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A phase-based account of agreement asymmetry in Arabic

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Abstract: This paper considers the well-known puzzling phenomenon of subject-verb agreement asymmetry in Arabic: full agreement surfaces in SV word order, whereas VS order manifests partial agreement. That is, agreement in all phi-features surfaces only when the subject moves to a preverbal position. To avoid (apparently inevitable) circularity of earlier analyses, the paper offers a minimalist, phase-based analysis to the phenomenon. Two ingredients to the analysis are proposed: phase sliding, according to which a phase extends if its phase head moves. More precisely, T becomes a (sort of) phase head when after v-T movement. The other element is a morphological rule, Morphological Agreement Realization (MAR), to the effect that morphological agreement surfaces iff the probe and goal are spelled out in the same phase. Thus, it turns out that in VS word order, the subject and the verb are spelled out in different phases. In SV constructions, on the other hand, both the subject and the verb are spelled out in the same phase. Hence, the agreement asymmetry. The analysis is supported by certain phonological phenomena.

Subjects: Language & Linguistics; Grammar, Syntax & Linguistic Structure; Historical & Comparative Linguistics

Keywords: agreement asymmetry; Arabic; phase sliding; morphological agreement realization

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PUBLIC INTEREST STATEMENT

There is an interesting phenomenon of Arabic which relates to subject-verb agreement. The facts show that the verb shows agreement in Person, Number and Gender with the subject only if the subject precedes it. If the subject follows the verb, on the other hand, the subject and the verb agree only in Gender and Person, but not in Number. The paper presents an analysis based on phonology/morphology and syntax. What is interesting about the paper is that it entertains an inter-disciplinary scope. That is the paper discusses the interaction between phonology, morphology and syntax—most of the sub-disciplines of linguistics. The paper is also interesting for pedagogical purposes. Subject-verb agreement asymmetry poses a challenge for learners of Arabic (non-native speakers as well as students at school). It would be helpful to draw learners’ attention to the intricacies of agreement in Standard Arabic and compare it to modern dialects of Arabic.
1. Introduction

Arabic allows mainly two word orders: SV with the subject or preverbal DP in a preverbal position, and VS word order where the subject occurs in a post-verbal position. These orders become interesting when subject–verb agreement is involved. In this respect, the two orders display a notoriously common agreement asymmetry.\(^1\) Consider the following pair.

\[(1)\] a. al-Tullabu katab-u al-qa\Siidata

the-students wrote-3pm the-poem

b. katab-a al-Tullabu al-qa\Siidata

wrote-3sm the-students the-poem

The pair above exemplifies the agreement asymmetry manifested in both the orders. In (1a), the subject, being in a preverbal position, agrees with the verb in all phi-features, i.e. person, number and gender. This type of agreement is dubbed “full/strong agreement”. In (1b), on the other hand, the verb agrees with the postverbal subject only in gender and person, but not in number—called partial agreement. Exchanging the verb forms in the pair above results in ungrammaticality.

\[(1)\] a. * al-Tullabu katab-a al-qa\Siidatan

the-students wrote-3sm the-poem

“The students wrote a poem”

b. * katab-uu al-Tullabu al-qa\Siidata

wrote-3pm the-students the-poem

“The students wrote a poem”

The agreement asymmetry in Arabic can be summed up as follows: the verb manifests full agreement with the subject only if the subject is in a preverbal position; otherwise partial agreement (in gender and person) surfaces. Further, sometimes even gender does not appear in VS, in which case agreement defaults. Consider the following pair.\(^2\) Notice, crucially, that in the VS order, as opposed to the VS order, rich agreement always holds.\(^3\)

\[(1)\] a. al-shamsu ta-Tlu’u/*ja-Tlu’

the-sun 3sf-rises/3sm-rise

b. taTlu’u/*jaTlu’u al-shams

3sf-rises/3sm-rise the-sun

“The sun rises”

2. Previous approaches to agreement asymmetry

Different approaches have been proposed to account for the agreement asymmetry in Arabic. They generally fall into two categories: syntactic and phonological. In this section, I will try to review some of those analyses.
2.1. Syntactic approaches

2.1.1. The rich AGR approach
The agreement asymmetry facts in Arabic may tempt one to consider the richness or otherwise of the functional head that carries the respective agreement features in the syntactic representation. In fact, this has been proposed. We will consider two approaches here, namely Fehri and Abdulkader (1993) and Nasu (2001). Working on the GB framework, Fehri and Abdulkader (1993) propose their AGR Criterion, to the effect that full agreement surfaces if AGR is specified as “rich”. Interestingly, Fassi Fehri makes this criterion a biconditional: if a lexical DP subject occurs in Spec,AGR, then AGR is rich, and vice versa, i.e. if AGR is rich, it hosts a lexical subject DP in its Spec. This is now the case in SV constructions. The other scenario of the Criterion holds in the VS order: since there is no subject DP in Spec, or alternatively since AGR is poor, no (full) agreement surfaces.

Nasu (2001) offers a similar analysis to the agreement asymmetry in Arabic, although this is couched in the recent Agree-model of Chomsky (2000, et sq.). Nasu claims that T in Arabic, being a functional head, can be either φ-complete, i.e. it has all φ-features, or defective (in Chomsky’s sense of lacking (some) features). Thus, for Nasu, in SV order, T is specified as φ-complete. Now this T agrees with the subject in Spec,vP (where it is first-merged), resulting in valuing T’s features. And since T is complete, full agreement surfaces. In the VS constructions, on the other hand, T is φ-defective, it either lacks Number or lacks all φ-features (this is where default agreement is obtained). Due to this defectivity, no (full) agreement surfaces.

Now that a functional head can be specified for features in the lexicon is not a problem. On the contrary, Chomsky, 2004 has recently argued that parametric variation seems to reside in the lexicon (and morphology). The major problem for this optionality-driven approach is that they are, in essence, circular, most obvious in Fassi Fehri’sCriterion. More precisely, a language can have different Ts, complete and defective, as is arguably the case in English. But we know that defective T is that of non-finite clauses in English. In other words, we can identify the two types of T. This is not, however, the case in Arabic, where the same declarative independent clause can have either of the word orders referred to, and consequently either of the agreement patterns. Saying that rich agreement holds when T is rich, and poor agreement obtains when T is poor, and T is rich when there is full agreement and T is defective when partial/default agreement appears, turns out to be a restatement of the problem, or more of a description rather than an explanation.

2.1.2. Base-generation approach
Soltan, Usama. (2007) approaches the agreement asymmetry issue in Arabic from a different perspective. He bases his analysis on the idea that the preverbal DP in null subject languages is not a (real) subject but a Left Dislocated element with A-bar properties (see, among others, Alexiadou & Anagnostopoulou, 1998; Fortuny, 2008; Sola, 1992; Zubizarreta, 1992). In particular, Soltan proposes that the VS and SV orders are two distinct structures with independent derivations. Thus, the postverbal DP, i.e. in VS, is a subject, whereas the subject in the SV order is always a (null) pro, with the preverbal DP being a Left-Dislocated element, base-generated in its surface position.

Soltan claims that there are two different Ts in Standard Arabic: φ-complete T and φ-incomplete T, associated with the two word orders. With regard to the agreement asymmetry, Soltan proposes that full agreement appears in the SV order because the subject is actually pro, a null element, crucially not the preverbal DP. Soltan in this connection resorts to Rizzi’s (1982) pro-identification requirement, to the effect that in order to identify pro, it has to be associated with a φ-complete T. Hence, since the subject in SV order is pro, T has to be φ-complete. Consequently, full agreement surfaces. In the VS order, on the other hand, since the subject is a lexical DP, there is no need for identification, and so poor or default agreement surfaces.
Soltan’s account encounters some conceptual and technical problems. First, postulating a null pro is problematic; particularly in the current minimalist framework for they are interface inert (Roberts et al., 2010; Chomsky, 2015 among others). Further, Holmberg (2005) argues, plausibly, that pro cannot be posited in the Agree system for the simple reason that pro as a null pronoun is in need of identification and hence cannot value T’s φ-features.

Another conceptual problem for Soltan’s analysis is his recourse to indices, which violate the Inclusiveness Condition. He assumes that the preverbal DP is related to pro by indices. Not only this, but I think Soltan will have to opt for double indexing in order to account for the fact that there is an agreement between the preverbal DP and the verb (technically T), if it turns out that it is the preverbal DP that identifies pro and in turn values φ on T.

A related question relates to the A/A-bar distinction. In Chomsky’s Agree system, the A/A-bar distinction is recast in terms of types of features rather than positions. Moreover, it has been proposed that both Spec,TP can be both an A- as well as A-bar position (e.g. Alahdal, 2018; Gallego, 2010).

2.1.3. Phase-based approaches to movement-contingent agreement
There have been phase-based attempts to account for movement-contingent agreement. Though the studies have been mostly on participle agreement in Scandinavian, we will briefly sketch them here to see if any of them can be extended to Arabic. The facts to be explained, exactly like the case in Arabic, show that the participle agrees with the direct object only if it moves to the specifier of the Participle head. Examples below are from Swedish.

(1) Swedish

(a) Det har blivit skrivet/*skrivna tre bocker

there have been written N.SG/written.PL three books

(b) Tre bocker ble *skrivet/skrivna

Three books was written N.SG/written.PL

(Richards, 2012: 205)

Svenonius (2001) proposes a principle, dubbed “Impatient Spell-out”, to the effect that as a structure’s unvalued features (uF) get valued, the structure is immediately transferred. Accordingly, in languages (and derivations) with participle agreement (e.g. Swedish and French), Prt happens to have uF and consequently gets delayed till its uF gets valued by a higher head. This delay, claims Svenonius, allows introduction of an EPP, which in turn triggers movement of the direct object to Spec,Prt. Being in a spec-head configuration, the direct object and Prt agree. In languages (and derivations) with no participle agreement (e.g. Danish), Prt will not have uF, and therefore PrtP is spelled out immediately as it is derived.

As pointed out by Richards (2012), since nothing in principle forces the addition of an EPP, Svenonius’ analysis erroneously predicts that participle-(direct) object agreement should also be compatible with non-movement, which is not borne out.

Holmberg (2002) defines a phase head as one that has phi-features and EPP. Based on this definition, he assumes that Prt head in all of Mainland Scandinavian has an EPP. But only in languages with overt participle agreement (e.g., Swedish) does Prt have φ, which makes it a (strong) phase head. Now Holmberg invokes Chomsky’s (2000) Merge over Move (MOM) principle
at the PrtP level to account for the respective facts. In particular, in languages with participle agreement, where Prt is a phase head, there is an option of excluding the possibility of merging an expletive, as it will belong to a different phase, understood as a subarray. In this scenario, the direct object moves to Spec,Prt to satisfy its EPP, and then agrees with Prt. If this option is not chosen, then MOM arises, and an expletive is merged. In addition to satisfying the EPP on Prt, the expletive also values Prt’s uF, resulting in default agreement. By contrast in languages without overt participle agreement (e.g. Danish), again by MOM, an expletive is merged to satisfy EPP, the only feature on Prt. No agreement surfaces because Prt has no uF.

A crucial problem for Holmberg is that he resorts to spec-head agreement, the configuration which has been successfully replaced in the current minimalism by long-distance Agree. Chomsky (2007, 2008) has recently argued for a definition of phases in terms of their phase heads as being loci of (unvalued) formal features, rather than as lexical subarrays, as assumed by Holmberg, who follows Chomsky’s (2000, 2001) definition of phases in terms of interface properties. Finally, the assumption that in cases where EPP and φ both exist, namely in overt agreement contexts, EPP probes (or is checked) prior to the φ-probe turns out to be stipulative, particularly if EPP is understood as “a property of a feature of a head—not a property of the head itself” (Pesetsky & Torrego, 2001: 359), or as generalized EPP (in Alexiadou & Anagnostopoulou, 2007), in which case EPP is not a probing feature.

D’Alessandro and Roberts, D&R henceforth, (2008: 482) proposed a morphophonological rule for agreement realization. The rule is given below (their (11))

1. Given an Agree relation A between probe P and goal G, morphological agreement between P and G is realized if P and G are contained in the complement of the minimal phase head H.

And to guarantee avoiding intervention, D&R posit the following condition (their (12)).

1. XP is the complement of a minimal phase head H iff there is no distinct phase head H’ contained in XP whose complement YP contains P and G.

With the rule in (6), D&R account for participle-direct object agreement in Italian. They show that agreement appears only if the participle head and the direct object are spelled out in the same complement of some phase head. Concretely, agreement surfaces only if Prt is and the direct object are spelled out in the complement domain of the phase head C, namely when vpr is defective.

Though D&R repeatedly stress that (6) is a PF rule, their account turns out to rely on the notion of “defectivity” of phase heads (i.e. vpr) interpreted as non-phasehood (Chomsky, 2001). And it is this assumption that Richards (2012) takes issue with: Richards argues that “defectivity”, in this sense of Chomsky, is “dubious”. He also criticizes D&R’s analysis for denying any connection between morphology and movement, and shows cases such as participle agreement in Germanic to which D&R’s analysis cannot be extended.

This state of affairs makes it clear that syntactic approaches to agreement alternations turn out to circular, a situation that compels us to search for an alternative that avoids the problem of circularity.

2.2. Phonological analyses
The analyses we have reviewed so far are purely syntactic. Recently, however, more attention has been paid to the observation that in a number of languages this type of agreement alternations observes some adjacency requirement. Hence, phonologically driven analyses have been proposed. We will consider Benmamoun (2000) and Peter and Neeleman (2003, 2012).
2.2.1. PF verb–subject merger

Benmamoun (2000) proposes a morphological account to subject–verb agreement asymmetry in Arabic. In particular, he claims that agreement asymmetry boils down to how Number (since it is Number that disappears in VS order) is spelled out morphologically. He suggests that Number can be realized morphologically either affixally or peripherastically. In the VS order, he claims, that the verb and subject undergo PF merger. And since the subject serves as an exponent for realizing Number, there is no need to spell out Number affixally (i.e., on the verb). In SV order, by contrast, the subject and verb do not PF-merge; hence, Number has to be spelled out affixally.

Benmamoun’s analysis encounters a technical problem with regard to the definition of adjacency between the verb and subject (see Peter & Neeleman, 2003; Soltan. Usama., 2007). In fact, the way adjacency is treated makes the analysis appear inconsistent. On the one hand, Benmamoun assumes that morphological merger holds between the subject and verb only in the VS order. As a matter of fact, in the VS order in Arabic, the verb and subject need not be adjacent—other elements like PPs, etc. may occur in-between. To solve this problem, Benmamoun claims that the subject can merge either with the verb or a copy of it. This immediately raises the question of the SV order, where the copy of the subject, ideally adjacent to the verb, cannot serve as a merger target. Moreover, Peter and Neeleman (2003) remark that Benmamoun does not provide any theory for how his PF-merger works.

Another empirical issue, raised by Soltan. Usama. (2007), is that in the SV order, if the subject is pronominal, strong agreement occurs, that is, Number is realized peripheristically—no merger takes place, unpredicted under Benmamoun’s analysis.

2.2.2. Peter and Neeleman (2003, 2012)

Ackema and Neeleman, henceforth Peter and Neeleman (2003, 2012), also propose a PF-based account for the agreement asymmetry in Arabic. Specifically, they argue that agreement alternation (our asymmetry), among other phenomena in natural language, obtains under two conditions: (1) the verbal head precedes the agreeing DP and (2) there is no intervening XP. Crucially, A&N argue that agreement weakening (i.e. partial agreement) in VS order is the result of a PF-rule, rather than a syntactic process, stated below ((41) in A&N 2003; (6) in A&N 2012).

(1) \[
\{V \textbf{Pl} \ldots \} \{D \textbf{Pl} \ldots \} \{V \ldots \} \{D \textbf{Pl} \ldots \}
\]

The rule in (7) informally states that if the verb and subject occur in one particular phonological context, namely the phonological phrase \(\phi\), Number feature on the verb is reduced, i.e. it surfaces only on the verb, not on the subject. This rule is coupled with the following rule, argued for independently in prosody, they claim, which defines prosodic phrasing, so that we know whether the verb and subject are in the same phonological domain.

(1) Align the right edge of an XP with the right edge of a \(\phi\).

Based on these rules, the following is the phrasing of the different word orders in Arabic.

(1) a. VS: \([V \{S \ldots \} \{V \textbf{S} \}\]

b. SV: \([\{S\} \{V \ldots \} \{V\}\]

Thus, since the subject and verb are spelled-out in the same phonological phrase, agreement is weakened; in (9b), by contrast, the subject and verb are spelled out in different phonological phrases, hence no weakening.
3. A phase-based alternative

Since we have seen that a syntactic analysis to agreement alternation, inevitably it seems, turns out to be circular, I would like to propose a phase-based account that, I claim, is not circular. Details aside, it will be argued that in the SV order, since the subject and verb turn out to be spelled-out in the same (phonological) ph(r)ase, (full) agreement surfaces. In the VS order, in contrast, agreement does not surface because subject and verb are spell-ed out in different (phonological) ph(r)ases. The account has two ingredients: Gallego’s (2010) phase sliding and D’Alessandro Roberts’s (2000) rule of morphological realization. This interface issue, as we will see, bears on the idea that a (syntactic) phase corresponds (though mismatches are probable) to a phonological domain, namely phonological phrase. Before spelling out the account, I will briefly sketch out phase sliding and its consequences on the framework of phases.

3.1. Phases and phase sliding

Chomsky (2000, et seq.) proposes that syntactic derivation of linguistic expressions proceed in small “chunks”, phases. A crucial aspect of the phase theory is that it captures the notion of “cycle”, first proposed in Chomsky et al. (1956) to delimit the domains of phonological rules. Recently, phonologists (see Samuels, 2012, and references cited therein) and semanticists (Hinzen, 2012 and references there) have adopted the notion of “phase” into these interface systems, in which case “phase”, if these are on track, turns out to be a natural unit/domain in the grammar. Phases are regulated by Phase Impenetrability Condition (PIC), given below.

(1) PIC₁ (Chomsky, 2000: 108)

In phase α with head H, the domain of H is not accessible to operations outside α; only H and its edge are accessible to such operations.

According to this version of PIC, the different search spaces/domains to the different phase heads are given below.

(1) PIC₁ Patterns of search space

![Diagram of PIC boundary triggered by Merge T and V's search space]
On this PIC, the spellout domain of the phase head v (i.e. its complement), namely VP is spelled out the moment T is merged. Hence, VP is not accessible to any operation that involves T (or any head beyond T for that matter).

However, empirical problems were immediately raised against this view of phases/PIC. For example, cases of long-distance agreement, as in That-constructions in English. In these constructions, T agrees with the in-situ V-comp subject, namely man, inside the VP. Now on the above view of PIC, this should be ruled out because T cannot agree with any object inside VP because VP has already been transferred.

(1) There T [\(_{vP}\) v arrived [a man]]

To solve these issues, Chomsky (2001) proposes a distinction between strong phases, headed by C and (transitive) \(*v\), called strong/\(\phi\)-complete phase heads; and weak phases, headed by (unaccusative and passive) v, called “defective” phase heads. Thus, v in the example above would be considered a weak phase, and hence does not trigger Transfer (only strong phases that observe PIC): T can probe into the VP. That is, the whole clause above is just one (strong) phase. Unfortunately, this strong/weak phase distinction cannot account for other long-distance cases of agreement, notably the Nominative-marked objects in Icelandic. In these constructions, T probes the object in VP, and, crucially, the phase probed is a strong one, i.e. headed by transitive v. This state of affairs led Chomsky (2001) to revise the old PIC and propose the following version.

(1) PIC\(_2\) \(^{10}\) Chomsky (2001: 14)

[Given structure [Z\(_P\) Z \ldots [\(_{vP}\) \(\alpha\) \{H YP\}]], with H and Z the heads of phases]: The domain of H is not accessible to operations at ZP; only H and its edge are accessible to such operations.

(1) PIC\(_2\) Patterns of search space

![Diagram of search space with PIC boundary triggered by Merge T]
Gallego (2010) develops a dynamic approach to the phase system, which he dubs “phase sliding”. The core idea is that when a phase head moves, for some independent reasons, the respective phase gets “pushed up”, as it were. This, so-called dynamic, view of phases certainly has a bearing on the search space of phase heads and consequently on spellout domains. An immediate consequence (relevant for our purposes in this paper) that this view of phases achieves is that it captures the long-standing fact that Spec,TP in null subject languages is an (A-and) A-bar position. That is, in phase-based terminology, Spec,TP ends up at the phase edge. The following diagram shows how search space differs with phase sliding.

\[(1) \text{ Patterns of search space with phase sliding}\]

As you can see, after v-to-T movement takes place, causing the vP phase to slide, the search space (i.e. the spellout domain) of v becomes the whole vP, including crucially the subject in Spec, vP which was once at the vP-phase edge. Moreover, the Spec,TP now becomes at the phase edge.

**3.2. The analysis**

Let us recap some of the examples that illustrate the agreement asymmetry phenomenon.

(1) a. al-banat-u daxal-na al-faSl

the-girls-Nom entered-3fp the-class

b. * al-banat-u daxal-at al-faSl

the-girls-Nom entered-3fs the-class

c. daxal-at al-banat-u al-faSl
entered.3fs the-girls-Nom the-class

d. * daxal-na al-banat-u al-fa5l

entered.3fs the-girls-Nom the-class

With the assumption of phase sliding, I would like to assume the following principle (adapted from D'Alessandro and Roberts (2008)).

(1) Morphological Agreement Realization (MAR)

Given an Agree relation, agreement is realized overtly iff the Probe/Controller and Goal/Target are spelled out in the same (phonological) phrase.

How is MAR different from D&R's rule? A crucial difference relates to the following conceptual issue of division of labor: MAR makes it clear(er) that Agree takes place in syntax, regulated by syntactic constraints, whereas realizing agreement overtly is a purely (morpho)phonological issue\textsuperscript{11,12}. Notice that MAR, unlike D''R's rule refer to Controller and Target in addition to Probe and Goal, in order to make explicit the idea that the principle/operation is more morphological than syntactic.

Interestingly, phonologists (see Samuels, 2012 (and references therein)) have recently extended the phases framework to phonology. More precisely, it has been argued that a phase (more accurately, the spellout domain of a phase) corresponds to a phonological domain, namely the phonological phrase.

Further, based on phenomena like encliticization in Arabic, where subject clitics cliticize to complementizers, a case of phonological interaction, Bošković (2016) argues for a model of syntactic theory where what is actually spelled out to the interface is the whole phase, rather than its complement. I believe that the proposal defended in this paper goes along this line.

With these assumptions in place, let us see how agreement asymmetry in Arabic is derived.

The derivation proceeds like this. T Agrees with the subject in Spec,vP. The verb then moves to T (or Asp), causing the phase to slide (in Gallego's sense). In the present configuration, the subject DP is no longer at the (little vP) phase edge; rather it is inside the spellout domain. If Transfer takes place now, the subject DP is spelled out in a different phase to T (which would be spelled out in the CP phase). This is what happens in the VSO order, where agreement is not realized.\textsuperscript{13} In the SVO order, on the other hand, the subject moves to SpecTP, and is consequently spelled out with T in the same domain. The question that immediately arises here is: what triggers movement of the subject to a preverbal position?

Recall that preverbal DP in null subject languages is thought to be a topic. In order to explain the fact that preverbal DP in Arabic SVO word order might have a topic interpretation, I would like to follow Alahdal (2018) who argues that SpecTP becomes an A-bar position when T inherits EF from C. For Alahdal, EF is similar to Rizzi's criterial features such as aboutness or Topic. In this case, the subject and T turn out to be spelled out in the same (CP) phase—hence overt full agreement. Crucially, in null subject languages, the subject DP does not move to SpecTP in order to Spec-agree with T (Holmberg, 2002) or to value its case (Richards, 2012). (Case is actually valued in situ, perhaps along the lines in Solton. Usama., 2007).

Since agreement checking in the current minimalist theory is done in a probe-goal fashion, there the subject DP does not move in order to check agreement with T. Further, entertaining a Spec-Head agreement configuration would raise the problem of why the subject does not move to TP in
the VS order. I would like to assume, following Alahdal (2018) that movement of the subject to Spec TP is triggered by EF on T. After all, the EF, the A-bar feature, is now on T, thanks to feature inheritance; EF has been inherited by T from C.

Support for the approach proposed here comes from phonological phrasing. Samuels’s (2012) puts forth the following typology of ϕ-domains. What matters for us here is the possibility of having the phrasing (SV) (O).

(1) Typology of ϕ-domains
  (a) (S)ϕ (V)ϕ (O)ϕ
  (S)ϕ (V O)ϕ/(OV)ϕ if O is non-branching
  (a) (S V)ϕ (O)ϕ if S is non-branching
  (S)ϕ (V O)ϕ/(O V)ϕ if O is non-branching
  (S O V)ϕ if S and O are non-branching

Consider the following.

(1) a.innahum [ʔunæsun jastami] [ʔunæsuj jastami yanastami] that/indeed.expl people listen

“Illy the indeed people who listen”

In (19), the subject unaasun “people” and the verb yastamiuun “listen” undergo an operation of nasal assimilation, [n] becomes [j]. Phonologically, that two items can undergo some phonological operation indicates that the two items occur in the same phonological domain. Therefore, for our purposes, we take this as a piece of evidence that our phrasing (SV) (O), with the subject and verb in the same phonological phrase, is on the right track. Overt agreement in these cases falls out from MAR. Consider the following paradigm.

(1) a. dʒaa al-awlaadu ʔlai-na
came.3sm the-boys.Nom to-us
b. dʒaa ila-na al-awladu
came.3sm to-us the-boys.Nom
c. al-awladu dʒaaʔu ʔlai-na
the-boys.Nom came.3pm to-us
d. *al-awladu ʔlai-na dʒaaʔu
the-boys.Nom came.3pm to-us

“The boys came to us”
The sentences in (20a&b) are in the VS order while (20 c&d) are in the SV word order. Notice that the PP can occur between the verb and the subject (20b). In the SV word order, however, as (20d) indicates, the PP cannot separate the subject and the verb.

Another revealing construction in this connection is that of auxiliary construction. This type of sentences is interesting in that the subject might not move to SpecTP, and the verb does not move to T.

(1) kaan al-awlodu jaʕabun  
be.pst.3sm the-boys.Nom play.3mp

“the boys were playing”

Since the subject and the verb are spelled out in the same phasal domain, rich agreement holds. Note that the auxiliary agrees with the subject only partially.

Further piece of evidence comes from Egyptian Arabic. Hellmuth (2016) shows that in Egyptian Arabic, the SVO sentences are phonologically phrased as (SVO).17

A problem for this account may be raised by those who take the subject to be in an A-bar position, a Topic. For prosodic purposes, elements in the A-bar domains form their own independent phonological phrases. This scenario, however, is only apparently problematic, for even here, the subject, a pronominal, will be spelled out with the verb again in the same phonological phrase.

4. Concluding remarks
In this paper, I have shown that all syntactic accounts that have been proposed to account for the well-known subject–verb agreement asymmetry in Arabic turn out to be circular, and hence lacks explanatory adequacy at best. Therefore, I have proposed an interface-phase-based account for this phenomenon. The analysis argued for here, I claim, complies more than any of the previous approaches with Chomsky’s SMT, the salient minimalist principle.

The analysis makes recourse to Agree, MAR and Phase sliding. Agree is an operation that is available to C_tIL without stipulation. MAR is introduced as an interface condition, and hence motivated. Finally, phase sliding is well defended in Gallego (2010). What is appealing about phase sliding is that it captures head movement, an issue since Pollock (1989), and maintains the universality/uniformity of phases. I believe that the present approach avoid circularity considerably.

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Notes
1. The phenomenon of agreement asymmetry has disappeared in modern dialects of Arabic. Subject–verb agreement has been neutralized to full agreement. See for instance, Mohammed (2002) on Palestinian and Alahdal (2020) on Yemeni Arabic.
2. Aoun et al. (2010:76, footnote 2) point out that “There is no consensus as to whether there is agreement in person in addition to gender under the VS order”.
3. A reviewer wonders whether the agreement asymmetry phenomenon occurs irrespective of the type of the subject. In fact, subject–verb agreement in Arabic is replete with intricacies. For instance, if the subject is broken plural, full agreement does not arise. But regarding the definite/indefinite subjects, it is well-known that in NSLs, preverbal subjects must be definite specific/presuppositional; indefinite subjects are not allowed. See, e.g. Aoun et al. 2010; Shlonsky and Rizzi (2018). A related question raised by the reviewer is: If the preverbal subject in Arabic is in an A-bar position (a Topic position), then how can agreement facts explained, since agreement features are features of A-positions. Here I follow Alahdal (2018) (referred to in the text) in assuming that the TP in Arabic is both A- as well as A-bar position.
4. A similar analysis is proposed in Saed (2011).
5. Specifically, he suggests that preverbal DP in Arabic should be looked at as a Haring Tonic.
6. Particularly if we consider recent minimalist work that attempts to derive binding conditions from other principles of the grammar (e.g. Reuland, 2001).
7. See Gallego (2010) for an interestingly detailed discussion of the development of the Phase Theory.
8. See Gallego (2010: 60–62) for a discussion of the different types of EPP, and how EPP developed.
9. Cf., for example, their statement (p. 481) that this rule relates to “mapping to PF”. Also they state (p. 482) that it is “the substructure that is transferred to PF as a single unit” that is involved here.
10. Richards (2012: 199), however, notes, that having two versions of PIC “opens up another conceptual can of worms—namely, if we can have two PICs, then why not 22 or 102?”
11. In this sense, MAR is similar in spirit to Peter and Neelamn (2003, 2012) weakening rule discussed above, though they turn out to have almost opposite consequences, particularly on prosody.
12. See the different papers in Erteschik-shir and Rochman (2010) for similar interface (particularly phonology)-based approaches to different apparently syntactic phenomena.
13. I take the sometimes partial agreement morphology that appears in VSO as an indication that this Agree has taken place rather than an argument for a defective T.
14. See Aoun et al. (2010) for a review of all such possibilities.
15. See also Narita and Samuels (2009) on phonological derivation by phase.
16. A reviewer raises a potential problem to the analysis presented in the paper. More specifically, the reviewer points out that in a sentence like below although the subject and the verb are spelled out in the same phonological phrase—manifested in nasal assimilation—only partial agreement surfaces, opposed to what I claim.Iam [jastalin ab al-famal] benefactive [jastalin ab al-famal] benefactive. The employer of his deputy way out is to argue that the phonological phenomenon obtained here is driven merely by linear adjacency; that is, this is not the spell-out realization of a syntactic operation between the subject and the verb. Notice that the subject is in situ, and, crucially, the verb is not in T, as the negative (tensed) negative element Iam occupies T (Fehri & Abdulkader, 1993, among others).
17. Elordieta et al. (2005) also show that in Spanish SVO structures are phrased as (SVO).

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