

## Composite Probing in Standard Arabic Preverbal Dependencies

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### ARTICLE

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### Abstract

*In this paper, we investigate whether Chen's (2025) theory of composite probing can be generalized to Standard Arabic preverbal dependencies. Chen (2025) argues that there are some movements that are neither purely A-movement nor  $\bar{A}$ -movement, but are instead triggered by the presence of a composite probe such as  $[\varphi + TOP]$  or  $[\varphi + FOC]$ . Standard Arabic has various types of preverbal dependencies, including VSO/SVO alternation, agreement asymmetry, case dependencies, null subjects, object fronting, wh-movement, and clitic left-dislocation. The results of this investigation indicate that Standard Arabic does exhibit behavior that is best described as composite probing, but only under a restricted formulation. Object fronting is the best candidate for composite A/ $\bar{A}$ -movement, since the object of the fronted clause retains its case with the object of the sentence. However, subject movement in SVO clauses is better described as A-movement to Spec-TP, and clitic left-dislocation occurs through base-generation in the left periphery of the clause. The paper concludes that Standard Arabic does support the idea of composite probing as a type of derivational process for the language. Yet, a distinction should be made between A-movement, composite A/ $\bar{A}$ -movement, pure  $\bar{A}$ -movement, and any process of base-generating topics.*

## 1. Introduction

The distinction between A-movement and  $\bar{A}$ -movement has been central to the theory of syntactic dependencies. A-movement is generally associated with features related to licensing of subjects, agreement, case, and binding.  $\bar{A}$ -movement is associated with wh-movement, topicalization, focalization, relativization, and dependencies on operators. These distinctions can be formulated in terms of the features that trigger each type of movement: A-movement is linked to features like  $[\varphi]$ , [Case], [D], and [EPP], where EPP, the Extended Projection Principle, is used in the Minimalist sense as an edge requirement on the functional head T that requires the projection of a specifier (Chomsky, 2000). While  $\bar{A}$ -movement is associated with features like [WH], [TOP], [FOC], and [REL] (Chomsky, 1995, 2000, 2001).

Chen (2025) proposes a notion of generalized composite probing that suggests it is possible for a syntactic head to bear both A and  $\bar{A}$  features. The presence of such a head would allow movement of some element that satisfies both the A and  $\bar{A}$  features; such movement would be recognized as a form of composite A/ $\bar{A}$ -movement. Chen suggests that such heads may have probing features like [ $\phi$ +TOP] or [ $\phi$ +FOC], which would trigger the movement of a DP that satisfies both the A and  $\bar{A}$  features (Chen, 2025).

Within the theory of generalized composite probing, it is possible to investigate whether this proposal can be extended to languages like Standard Arabic. Unlike Mandarin, Standard Arabic has several overt features that help determine whether preverbal pronouns occupy an A-position, an  $\bar{A}$ -position, or a composite A/ $\bar{A}$ -position within the syntax.

Specifically, Standard Arabic has features such as agreement, case, VSO/SVO word order, null subjects, object fronting, wh-fronting, and resumptive clitic pronouns. Each of these features can contribute to determining whether preverbal elements have an A-,  $\bar{A}$ -, or composite A/ $\bar{A}$ -status. The research question is: does Standard Arabic exhibit signs of composite A/ $\bar{A}$ -probing within its language?

The answer to this question will determine whether Chen's proposals on composite probing can be applied to Standard Arabic. The answer is yes, in principle: the notion that syntactic heads can bear both A and  $\bar{A}$  features is applicable to the language. However, Standard Arabic does not permit a generalization of Chen's (2025) proposal to all preverbal DPs. Preverbal subjects have A-properties due to their agreement with T, but not because of a composite nature as  $\bar{A}$ -topics. Left-dislocated topics that have resumptive clitics do not involve movement from the argument position; yet, between these two examples lies the phenomenon of gap-based object fronting, which does exhibit signs of composite probing.

## 2. Literature Review and Research Gap

### 2.1 Literature Review

The present study relates to three different strands of literature. The first strand concerns the theory of composite probing and mixed A/ $\bar{A}$ -movement. Chen (2025) presents an analysis of Mandarin that is based on a featural view of movement. Chen proposes that instances of topicalization and focalization that take place within the IP are instances of composite A/ $\bar{A}$ -movement that end at low IP TopP or FocP but pass through Spec-VoiceP. For topicalization and focalization that occur outside of the IP, however, Chen proposes either an intermediate movement through VoiceP or a movement that is purely  $\bar{A}$ -movement to the left periphery. Thus, Chen's proposal is based upon the features of the probes that occur during these movements.

The second strand of literature relates to the asymmetry of agreement in Standard Arabic clauses. In VSO clauses, a plural subject that occurs after the verb usually does not trigger the agreement of the verb with that subject. In SVO clauses, however, a plural subject that occurs before the verb will trigger the agreement of the verb with that subject. These properties of Standard Arabic have been discussed by Fassi-Fehri (1993), Benmamoun (2000), Mahfoudhi (2002), Soltan (2007), and Aoun et al. (2010). The main debate within the literature on these properties concerns the source of the asymmetry. For instance, Mahfoudhi (2002) argues that SVO clauses involve movement of the subject to Spec-TP but that VSO clauses do not require such movement by the subject. Benmamoun (2000) also proposes analyses that suggest that

the agreement of the verb with a subject is sensitive to the syntactic structure of the clause and the morphological structure of the subject. Aoun et al. (2010) discuss the notion that preverbal DPs must be analyzed separately from the rest of the clause, as not all preverbal DPs that occur before the verb in Standard Arabic clauses are subjects of those verbs.

The third strand of literature relates to the notions of topic and focus in Standard Arabic clauses. In Alazzawie's (2019) analysis of Arabic, which is based upon the cartographic split-CP framework, topics in Standard Arabic are recursive and have a different structure from focus, which is non-recursive. Topics are expressed at the beginning of the clause in Spec-TopP but are also linked to resumptive pronouns that appear within TP. Focus and wh-phrases, in contrast, move to Spec-FocP. Aoun et al. (2010) also make a similar distinction between focus and clitic left-dislocation. Focus moves to Spec-FocP, while clitic phrases that are left-dislocated at the beginning of a clause are both base-generated and resumed with a clitic within the clause. Such distinctions by Aoun and others relate to Chen's proposal regarding probing and movement. In Chen's analysis of Mandarin, the object that is moved to the front of the clause leaves a gap for the pronoun, the object has the case associated with the thematic position of the verb, and it receives a focus interpretation. In contrast, the phrases that are moved and are also resumed by a clitic do not leave a gap and do not have focus interpretations.

Finally, a discussion of the category of the fronted nominal in Arabic is relevant to the present paper. The nominal phrases that are fronted in Arabic clauses in the present analysis are determiner phrases (DPs), not noun phrases (NPs). This is important because the concept of composite probing only applies to goals of movements that have specific features. The object that is fronted in Arabic clauses has features associated with it, such as case, definiteness, number, and gender. For instance, Beina (2013) discusses the determiner system of Standard Arabic, including the definite article *al-* and the indefinite marker indicated by nunation. Kremers (2003) discusses how Arabic nouns have a determiner D, possessive determiners, number expressions, and cases that are resolved through the Agree operation. Shlonsky (2012) discusses how determiners in Semitic languages, such as Arabic, may move to the verb because of the interaction between the determiner, the  $\phi$ -features of the noun phrase, adjectives, and the construct-state of the noun phrase. Finally, AlQahtani (2021) presents evidence for the concord of definiteness in Arabic nouns, indicating that definiteness can be resolved within the noun phrase independently of the verb phrase.

## **2.2. Research Gap**

The research gap filled by the present study is the lack of an existing Minimalist analysis that relates the three discussions reviewed in this section. Part of the discussion of Standard Arabic will relate the language's properties to the proposals of Chen, Alazzawie, Aoun, and others cited above. Based on these discussions, it will become clear which aspects of Chen's proposals apply to Arabic, which aspects require modification, and which aspects do not apply to the language. The result will not be that Chen's proposals are refuted in Arabic. Rather, they will apply only to the gaps created in Arabic clauses by fronting, and not generally to the language in other contexts.

Section 3 presents the theoretical assumptions that are made throughout the paper. Section 4 presents the methodology adopted for this paper. Section 5 presents the results of the syntactic analysis of Arabic clauses, discusses the implications of such syntactic analysis,

compares those results with those of Chen, and presents the implications of such comparisons for Minimalist theory and the concept of probing.

### 3. Theoretical Framework

#### 3.1. Minimalist Assumptions

In the analysis that follows, a Minimalist architecture is assumed to hold. More specifically, Merge constructs syntactic structures, and Agree establishes syntactic dependencies. A head bearing uninterpretable features probes for a goal DP in its c-command domain. When an accessible goal DP is found, the features of the head are valued. If the head bears an edge or EPP-type property, the constituents move internally within the syntactic structure to satisfy that feature.

The following assumptions are adopted: First, T bears the features [ $u\phi$ ] and an EPP property. The head probes for a DP bearing  $\phi$ -features and values them. If the EPP feature is satisfied by movement of the subject DP to Spec-TP, full agreement is expected in Standard Arabic. Second, Voice/v introduces the external argument to the clause. Voice may bear an edge feature that allows movement of a constituent into its specifier. This feature is important for comparing Standard Arabic with Chen's (2025) proposal of using Voice as an intermediate head. Third, C and discourse heads bear  $\bar{A}$ -features. C may bear a [WH] feature, and Top and Foc heads may bear [TOP] and [FOC]. These features indicate whether a movement is an operator movement or a discourse movement unless the DP is externally merged to the topic structure. Fourth, the ability of one head to probe into another is limited to the case where that head bears both A- and  $\bar{A}$ -features. For instance, Foc heads may bear [Case/ $\phi$  + FOC] features, allowing them to merge with a DP that satisfies both A- and  $\bar{A}$ -features. Fifth, the position of a constituent in the clause is not diagnostic in determining the nature of its movement to a higher position. A DP that occurs before the verb may be in Spec-TP, Spec-TopP, Spec-FocP, or in a left-dislocated base-generated position.

#### 3.2. Formal Reconstruction of Composite Probing

Composite probing can be defined as follows. Suppose there is a head H bearing an uninterpretable feature bundle. If H bears [ $u\phi$ ], it probes for a DP that bears interpretable  $\phi$ -features. If H bears [ $u$ TOP] or [ $u$ FOC], it probes for a discourse-marked XP. If H bears both [ $u\phi$ ] and [ $u$ TOP], then it probes for a DP that can satisfy both A- and  $\bar{A}$ -features.

The derivation proceeds in eight steps. First, Merge forms the relevant vP/VoiceP phase. Second, a DP is merged in an argument position. Third, Voice, as a phase head, may bear an edge feature and a composite probe. Fourth, Voice probes for a DP bearing both nominal features and a discourse feature. Fifth, the DP moves to Spec-VoiceP as an intermediate phase-edge position. Sixth, a higher Top or Foc head probes the same DP. Seventh, if the higher head bears [ $\phi$  + TOP] or [ $\phi$  + FOC], the movement remains composite. Eighth, if the higher head bears only [TOP] or [FOC], the final step is pure  $\bar{A}$ -movement.

For Standard Arabic, the possible distribution of probes can be represented as follows:

T: [ $\phi$ ], [EPP], [Nom]  
 Voice/v: [Case], edge feature, possibly [ $\phi$ /Case + TOP/FOC]  
 Low Top: possibly [ $\phi$ /Case + TOP]  
 Low Foc: possibly [ $\phi$ /Case + FOC]  
 C/Force: [WH], [TOP], [FOC]

The entry for Voice/v should be understood as the restricted option available at the phase edge, not as a claim about the presence of Voice as an information-structural head in Standard Arabic. The claim is limited to the observation that when an object moves out of its position within the VP to a higher position related to the discourse structure, it must transit through the edge of the verbal phase. Voice is relevant to this movement because it determines which phase the object moves out of, while the discourse-related head Foc/Top determines its final position within the clause. The proposal that Voice is a composite head is limited to its relationship with fronting of object elements, not with topicalization or focalization in general.

The paper does not claim that all these probes are active in every clause. Rather, it argues that Standard Arabic supports only a restricted distribution of composite probes. This restriction will be tested in Section 5 by comparing VSO, SVO, object fronting, wh-movement, and clitic left-dislocation.

### **3.3. Standard Arabic as a Testing Ground**

Standard Arabic is a suitable testing ground for composite probing because it makes several diagnostics visible. Agreement morphology distinguishes preverbal and postverbal subjects. Case morphology distinguishes subjects, objects, and left-dislocated topics. Null subjects show whether agreement requires overt preverbality. Gap-based object fronting tests movement from an argument position. Clitic left-dislocation tests whether discourse prominence can arise without movement. Wh-movement tests whether the CP-domain behaves as a pure  $\bar{A}$ -domain. DP-internal definiteness contrasts show that Arabic nominals carry visible syntactic features relevant to probing.

The clause structure assumed for Standard Arabic is given in (1).

(1)

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[CP C [TopP Topic [FocP Focus [TP Subject T [VoiceP Subject Voice [vP  
v [VP V Object]]]]]]]]
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The structure in (1) distinguishes Spec-TP from left-peripheral topic and focus positions. A preverbal subject in Spec-TP is not equivalent to a left-dislocated topic in Spec-TopP. Similarly, a fronted object in Spec-FocP is not equivalent to a base-generated topic resumed by a clitic.

The working hypothesis is stated in (2).

(2)

Standard Arabic allows composite A/ $\bar{A}$ -probing only where a fronted DP simultaneously satisfies an A-related licensing relation and a discourse-related operator relation. This is most plausible in gap-based object fronting. It does not apply to ordinary SVO subject movement, CP-level wh-movement, or clitic left-dislocation.

The hypothesis in (2) aligns with Chen's proposal in accepting composite probing, but modifies its distribution in light of Standard Arabic agreement, case, and resumption.

## **4. Methodology**

### **4.1. Data Source: Standard Arabic**

The data used in this paper consist of extracted sentences from the Leipzig Corpora Collection, as well as constructed examples and judgments from native speakers. These groups

of analyses have been verified against existing grammatical accounts of Standard Arabic. Each example is evaluated according to four diagnostics: agreement morphology, case marking, gap versus resumptive clitic dependency, and position relative to T, Voice, and CP.

The data set includes VSO clauses, SVO clauses, feminine plural agreement, null-subject clauses, gap-based object fronting, clitic left-dislocation, wh-fronting, embedded wh-extraction, and DP-internal definiteness contrasts. The Arabic examples are presented with transliteration, gloss, translation, and syntactic explanation.

## 4.2. Qualitative Analytical Approach

The analysis is qualitative and theory-driven. It proceeds in three steps. First, Chen's composite-probing proposal is reconstructed in Minimalist terms, as shown in Sections 3.1–3.2. Second, predictions for Standard Arabic are formulated in Section 3.3. Third, these predictions are tested against Standard Arabic data in Section 5.

The main diagnostic logic is as follows: If a fronted XP is associated with agreement, case licensing, binding, or locality effects, then it has A-like properties. If the same XP is also interpreted as a topic, focus, or wh-operator, then it has  $\bar{A}$ -like properties. If both types of properties are present in a single dependency, composite probing becomes plausible. If only discourse properties are present, pure  $\bar{A}$ -movement or base-generation is preferred. If only subject agreement and nominative case are present, ordinary A-movement is preferred.

This methodology is narrower than a general account of Standard Arabic word order. The goal is not to decide every case of preverbality. Rather, the goal is to determine whether Chen's (2025) composite-probing proposal can be applied to Standard Arabic without collapsing distinct structures into one general fronting operation.

## 5. Results and Discussion

### 5.1. VSO as the Baseline Non-Composite Derivation

The first result of the investigation is that VSO clauses are not a type of clause that motivates the formation of composite probing. In VSO clauses, the subject is inherently postverbal in its derivation, which prevents any potential for probing to occur within the clause's derivation. The verb additionally exhibits reduced agreement with plural subjects in VSO clauses.

(3)

kataba al-ṭullāb-u al-taqārīr-a fī al-ṣabāḥ-i  
write.PFV.3MSG DEF-student.M.PL-NOM DEF-report.PL-ACC in DEF-morning-  
GEN

'The students wrote the reports in the morning.'

In (3), the verb is masculine singular, yet the subject of the clause is masculine plural. The theory posits that the T node's T-features may be valued against the subject, but the number feature of the subject remains outside of the TP-complex that is necessary for full agreement to occur.

The derivation of (3) is given in (4).

(4)

[TP T[ $\varnothing$ ] [VoiceP al-ṭullāb-u [Voice' Voice [VP kataba al-taqārīr-  
a]]]]

The derivation of this clause proceeds as follows: First, the verb merges with its object. Second, the Voice head and its feature introduce the external argument of the clause. Third, the T node merges with the  $u\phi$  node of the clause. Fourth, the T node probes into the subject of the clause to value its features against the subject. Finally, the subject node remains postverbal within the clause. Thus, there is no feature TOP or FOC that attracts the subject to the T head, indicating that the derivation is not composite in nature.

This derivation represents the non-composite derivation that will be contrasted with Chen’s proposal regarding the existence of A- and  $\bar{A}$ -movement within clauses.

**5.2. SVO as A-Movement, Not Automatic Composite Movement**

In contrast to VSO clauses, SVO clauses do exhibit certain properties related to A-movement, but do not exhibit any properties that suggest the automatic probing of T for features within those clauses.

(5)

al-ṭullāb-u katab-ū al-taqārīr-a fī al-ṣabāḥ-i  
 DEF-student.M.PL-NOM write.PFV-3MPL DEF-report.PL-ACC in DEF-morning-  
 GEN  
 ‘The students wrote the reports in the morning.’

In (5), the preverbal subject controls the full plural agreement. The dependency is A-like because the DP is nominative, agrees with T, and occupies a subject position. No discourse feature is required to derive the agreement pattern.

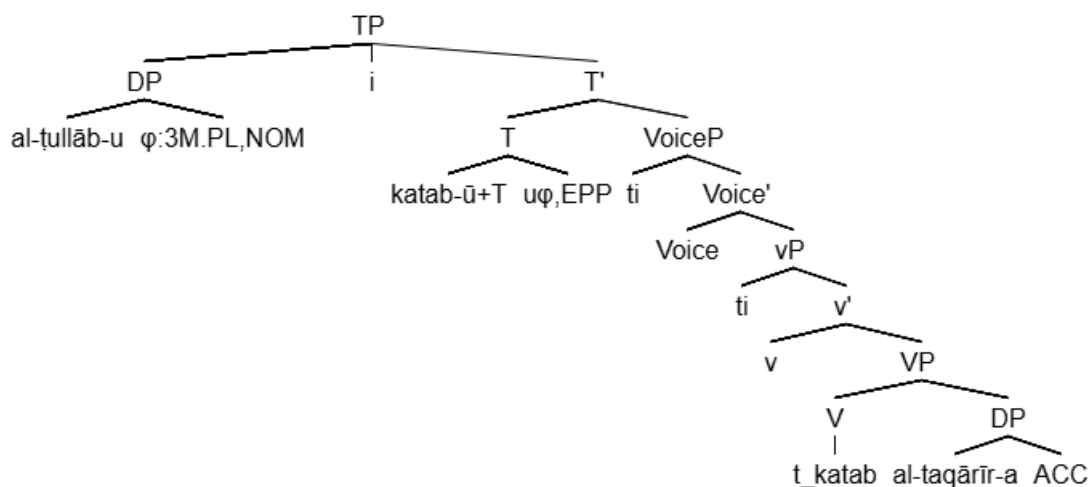
The derivation is represented in (6).

(6)

[TP al-ṭullāb-ui T[ $\phi$ , EPP] [VoiceP ti [Voice’ Voice [VP katabu al-taqārīr-a]]]]

The derivation proceeds as follows: The subject is first merged in Spec-VoiceP. T is then merged with [ $u\phi$ ] and [EPP]. T probes downward and values its  $\phi$ -features against the subject. The EPP property triggers Internal Merge of the subject to Spec-TP. Once the subject is local to T at Transfer, full plural morphology is realized.

**Figure 1. SVO subject movement to Spec-TP**



This is ordinary A-movement. It does not require TOP or FOC. Therefore, SVO should not be analyzed as composite movement unless the preverbal subject is independently shown to bear a syntactically active discourse feature. This is the first major modification to Chen's proposal: in Standard Arabic, preverbality alone cannot be used as evidence for composite probing.

### 5.3. Feminine Plural Agreement and Feature Visibility

Feminine plural subjects show that the reduced agreement among VSO clauses is not the result of failed Agree. Some features are visible, while others are not.

(7)

sāfarat-i al-ṭālibāt-u 'ila al-ribāṭ-i  
 travel.PFV.3FSG DEF-student.F.PL-NOM to DEF-Rabat-GEN  
 'The female students travelled to Rabat.'

In (7), the verb agrees in gender but not in number. This demonstrates that T had access to some part of the feminine plural subject's  $\phi$ -bundle. The issue is not a failure in Agree, but a failure to realize the valued number feature.

(8)

al-ṭālibāt-u sāfar-na 'ila al-ribāṭ-i  
 DEF-student.F.PL-NOM travel.PFV-3FPL to DEF-Rabat-GEN  
 'The female students travelled to Rabat.'

In (8), the preverbal subject DP triggers full feminine agreement in the verb. The contrast between (7) and (8) highlights the role of the relationship between T and the subject in determining the presence or absence of full agreement.

These examples contribute to the discussion of the independence of agreement. Full agreement, in SVO clauses, can be achieved in a manner independent of discourse. If the agreement in full SVO clauses can be derived from the T–subject agreement process and the EPP principle that requires a subject DP to be present, then the process of T triggering full agreement with a subject DP supports the argument that full agreement among VSO clauses is also independent of discourse.

### 5.4. Null Subjects and the Independence of Agreement from Overt Topics

In addition to the examples involving null subjects and overt agreement, there are other examples of feminine agreement with null subjects that indicate the independence of agreement from overt topics.

(9)

katab-ū al-taqārīr-a fī al-ṣabāḥ-i  
 write.PFV-3MPL DEF-report.PL-ACC in DEF-morning-GEN  
 'They wrote the reports in the morning.'

In (9), the full agreement between the verb and the subject is established without the presence of an overt subject DP. The null pro subject agrees with T. This is another indication that full agreement can be independent of discourse.

The derivation is given in (10).

(10)

[TP pro<sub>i</sub> T[ $\phi$ ] [VoiceP ti [Voice' Voice [VP katabu al-taqārīr-a]]]]

In [pro], a null pronominal subject is represented. T merges with [u $\phi$ ]. T then probes the null subject to value its features. Because the null pronoun T is in agreement with, the features that the subject possesses are valuable. Full agreement is established between the verb and the subject without the need for an overt DP to be present.

**Table 1. Agreement and Locality Patterns**

Example	Construction	Subject position	Subject $\phi$ -features	T-Goal relation	Surface verb agreement	Theoretical conclusion
(3)	VSO masculine plural	Postverbal / low VoiceP	3M.PL	T probes downward	3M.SG	Reduced agreement; non-composite baseline
(5)	SVO masculine plural	Spec-TP	3M.PL	T agrees with TP-local DP	3M.PL	A-movement to Spec-TP
(7)	VSO feminine plural	Postverbal / low VoiceP	3F.PL	T accesses $\phi$ -bundle	3F.SG	Gender visible; plural not realized
(8)	SVO feminine plural	Spec-TP	3F.PL	T agrees with TP-local DP	3F.PL	Full agreement through A-movement
(9)	Null subject	pro in TP-domain	3M.PL	T agrees with pro	3M.PL	Full agreement independent of overt topic

This finding confirms the hypothesis presented in Section 3.3. The existence of composite A/ $\bar{A}$  movement in Standard Arabic is likely, but it cannot be inferred from the agreement between verbs and their subjects. Full agreement can be established between the SVO clause elements by the ordinary process of T agreeing with its subject pro.

### **5.5. Gap-Based Object Fronting as the Strongest Composite Candidate**

The best candidate for composite probing in Standard Arabic is object fronting. In these examples, the object of the clause precedes the verb and retains its accusative case. In addition, the fronted object receives a topic interpretation from the clause.

(11)

al-taqārīr-a kataba al-ṭullāb-u  
 DEF-report.PL-ACC write.PFV.3MSG DEF-student.M.PL-NOM  
 'The reports, the students wrote.'

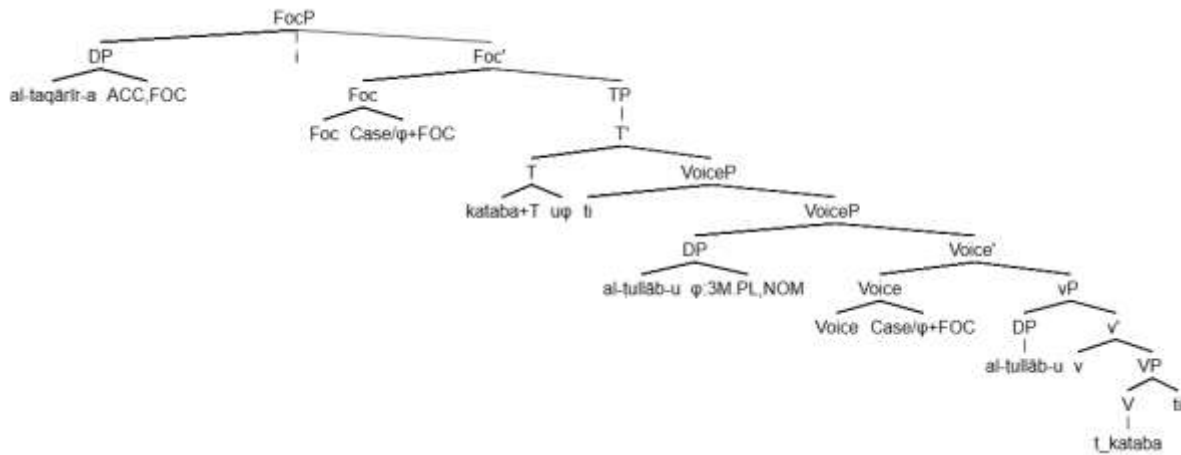
In (11), the fronted object is still marked with accusative case. It also receives the role of object of the clause. The other properties of object fronting in the clause support the existence of the best candidate for composite movement.

The derivation of (11) is proposed in (12).

(12)

[FocP al-taqārīr-ai Foc[Case/ $\phi$  + FOC]  
 [TP T [VoiceP ti Voice[Case/ $\phi$  + FOC]  
 [vP al-ṭullāb-u [VP kataba ti]]]]]

Figure 2. Composite Derivation of Gap-Based Object Fronting



V merges with the object DP in [VP]. [Voice] introduces the external argument. The object DP retains its features related to its position within the clause. A low [Foc] head introduces the [FOC] feature. If the head that is attracted to the object fronted DP includes the [Case/ $\phi$  + FOC] feature, then the object DP moves into the clause. The moved DP retains its relation to the object position in the clause and gains a topic interpretation from its preverbal placement.

Where Standard Arabic aligns with Chen is in the fact that the A-side of the dependency is reflected in the case of the fronted DP and its relationship to the object position in the clause. The  $\bar{A}$ -side of the dependency is reflected in the focus and topic interpretation of the fronted DP. However, T is not a candidate for the composite probe movement. This is because the topic of the clause does not trigger the agreement of the subject pronoun. If the process of composite movement exists in Standard Arabic, it is associated with Voice and/or a low Foc and Top head.

Two qualifications are necessary: First, the fronted object in (11) does not appear to be an element that could occupy Spec-TP; it is in an accusative rather than nominative function, it does not control  $\phi$ -agreement on T, and it retains the agreement pattern that is associated with a postverbal plural subject. The fronted DP does not satisfy the requirements of an A-position. Second, the object is not base-generated in a high left-peripheral topic position. Unlike clitic left-dislocation, the construction in (11) contains a gap rather than a resumptive clitic, and the fronted DP preserves the accusative case associated with its object position. These properties indicate movement from the verbal domain. Under the phase-theoretic assumptions adopted in Section 3.1, such movement cannot bypass the VoiceP phase edge; extraction from VP to FocP must proceed through Spec-VoiceP. Voice is therefore not the final discourse position, but the intermediate phase-edge position through which the composite dependency is established.

### 5.6. Object Fronting Does Not Trigger Full Subject Agreement

A crucial test of the proposed analysis is whether object fronting triggers full subject agreement. It does not.

(13)

al-kutub-a qara'a al-tullāb-u  
 DEF-book.PL-ACC read.PFV.3MSG DEF-student.M.PL-NOM

'The books, the students read.'

In (13), the object is fronted to give the object prominence in the discourse. However, the verb remains masculine singular, indicating that the subject, which is postverbal, is not contracted. Therefore, fronting the object does not result in full subject agreement.

The relevant structure is given in (14).

(14)

[FocP al-kutub-ai Foc[FOC]  
[TP T [VoiceP al-ṭullāb-u [VP qara'a ti]]]]

Example (13) is crucial in supporting the conclusion that object fronting does not trigger full subject agreement. If object fronting created some type of [ $\phi$  + FOC] element on the verb T, then we should have seen agreement between the fronted object and the verb. The lack of agreement in (13) indicates that the movement of the fronted object does not impact the agreement processes. This supports the more narrow form of composite movement proposed in Section 3.3.

### 5.7. Clitic Left-Dislocation as Non-Composite

An additional test of Chen's (2025) proposal is the analysis of clitic left-dislocation.

(15)

al-taqārīr-u, kataba-hā al-ṭullāb-u  
DEF-report.PL-NOM write.PFV.3MSG-3FSG.ACC DEF-student.M.PL-NOM  
'The reports, the students wrote them.'

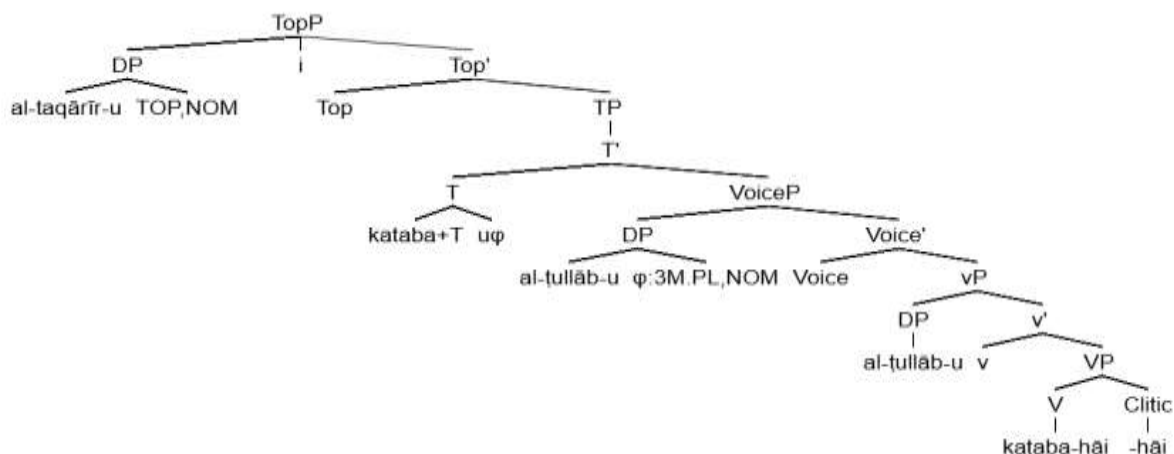
In (15), the topic is fronted to the beginning of the sentence. However, rather than using a left-dislocation marker such as an enclitic pronoun, the topic is resumed by a clitic. In this example, the clitic is -hā, which stands for them. Furthermore, the topic itself does not need to have moved from its object position to its position at the start of the sentence.

The structure is given in (16).

(16)

[TopP al-taqārīr-u Top  
[TP T  
[VoiceP al-ṭullāb-u [VP kataba-hā]]]]

**Figure 3. Clitic Left-Dislocation**



The topic is merged with the top topic. There is a clitic in the object position of the verb that satisfies the argument relation that the verb requires. In this case, the clitic -hā satisfies the argument requirement for the verb *kataba*, meaning “wrote.” Therefore, the topic does not need to have moved into the Spec-TopP to fulfill the clause’s requirements.

This is one of the main ways in which Standard Arabic differs from Chen’s proposal for Mandarin. In Mandarin, both topics and left-dislocated pronouns are analyzed as movements of phrases from one position to another. In Standard Arabic, there are both types of left-dislocation. However, only the type that involves gaps is analyzed as a candidate for composite movement.

### 5.8. Wh-Movement as Pure $\bar{A}$ -Movement

Wh-movement is best understood as a case of pure  $\bar{A}$ -movement to the CP domain.

(17)

māḍā qara’a al-ṭullāb-u  
 what read.PFV.3MSG DEF-student.M.PL-NOM  
 ‘What did the students read?’

In (17), the wh-phrase moves to the left periphery, while the subject remains postverbal and the verb retains reduced agreement. The wh-dependency is therefore operator movement to CP, not subject-related A-movement.

The structure is given in (18).

(18)

[CP māḍāi C[WH] [TP T [VoiceP al-ṭullāb-u [VP qara’a ti]]]]

The derivation of this sentence indicates that the wh-DP merged with the verb’s object. The C merged with the wh-phrase, probing for the closest wh-phrase. The object moved internally to become the specifier of CP. What occurred here was movement of the operator, not A-movement of the subject to the left periphery.

This supports one of Chen’s important restrictions: C may host pure  $\bar{A}$ -probes rather than composite probes. In Standard Arabic, wh-movement behaves like a CP-level operator dependency and does not trigger A-like agreement effects. Therefore, it should not be analyzed as composite probing.

### 5.9. Embedded Wh-Extraction and the CP Boundary

Another test of pure  $\bar{A}$ -movement involves instances of long-distance extraction of a wh-phrase across a finite clause.

(19)

māḍā ḡanna Zayd-un ‘anna ‘Amr-an qara’a  
 what think.PFV.3MSG Zayd-NOM COMP ‘Amr-ACC read.PFV.3MSG  
 ‘What did Zayd think that Amr read?’

In (19), the wh-element moves from its origin within the embedded clause to the matrix clause’s CP. Such movement across a finite clause but within a single clause is indicative of successive-cyclic  $\bar{A}$ -movement.

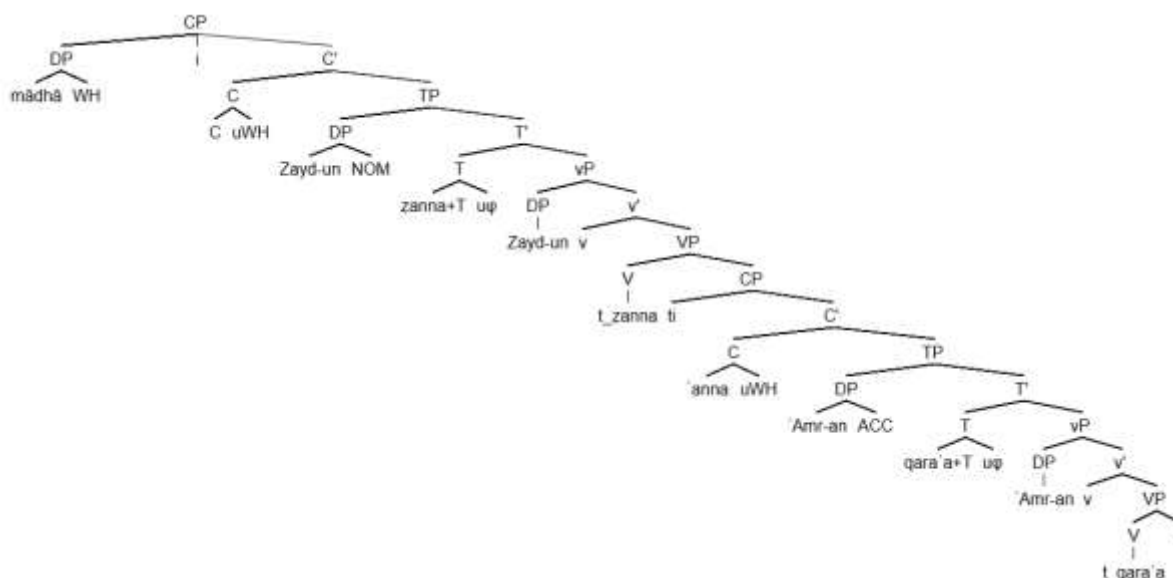
The derivation is given in (20).

(20)

[CP māḍāi C[WH]

[TP Zaydun [vP ʒanna  
 [CP ti C[WH]  
 [TP 'Amran [vP qara'a ti]]]]]

**Figure 4. Embedded Wh-Extraction across CP**



This kind of wh-movement is separate from any analysis of composite A/ $\bar{A}$ -movement. If the movement of phrases through the finite CP is through a pure  $\bar{A}$ -position, then there should be no subsequent use of composite A/ $\bar{A}$ -movement, otherwise this would violate the rule against improper composite movement following  $\bar{A}$ -movement. Thus, this distinction between wh-movement and composite A/ $\bar{A}$ -movement supports Chen’s assertion that C is a domain for pure  $\bar{A}$ -movement only.

**5.10. Preverbal Topics and the Limits of Linear Evidence**

Not all phrases that appear to the left of the verb in a clause have the same structural role. The DP closest to the verb may be the subject of the clause, but it could also be a topic, focus, or left-dislocated element.

(21)  
 al-ṭullāb-u qara’-ū al-kutub-a  
 DEF-student.M.PL-NOM read.PFV-3MPL DEF-book.PL-ACC  
 ‘The students read the books.’

In (21), the DP appearing to the left of the verb is the subject of the clause and is responsible for the agreement of the verb. Thus, this DP is a candidate for analysis as the subject of the clause (Spec-TP) in particular.

(22)  
 al-kutub-u, qara’a-hā al-ṭullāb-u  
 DEF-book.PL-NOM read.PFV.3MSG-3FSG.ACC DEF-student.M.PL-NOM  
 ‘The books, the students read them.’

In (22), the left-peripheral DP is not the subject of the clause. It does not control agreement, and the object of the verb is indicated by the clitic -hā. Thus, preverbal status of a DP does not indicate its relationship with A-movement or with any form of movement to the left periphery of the clause.

Table 4. Fronting Diagnostics in Standard Arabic

Construction	Example	Fronted element	Case on fronted DP	Gap or clitic	Agreement effect	Target position	Preferred analysis
SVO subject	(5), (21)	Subject DP	Nominative	Gap/copy of subject movement	Full subject agreement	Spec-TP	A-movement
Gap-based object fronting	(11)	Object DP	Accusative	Gap	No full subject agreement	Low Foc/Top or FocP	Possible composite A/ $\bar{A}$
Object focus with low subject	(13)	Object DP	Accusative	Gap	Verb remains singular	FocP	Object fronting, not T-agreement
Clitic left-dislocation	(15), (22)	Topic DP	Nominative	Resumptive clitic	No topic agreement	Spec-TopP	Base-generation + resumption
Wh-fronting	(17)	Wh-object	Operator form	Gap	No full subject agreement	Spec-CP	Pure $\bar{A}$ -movement
Embedded wh-extraction	(19)	Wh-object	Operator form	Successive gaps	No A-like agreement effect	Matrix Spec-CP	Successive-cyclic $\bar{A}$ -movement
Resumptive island dependency	(26)	Topic DP	Nominative	Resumptive clitic	No movement agreement	Spec-TopP	Base-generation + resumption

The contrast between (21) and (22) helps to indicate that a DP that surfaces to the left of the verb can be either a subject (Spec-TP) or a topic (Spec-TopP). Such analysis does not depend upon word order to determine movement but upon agreement, case, gaps, and resumption of utterances.

### 5.11. Definiteness Concord and the DP/TP Boundary

The distinction between DPs and TPs is critical for understanding how definiteness concord may help to mark the boundary between DP and TP.

(23)

al-kitāb-u al-jadīd-u ‘alā al-ṭāwīlat-i  
 DEF-book-NOM DEF-new-NOM on DEF-table-GEN  
 ‘The new book is on the table.’

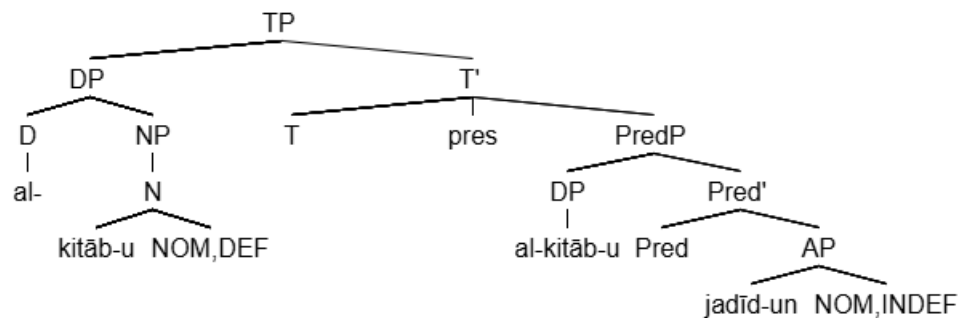
In (23), the adjective bears *al-* and agrees with the noun in definiteness and case. The adjective is therefore DP-internal. This supports the assumption that Arabic nominals carry visible syntactic features.

(24)

al-kitāb-u jadīd-un  
 DEF-book-NOM new-NOM.INDEF  
 ‘The book is new.’

In (24), the adjective of the noun lacks *al-* and functions as a predicate. This contrast with (23) reinforces the idea that definiteness concord may help to mark the boundary between DPs and TP.

**Figure 5. TP-Level Predicative Adjective**



Examples (23)-(24) support the assumption that the features associated with moved DPs are crucial to understanding the basis of this analysis. In Standard Arabic, DPs that have moved within the clause may bear the features of [Case], [ $\phi$ ], [def], [TOP], and [FOC]. These features are critical for proposing composite probing of DPs, but only in those instances where the syntax of the language indicates that both A- and  $\bar{A}$ -related syntactic properties are required of the moved DP.

**5.12. Binding and the A-Side of Movement**

Another critical property of A-dependencies is its relationship to the notion of binding.

(25)

kull-u ṭālib-in yuḥibb-u 'ustād-a-hu  
 every-NOM student-GEN love.IPFV-3MSG teacher-ACC-3MSG  
 'Every student loves his teacher.'

In (25), the subject that is bound to the pronoun is an A-related dependency; it is involved with the T that is mentioned in its syntactic structure.

The point of (25) is not to prove that all fronted objects are A-moved. Rather, it provides the types of evidence that would need to be presented in support of the existence of composite probing. The presence of A-dependencies within an object that has been fronted and focused would support the notion of composite probing. The presence of  $\bar{A}$ -dependencies alone, however, only supports focused movement as the nature of such movement.

**5.13. Island Sensitivity and Resumption**

Resumption provides a further distinction between movement and base-generation. Gap-based movement is expected to be island-sensitive, whereas resumptive dependencies may be more tolerant of island environments.

(26)

hāqā al-ṭālib-u, qābal-tu al-rajul-a allāqī 'allama-hu  
 this DEF-student-NOM meet.PFV-1SG DEF-man-ACC REL teach.PFV.3MSG-  
 3MSG.ACC  
 'This student, I met the man who taught him.'

In (26), the topic is linked to a resumptive clitic inside a relative clause. The dependency does not require extraction from the relative clause. It therefore supports base-generation plus resumption rather than composite movement.

This discussion of resumption is of the present analysis of the construction rather than of a discussion of the fact that resumption rules out all movements. While there are approaches to resumption that account for movements and illicit dependencies, this approach to (26) was chosen due to the fact that the DP in (26) is cleft with an overt clitic within an island, that the clitic saturates the argument relationship within the island, and due to the fact that there is no gap in the relative clause. While (26) is evidence against a general analysis of composite movement, that evidence is only in contrast to constructions like (11), and not in argument for the base-generated analyses of all instances of resumption in Standard Arabic.

This point sharpens the distinction developed in Sections 5.5 and 5.7. A topic linked to a clitic should not be treated as a moved object unless independent diagnostics show gap formation. In Standard Arabic, resumption is therefore evidence against a generalized composite analysis.

#### **5.14. Interpretation of the Results**

The results so far show that Standard Arabic neither rejects nor straightforwardly replicates Chen's proposal. The language supports the core logic of composite probing because certain dependencies, especially gap-based object fronting, combine an argument-related property with a discourse-related interpretation. However, Standard Arabic also shows that composite probing must be carefully restricted. Agreement, case, pro-drop, wh-movement, and resumption independently distinguish A-movement,  $\bar{A}$ -movement, composite movement, and base-generation.

The VSO facts in Section 5.1 provide the baseline. The postverbal subject remains low and the verb displays reduced agreement. Since no discourse feature attracts the subject, VSO does not instantiate composite movement. The SVO facts in Section 5.2 show that full agreement follows from a local relation between T and the subject. This is A-movement to Spec-TP, not automatic composite movement. Feminine plural agreement in Section 5.3 confirms that reduced agreement is not failed Agree; rather, feature realization depends on structural locality. Null-subject agreement in Section 5.4 further shows that full agreement can arise without an overt preverbal DP.

The strongest evidence for alignment with Chen comes from gap-based object fronting, analyzed in Sections 5.5-5.6. In this construction, the fronted object retains accusative case and receives discourse prominence. The object remains linked to its internal argument position, while its surface position signals topic or focus. This combination makes composite probing plausible. However, the fact that the fronted object does not trigger full subject agreement shows that the composite probe cannot be finite T. If a composite probe is present, it must be associated with Voice and/or a low Foc/Top head.

Clitic left-dislocation, analyzed in Sections 5.7 and 5.13, is the clearest point where generalized composite probing fails. A left-dislocated DP resumed by a clitic does not have to be internally merged from object position. The clitic satisfies the internal argument relation inside the clause, while the topic is externally merged in the left periphery. This structure is

discourse-related, but not movement-based in the same way as gap fronting. Therefore, it should not be treated as composite A/ $\bar{A}$ -movement.

Wh-movement, analyzed in Sections 5.8-5.9, supports Chen's claim that C may host pure  $\bar{A}$ -probes. The wh-phrase moves to Spec-CP, but the dependency does not create subject agreement or other A-like effects. Embedded wh-extraction further supports successive-cyclic  $\bar{A}$ -movement across CP. This means that CP-level dependencies in Standard Arabic are not composite in the relevant sense.

### **5.15. Agreement, Partial Agreement, and Disagreement with Chen's Proposal**

The analysis of Standard Arabic agrees with Chen's (2025) proposal. This is in large part due to the fact that the dependencies within the clause may need to be analyzed according to the features of the moved element. The same position within the clause may contain elements of different types. For instance, it may contain a subject in Spec-TP, a focused element in Spec-FocP, a wh-pronoun in Spec-CP, or a topic in Spec-TopP.

The agreement between Standard Arabic and Chen's proposal is only partial. Standard Arabic does exhibit a type of A/ $\bar{A}$  movement that is consistent with Chen's proposal. When an object is fronted in a gap-based manner, it maintains its case to the object argument within the clause. It is also given prominence within the discourse. These two features, along with the element's relationship to the clause argument, are consistent with Chen's proposal of A/ $\bar{A}$  movement within the clause.

Despite this partial agreement, Standard Arabic also exhibits features that indicate the rejection of Chen's proposal for generalized movement within the language. For instance, basic SVO movement does not require a type of composite movement; T simply bears the feature of [ $\mu\phi$ ] and [EPP]. In addition, left-dislocation that is resumed by a clitic does not exhibit any features of composite movement. Finally, the movement of wh-pronouns is a type of  $\bar{A}$ -movement, and does not require the presence of either the [ $\phi$ ] or the [WH] feature.

Standard Arabic is a language that exhibits general alignment with Chen's proposal, but only in a restricted manner. The language supports composite movement of elements in gap-based object fronting. It does not support the extension of such movement to elements like subjects, wh-pronouns, or clitic left-dislocated elements.

### **5.16. Theoretical Implications for the Minimalist Program**

There are three main implications of this analysis for the Minimalist Program in particular. First, the notion of A- and  $\bar{A}$ -movement may best be understood as a featural distinction rather than a positional distinction within the clause. Any dependency within a clause can potentially exhibit any type of movement to another element. Yet, each type of movement will likely be associated with certain features of the element that moves within the clause.

Second, the type of movement within a language is specific to that language's structure. Chen's proposals for Mandarin grammar indicate that composite movement is permitted in topics and focuses in the clause, and with the Voice feature in the clause. The same movement is permitted in Standard Arabic, though at lower Foc and Top heads or with the Voice feature. The low T position is responsible for movement of the subject of the clause. The low C position is responsible for movements of both wh-extraction and high movement operators. Topics can

also be moved into the top of the clause. Finally, the low Foc and Top head or the Voice may contain the composite movement element to explain fronting of objects that are within gaps in the clause.

Third, the implications of this analysis also support the idea that phases have boundaries to the movement within them. The Voice feature is a potential boundary for movement, as is the CP structure with *wh*-elements. The finding that there is no improper composite movement after  $\bar{A}$ -movement is also consistent with Chen's proposal as to why such movement is not permitted after *wh*-extraction.

### 5.17. Comparative Summary

**Table 6. Final Comparison**

Standard Arabic evidence	Relation to Chen's proposal	Works?	Requires modification?	Fails as direct transfer?	Preferred analysis
VSO with postverbal subject	Provides baseline outside topic/focus movement	No direct test	Yes	No	Low subject; T probes downward
SVO with preverbal subject	Shows A-properties of preverbal DP	Partly	Yes	Yes, if treated as composite	A-movement to Spec-TP
Feminine plural asymmetry	Shows feature visibility without full number realization	Partly	Yes	No	T-subject Agree plus locality-sensitive spell-out
Null-subject agreement	Shows full agreement without overt topic	No direct support	Yes	Yes, if preverbality is required	T agrees with pro
Gap-based object fronting	Best Arabic analogue to composite movement	Yes	Slightly	No	Possible Voice/low-Foc composite movement
Object fronting without full subject agreement	Shows fronting does not affect T-agreement	Yes	Yes	No	Object focus; subject remains low
Clitic left-dislocation	Separates topic from movement	No	Yes	Yes	Base-generation plus resumption
Wh-fronting	Supports pure $\bar{A}$ C-domain	Yes	No	No	$\bar{A}$ -movement to Spec-CP
Embedded wh-extraction	Supports successive-cyclic $\bar{A}$ -movement	Yes	No	No	CP-mediated pure $\bar{A}$ -movement

These findings suggest that Standard Arabic refines Chen's proposal for *wh*-movement as an element of the Minimalist Program. While Chen's proposal may suggest that there is a general type of probing within the clause that indicates some type of composite movement of A- and  $\bar{A}$ -features, the findings of Standard Arabic suggest that this movement is limited to certain structures within the clause.

## 6. Conclusion

In this paper, we have examined whether Chen's (2025) theory of composite probing can be applied to Standard Arabic preverbal dependencies. The answer to this question is affirmative, but with some important restrictions. On the one hand, Standard Arabic is consistent with Chen's proposal that A-related and  $\bar{A}$ -related features can combine in head nodes that contain a composite probe. On the other hand, Standard Arabic shows that composite probing cannot be generalized to all preverbal dependencies in the language.

Evidence from VSO clauses shows that a postverbal subject does not trigger number agreement in the verb. In SVO clauses with a preverbal subject, full agreement does occur, but in these cases the subject moves to Spec-TP to establish agreement with the T head. Agreement in feminine plural form further indicates that these contrasts are between syntactic movement and agreement rather than a failure of agreement. In sentences with null subjects, full agreement can occur without a preverbal determiner phrase. However, in cases of fronting an object that contains a gap, the object retains its accusative case. This is evidence of a composite probe. In contrast, left-dislocated clauses with internal clitic pronouns indicate that object-argument relations are not established by a composite movement. Movement of wh-phrases and extraction of wh-phrases from embedded clauses indicate that the CP contains only pure  $\bar{A}$ -probes.

The position that emerges from the evidence is that Standard Arabic aligns with Chen's theory; however, the language provides arguments for the distinction between A-movement, composite A and  $\bar{A}$  movement,  $\bar{A}$ -movement alone, and topic movement in the base.

The implications of this discussion for Standard Arabic are to treat composite probing as a parameterized option within the Minimalist Program. The location of the head of a clause that contains a composite probe may differ between languages. In Standard Arabic, the evidence indicates that the T head is responsible for agreement with a subject, the C head is responsible for movement of wh-phrases and high operators, and the Voice feature or a lower head may host the restricted composite probes needed for gap-based object fronting.

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