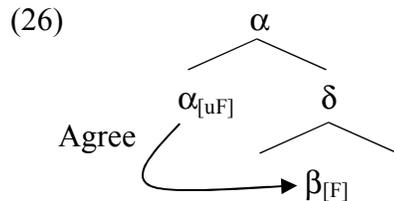
To summarize, while an analysis in terms of syntactic HM can account for sentences with tensed negatives in SA, further assumptions are needed to prevent it from overgenerating $[\text{Neg}_{[\text{non-tensed}]} + \text{V}_{[\text{tensed}]}]$ strings. A morphophonological HM account, by contrast, forces us to treat tensed Neg and ϕ -agreeing Neg differently, even though they both seem to exhibit a similar pattern. Also, neither analysis explains the presence of temporal case features on the verb in these contexts. In the next section, I present an alternative analysis of the negation paradigm in SA which accounts for the facts without running into the theoretical or empirical problems that each of the two analyses runs into.

5 A minimalist analysis: Agree in the syntax, HM in the morphophonology

Unlike in the GB model and early minimalism (e.g., Chomsky 1993, 1995), Chomsky (2000, 2001a, 2001b) proposes that licensing of formal features such as case and agreement is induced via *Agree*, a primitive operation built in the grammar.⁶ *Agree* is an operation that establishes a relationship between an element α (call it a *Probe*) with uninterpretable features [uF] and an element β (call it a *Goal*) with matching interpretable features [F] in the c-command domain of α , whereby the uninterpretable

⁶ For an elaborate discussion of formal feature licensing and arguments for *Agree* and against earlier approaches, see Soltan (2007) and references cited there.

features on the Probe are *valued* by the matching interpretable features on the Goal, as in the diagram given in (26):



Typical examples of uninterpretable features are ϕ -features (i.e., person, number, and gender) on T, wh-features on interrogative C(omplementizer), or Case features on nominals. For example, nominative case to subjects is licensed under Agree with T, whereas accusative case to objects is licensed under Agree with *v*:

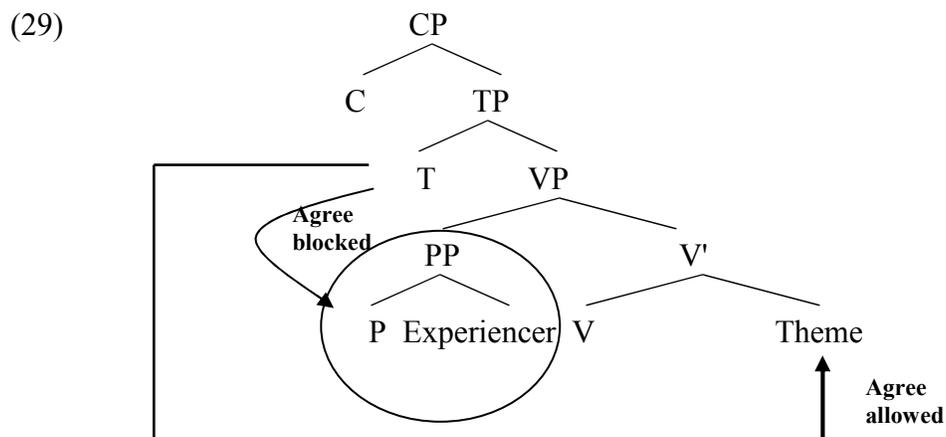


Agree is also assumed to be subject to an “activity” condition: To get into an Agree relation, both Probe and Goal have to be “active,” that is, each has to have an uninterpretable feature or features to value as a result of the operation, e.g., Agree between T and a nominal that has an unvalued case feature is permissible, but Agree between T and a nominal that has already valued its case feature (perhaps via a prior Agree relation with another head or via lexical case-assignment) is not allowed. In SA, for example, verbs of deontic modality select a PP for its Experiencer argument. Since the DP within the Experiencer PP is assigned case by the preposition, that DP is no longer accessible for Agree operations. As it

turns out, in these constructions, Agree takes place with the Theme argument instead, assigning nominative case to it:⁷

- (28) yajib-u/tajib-u ʔalaa ʔal-muʔminiina ʔal-Salaat-u
 must.3sgmas/fem-IND on the-believers_{DAT} the-praying-NOM
 “The believers have to pray.”

Despite the opacity of the Experiencer PP in sentences such as (28), the possibility of agreement and nominative case assignment follows from the presence of another Goal for T to Agree with, that is, the Theme DP, as shown in the tree below:



To sum up, Agree is a syntactic operation that takes place between syntactic elements within a local domain in sentence structure, subject to the activity condition, resulting in the licensing of formal features on the

⁷ A question arises with regard to the optionality of gender agreement in (28). Notice, however, that this is not confined to these particular constructions, but is true of all cases of gender agreement where the verb and the agreeing DP are not adjacent at surface structure. In Soltan (2007) I propose that this can be accounted for in terms of a morphological rule that allows gender agreement to drop in non-adjacency contexts. Syntactically, though, agreement does take place, as evidenced by its actual appearance as well as the appearance of nominative case on the Theme argument.

functional heads and substantive categories involved. In the rest of this paper, I propose that Agree be extended to contexts in which functional heads engage in relationships with one another, which typically gives rise to morphological fusion. I argue that this is indeed the case in the negation paradigm of SA.

One thing we observe about inflecting negatives in SA is that the phenomenon has the flavor of formal feature licensing in the minimalist sense. For one thing, there is no reason to believe that ϕ -features on Neg are different from ϕ -features on T, or any other functional head for that matter. Similarly, a tense feature on Neg is presumably a formal feature as well. If this is the case, then we should wonder if we can treat the phenomenon in terms of the mechanisms of formal feature licensing utilized in minimalist syntax. A Spec-head approach to these phenomena is obviously not viable. On the other hand, we have already seen that feature licensing through HM gives rise to a number of theoretical problems that have remained unsolved (cf. Section 1 of this paper). The question now is: How does Agree-based syntax fare in this respect? If Agree is a head-head relation, as Chomsky (2001a,b) argues, then it should not be constrained to apply only between functional heads and substantive categories. Rather, any two elements in the structure should be able to engage in a Probe-Goal relation if the conditions for such a relation are met, i.e., that they both have uninterpretable features that require valuation. I would like to argue here that Neg in SA can in fact engage in an Agree relation with T in certain contexts, thereby giving rise

to tensed negatives. ϕ -agreeing negatives, on the other hand, follow from Neg having ϕ -features that require valuation in an Agree relation with a DP. Non-agreeing Neg is simply an inactive head that does not engage in any syntactic operations. I discuss each case below.

5.1 Deriving tensed negatives in SA: The case of *laa*

Given the facts of the negation paradigm presented in Section 2, I will make the plausible assumption that Neg in SA may enter the derivation with an uninterpretable Tense feature [uT] or uninterpretable ϕ -features [u ϕ], each of which requires licensing in the syntax under standard minimalist assumptions. Let's see how this analysis works.

Consider the case of tensed Neg first, as in the following example:

- (30) lam ya-qaʔ-Ø Zayd-un ʔal-kitaab-a
 Neg_{PAST} IMPER-read 3sgmas-JUS Zayd-NOM the-book-ACC
 “Zayd did not read the book.”

Suppose we assume that in these cases, Neg has a [uT] feature. Recall also that in contexts of tensed negatives, the verb appears inflected for what we called temporal case, following Fassi Fehri. Since such a feature is also uninterpretable, let us assume that T has some unvalued temporal case feature, call it [uTC]. Now, if Neg is higher than T, as we concluded in the discussion in Section 4, then at the point of the derivation where Neg is introduced we have the following structure, irrelevant details ignored:⁸

⁸ The ϕ -features on T will be valued through Agree with Subj in the regular fashion. This is not shown here, though.

pronounced on Probe P, but interpreted on Goal G, when G is the head of the sister of P. This will ensure that the valued feature on the Probe gets deleted, thereby allowing the derivation to converge at LF, but at the same time the (now silent) feature on the Goal remains available, so it gets interpreted at LF. Such a condition is, in essence, Hale and Keyser’s (2002) *Strict Complementation Condition* on conflation processes, and also the *Head Movement Generalization* of Pesetsky and Torrego (2001).⁹

To give a concrete example, let’s revisit the problem with the structural representation in (32), repeated below:

(34) [_{NegP} Neg_[+Past] [_{TP} T_{[+Past]/ ϕ /[~~uTC~~]} [_{VP} Subj V_{ROOT...}]]]

Now bearing the HAC in mind, the problem with (34) disappears, since [+Past], while appearing on both Neg and T, will be pronounced only on the former, but interpreted on the latter, in compliance with the HAC, since the Goal, T, is the head of the sister of the Probe, Neg. This way we

⁹ If Agree is indeed involved in these cases as proposed here, then we have to assume that the difference between prototypical Agree configurations (i.e., those between a head and a substantive category) and the head-head configurations discussed in this paper, is probably locality, or anti-locality for that matter. Agreeing with the head of your sister is pretty much like Agreeing with your sister, and perhaps there is an anti-locality effect prohibiting the same feature from appearing multiply within too local a domain, as Grohmann (2000, 2003) suggests. Now, when the sisterhood relation is not involved, then both elements in the Agree relation can, or perhaps must, spell-out the relevant features independently, e.g., T spells out the ϕ -features that are also spelled out on the agreeing DP. I believe that this is the intuition behind Hale and Keyser’s (2002) analysis for conflation. One may also speculate that incorporation in the sense of Baker (1988) is of that nature. As far as I know, we do not see incorporation of an object coupled with spell-out of that object separately inside the same VP (e.g., no instances of “*John meat-ate the meat*”). It remains, however, to find out what relevant feature is involved in incorporation, if we want to extend the Agree-based analysis proposed here to such cases.

predict the ungrammaticality of sentences where both tensed Neg and tensed V co-occur. While the HAC might seem *ad hoc*, I will provide further empirical evidence later in the paper that it does indeed exist.¹⁰

We have now managed not only to predict that tense will appear on Neg, but also to prevent multiple tense-marking in negative sentences in SA. The rest of the derivation could be handled in the morphophonological component. For example, verb movement to T and Neg is probably driven by the affixal features of both heads, which results in the observed adjacency requirement.¹¹ Notice also that V will end up hosting the ϕ -features on T, while appearing in the non-tensed imperfective form (or the HAC would be violated). Finally, as a result of Agree, the temporal case features on T are valued, which explains the presence of these formal features on verbs in such contexts.

In sum, the Agree-based analysis proposed here accounts for the properties associated with tensed negatives in SA. First, tense appears on the negation particle as a reflex of the valuation of an uninterpretable feature on Neg. Second, the verb has to appear in the imperfective non-tensed form since Neg realizes the tense feature. Third, adjacency is accounted for in terms of morphophonological head movement that requires V to raise to T and Neg, to license their affixal features. Finally,

¹⁰ See also fn. 9 above for what the HAC might follow from.

¹¹ There is evidence that Neg by itself is not an affix in the language, as we will see later in the discussion of the negation particle *maa*. We may assume here that it is the tense feature on Neg that actually renders it affixal, hence requiring it to be part of the verbal complex.

the Agree relation leads to the valuation of the temporal case on T, resulting on what has been traditionally called mood-marking on the verb.

5.2 Deriving ϕ -agreeing negatives in SA: The case of *laysa*

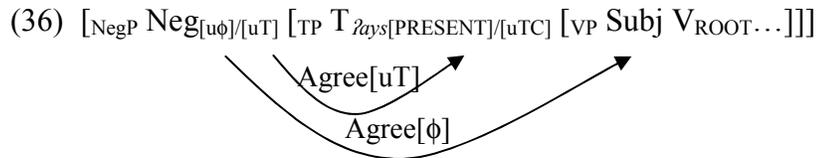
Recall that *laysa*, unlike *laa*, shows ϕ -agreement, is only compatible with present tense contexts, and does not require adjacency with the verb. The examples are repeated below:

- (35) a. *laysa* *Zayd-un* *yu-ħibb-u* ʔal-qiraaʔat-a
 Neg 3sgmas *Zayd-NOM* IMPER-like 3sgmas-IND the-reading-ACC
 “Zayd does not like reading.”
- b. *laysa-t* *Hind-u* *tu-ħibb-u* ʔal-qiraaʔat-a
 Neg 3sgfem *Zayd-NOM* IMPER-like 3sgfem-IND the-reading-ACC
 “Hind does not like reading.”
- c. *las-naa* *nu-ħibb-u* ʔal-qiraaʔat-a
 Neg 1pl IMPER-like 1pl-IND the-reading-ACC
 “We do not like reading.”

Given the presence of ϕ -features on *laysa*, we have to assume that Neg in such contexts enters the derivation with uninterpretable ϕ -features that require valuation. I will assume that Neg in this case Agrees with a DP target in the same way that T does. For example, in (35a), it agrees with the subject *Zayd-un*, in (35b) with the subject *Hind-u*, and in (35c) with a null subject *pro*.

It has been noted in the literature on SA negation that *laysa* is actually a composite form, consisting of the negation particle *laa* and the extinct present tense copula *ʔays* (Wright 1898:96; Ouhalla 1993). If this is the case, then this is probably why *laysa* is only compatible with

present tense contexts. Given these assumptions, the structural representation when Neg is introduced into the derivation is as in (36), again ignoring irrelevant details:¹²



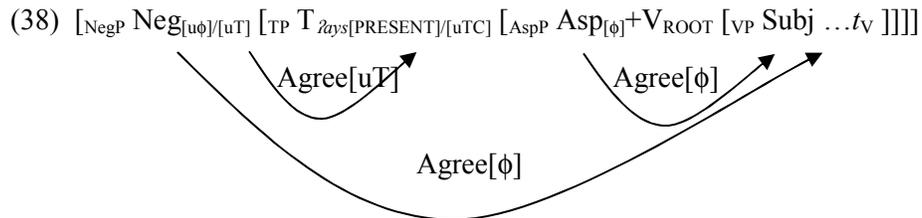
Agree takes place between Neg and Subj in the usual fashion, valuing the former's ϕ -features. Agree also takes place between Neg and T, valuing the former's tense feature, and licensing T's temporal case in the process. By the HAC, tense can only be pronounced on Neg, as desired. In the morphophonological component, the copula morpheme *lays* moves to host affixal Neg, forming the composite negation particle *laysa*.

Notice, however, that if present tense T has no ϕ -features (cf. fn. 12), then we have no explanation for why the main verb appears with ϕ -features as well, as the data in (35) show. An answer is readily available when we consider multiple agreement configurations in aspectual structures in SA (37a) and Egyptian Arabic (37b):

¹² I will assume here that present T, unlike past T, is “ ϕ -feature inert,” i.e., it has no ϕ -features, hence presumably nonaffixal. I suspect that this is precisely the reason why verbless sentences in this language occur only in present tense contexts, the reason being that there are no features on T that require a verbal host. Past and future T are, by contrast, ϕ -active and hence affixal, thus always requiring a verbal host. This assumption will prove useful later in the discussion in this section.

- (37) a. kaana-t Hind-u ta-lʕab-u
 was 3sgfem Hind-NOM IMPER-play 3sgfem-IND
 “Zayd was playing in the garden.”
- b. ʔəl-wilaad kann-uu bi-yə-lʕab-uu
 the-boys was 3plmas Asp-IMPER-play 3plmas
 “The boys were playing in the garden.”

To account for multiple agreement, I suggested elsewhere (see Soltan 2007), that such structures actually contain an Asp(ectual) projection, which is also ϕ -active, thereby explaining presence of multiple agreement on both the auxiliary and the main verb.¹³ Now, given that *laysa*-constructions are confined to aspectual contexts, particularly habitual or progressive aspect, it follows that they also must have a ϕ -active Asp, which hosts the verb in sentences such as those in (35). A full structural representation of a *laysa*-negative with Agree relations and verb movement will be along the lines in (38):



Notice, finally, that the Asp projection has to be present also in the cases of tensed negatives with *laa* in present tense contexts where an aspectual reading is also available, as in (39) below:

¹³ Notice that the aspectual head is expressed overtly in EA: the *bi*- morpheme in (37b).

5.3 Deriving the non-inflecting negative in SA: the case of *maa*

The last negation particle in the SA negation paradigm is *maa*. Recall that *maa* inflects neither for tense nor agreement, is compatible with all verb forms, and does not require adjacency with the verb. Here are the earlier illustrative examples:

- (41) a. *maa qraʔa Zayd-un ʔal-kitaab-a*
Neg read 3sgmas Zayd-NOM the-book-ACC
“Zayd did not read the book.”
- b. *maa yu-ħibb-u Zayd-un ʔal-qiraaʔat-a*
Neg IMPER-love 3sgmas-IND Zayd-NOM the-reading-ACC
“Zayd does not like reading.”
- c. *maa sa-yu-safir-u Zayd-un ʔad-an*
Neg FUT-IMPER-love 3sgmas-IND Zayd-NOM tomorrow-ACC
“Zayd is not traveling tomorrow.”

To account for the behavior of *maa*, it is reasonable to assume that it has no uninterpretable features and hence does not take part in any Agree relation. If so, then we should expect it to be compatible with all verb forms (past, present, and future), given that the tense feature will remain on T and then appears on V when the verb raises. This also explains why no adjacency effect is observed with *maa*, under the assumption that Neg is only affixal when hosting formal features (see fn. 11).

5.4 Summary

In this section I have shown that the morphosyntactic properties of the negation paradigm in SA can be accounted for in terms of what may be described as a hybrid analysis, whereby some head-head relations (particularly those between functional heads) are driven by the need to

license formal features such as tense and ϕ -features on Neg, whereas movement of lexical verbs to host affixal heads is done in the morphological component. The analysis has the virtue of accounting for the three types of negative sentences in the language: tensed negatives, ϕ -agreeing negatives, and non-inflecting negatives. If correct, the analysis presents further evidence that something like Agree does exist in the grammar as a mechanism for formal feature licensing, not only between functional heads and substantive categories, but also in a subset of the head-head relations that have been typically treated as cases of head movement, specifically those holding between functional heads. In the next section, I show that there is further empirical evidence that this proposal is correct.

6 Some consequences of the Agree-based analysis of SA inflecting negatives

In this section, I discuss both the theoretical and empirical advantages of the Agree-based analysis of the negation paradigm in SA presented in the previous section.

6.1 Theoretical consequences: No HM-related issues

Since the proposed analysis does not involve any “actual” head movement in the syntax, but only feature valuation, the theoretical problems discussed in Section 1 with regard to HM disappear. For one thing, if chain uniformity indeed holds as a principle of grammar, there is no violation of uniformity here because there is no movement, hence no

chain. Similarly, if the extension condition does hold for adjunction, the current proposal is compatible with that, since Agree does not create an adjunction structure. Finally, and perhaps most importantly, the operation is “minimalist” since it is driven by the requirement to check the formal features of functional heads.

6.2 Empirical consequences

6.2.1 Negation in “verbless” sentences

One prediction that the current analysis makes is that only Neg heads that do not require verb raising, i.e., *laysa* and *maa*, will be compatible with the so-called “verbless” copular constructions. This is because Neg in such cases is either nonaffixal and therefore does not need a verb to host it, which is the case of *maa*, or because the Neg head can be hosted by a lexical T, which is the case of the composite form *laysa*. Tensed Neg, being affixal, as in the case of *laa*, is, by contrast, predicted to be incompatible with verbless sentences. The predictions are borne out: *maa* and *laysa* can negate verbless sentences; *laa* cannot:

- (42) a. *maa* *Zayd-un* *fii* *?al-dar-i*
 Neg *Zayd-NOM* in the-house-DAT
 “Zayd is not in the house.”
- b. *laysa* *Zayd-un* *fii* *?al-dar-i*
 Neg 3sgmas *Zayd-NOM* in the-house-DAT
 “Zayd is not in the house.”
- c. **laa/lam/lan* *Zayd-un* *fii* *?al-dar-i*
 Neg *Zayd-NOM* in the-house-DAT

6.2.2 Interaction between C, Neg, and T

Another prediction made by the current proposal is that other functional heads should, in principle, be expected to engage in Agree relations like Neg does. I would like to argue here that C in SA may also appear with an uninterpretable tense feature, hence requiring valuation through Agree (see Pestesky and Torrego 2001 who argue that C has a [uT] feature). Evidence for this comes from the complementizer system in the language. As Aoun (1981) discusses, there are two types of embedded Cs in SA: *ʔanna* and *ʔan*. The behavior of the two Cs differs, however. While *ʔanna* is compatible with all verb forms in the embedded clause, *ʔan*, by contrast, can only occur with non-tensed imperfective verb forms (i.e., *ʔal-muDaariʔ ʔal-manSuub*, in the Arabic grammar terminology):

- (43) a. ʔanan-tu ʔanna Hind-a kataba-t ʔal-risaalat-a
 thought-1sg C Hind-ACC wrote 3sgfem the-letter-ACC
 “I thought that Hind wrote the letter.”
- b. ʔanan-tu ʔanna Hind-a ta-ktub-u
 thought-1sg C Hind-ACC IMPER-write 3sgfem-IND
 ʔal-risaalat-a
 the-letter-ACC
 “I thought that Hind is writing the letter.”
- c. ʔanan-tu ʔanna Hind-a sa-ta-ktub-u
 thought-1sg C Hind-ACC FUT-IMPER-write 3sgfem-IND
 r-risaalat-a
 the-letter-ACC
 “I thought that Hind will write the letter.”

- (44) a. ʔaraad-a Zayd-un ʔan ya-rħal-a
 wanted 3sgmas Zayd-NOM C IMPER-leave 3sgmas-SUB
 ʔamr-u
 Amr-NOM
 “Zayd wanted Amr to leave.”
- b. *ʔaraad-a Zayd-un ʔan raħal-a
 wanted 3sgmas Zayd-NOM C left 3sgmas
 ʔamr-u
 Amr-NOM
- c. *ʔaraad-a Zayd-un ʔan sa-ya-rħal-a
 wanted 3sgmas Zayd-NOM C FUT-IMPER-leave 3sgmas-SUB
 ʔamr-u
 Amr-NOM

Second, while *ʔanna* does not require adjacency with the verb, *ʔan*, by contrast, does require adjacency with the verb. The sentences in (43b-c) above show lack of adjacency between *ʔanna* and the embedded verb, while the following data show the ungrammaticality of *ʔan* in absence of adjacency with a verb:

- (45) a. *ʔaraad-a Zayd-un ʔan ʔamr-u
 wanted 3sgmas Zayd-NOM C Amr-NOM
 ya-rħal-a
 IMPER-leave 3sgmas-SUB
 “Zayd wanted Amr to leave.”
- b. *ʔaraad-a Zayd-un ʔan yadan
 wanted 3sgmas Zayd-NOM C tomorrow
 ya-rħal-a ʔamr-u
 IMPER-leave 3sgmas-SUB Amr-NOM
 “Zayd wanted Amr to leave tomorrow.”

The contrasting behavior of *?anna* and *?an* thus parallels that of the tensed negation particle *laa*, as opposed to the non-tensed *maa*. One may speculate, then, that the difference between the two types of C is also tense realization: *?anna* does not realize the tense of the embedded clause, while *?an* carries the tense feature of the embedded clause. As it turns out, there is good evidence that this is true from the interaction of negation with both types of C. While *?anna* can co-occur with all forms of tensed negation (i.e., *laa*, *lam*, *lan*), *?an*, by contrast, can only occur with *laa*, the default form. Compare (46) and (47):

- (46) a.

ǫanan-tu	?anna	Hind-a	lam
thought-1sg	C	Hind-ACC	Neg
ta-ktub-Ø	?al-risaalat-a		
IMPER-write 3sgfem-JUS	the-letter-ACC		

 “I thought that Hind did not write the letter.”
- b.

ǫanan-tu	?anna	Hind-a	laa
thought-1sg	C	Hind-ACC	Neg
ta-ktub-u	?al-risaalat-a		
IMPER-write 3sgfem-IND	the-letter-ACC		

 “I thought that Hind is not writing the letter.”
- c.

ǫanan-tu	?anna	Hind-a	lan
thought-1sg	C	Hind-ACC	Neg
ta-ktub-a	?al-risaalat-a		
IMPER-write 3sgfem-SUB	the-letter-ACC		

 “I thought that Hind will not write the letter.”

- (47) a. ʔaraad-a Zayd-un ʔalla (=ʔan+laa)
 wanted 3sgmas Zayd-NOM $\text{C+Neg}_{\text{Present}}$
 ya-rʔal-a ʔamr-u
 IMPER-leave 3sgmas-SUB Amr-NOM
 “Zayd wanted Amr not to leave.”
- b. * ʔaraad-a Zayd-un ʔallam (=ʔan+lām)
 wanted 3sgmas Zayd-NOM $\text{C+Neg}_{\text{Past}}$
 ya-rʔal-a ʔamr-u
 IMPER-leave 3sgmas-SUB Amr-NOM
- c. * ʔaraad-a Zayd-un ʔallan (=ʔan+lan)
 wanted 3sgmas Zayd-NOM $\text{C+Neg}_{\text{Future}}$
 ya-rʔal-a ʔamr-u
 IMPER-leave 3sgmas-SUB Amr-NOM

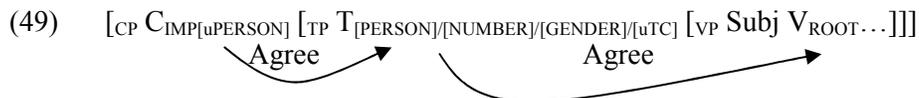
The contrast between (46) and (47) can be accounted for if we assume that *ʔan* is the result of C absorbing the tense feature of the embedded clause. Specifically, Neg Agrees with T in tense, followed by C Agreeing with Neg in tense as well. By the HAC, the tense feature has to be realized on the highest head, which is C in this case, therefore explaining the absence of tense-inflecting negation particles with this complementizer, as well as the required adjacency between C and the verb. The complementizer system in SA thus provides further support for the Agree-based analysis of head movement, whereby relations between functional heads can be licensed via minimalist mechanisms of formal feature licensing, Agree in the present context.

6.2.3 Interaction between C and T in Person-less imperatives

Further evidence for the correctness of the current analysis comes from the behavior of imperatives in SA, as argued in Soltan (to appear). As has been traditionally noted, positive imperative verb forms in Arabic dialects appear without the person prefix *-ta*. Compare the second person imperfective forms to the positive imperative verb forms in (48) below:¹⁴

(48)	Imperfective (indicative)	Positive Imperative
2sgmas	ta-ktub-u	ʔu-ktub-Ø
2sgfem	ta-ktub-ii-na	ʔu-ktub-ii
2dumas/fem	ta-ktub-aa-ni	ʔu-ktub-aa
2plmas	ta-ktub-uu-na	ʔu-ktub-uu
2plfem	ta-ktub-na	ʔu-ktub-na
	“write”	“Write.”

In Soltan (to appear), I argue that this is yet another case where two functional heads (imperative C and T) engage in an Agree relation, as schematically represented below:



In particular, I argue that imperative C_{IMP} has an uninterpretable Person feature.¹⁵ T Agrees with Subj in the usual fashion, licensing the ϕ -features

¹⁴ Imperative verbs appear in the so-called jussive mood (or temporal case in Fassi Fehri’s terminology). Notice also that the initial glottal stop as well as the following vowel in the positive imperative verb forms are epenthesized for syllabification purposes.

¹⁵ Whether this can be tied to the fact that imperative structures are for the most part second person in nature is unclear. Perhaps the inherent properties of imperative C is compatible with it being the locus of the formal feature of (second) person, but this is at best a mere speculation.

on T. Now, C Agrees with T in Person, thereby licensing C's Person feature as well as the temporal case on T, as evidenced by the occurrence of the jussive mood marker on imperative verb forms (cf. fn. 14). Since T is the head of the sister of C, then, by the Head Agreement Condition, the Person feature has to be realized on the probing head, C in this case, which explains its absence on the verb. Interesting consequences arise in both negative imperatives (e.g., *laa ta-ktub-Ø*) and so-called *li-*imperatives (e.g., *li-ta-ktub-Ø*) in SA, as well as with regard to cross-linguistic variation in the morphosyntax of imperatives, which I will not discuss here, referring the reader to Soltan (to appear) for an elaborate discussion.

7 Conclusions

In this paper, I have discussed the interesting (and rather intricate) negation paradigm in SA, arguing for a hybrid analysis in terms of an Agree relation holding between the two functional heads Neg and T, coupled with morphophonological movement of the lexical verb to host affixal Neg. I have shown that this analysis derives the three different types of negation, as well as their associated morphosyntactic properties. I have also shown that the analysis escapes all the theoretical problems associated with syntactic head movement, while accounting for a set of interesting empirical facts regarding negation in verbless sentences, interaction between negation and C in embedded clauses, as well as the agreement properties of positive and negative imperatives.

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Usama Soltan
Arabic Program
Middlebury College
Middlebury, VT 05753
usoltan@middlebury.edu