

Structural Case Assignment in the Arabic Control Embedded Clause: The Role of Mood Beyond Agreement and Tense

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Abstract—This paper aims to demonstrate how Structural Case (SC) is assigned within the Control Embedded Clause (CEC) in Arabic. It illustrates that the partial agreement feature cannot assign case in configurations like verb-subject-object and post-verbal subject order, as they only exhibit number and gender features. This is clear evidence that there is a disassociation between the agreement feature and CEC case assignment. When considering tense, the absence or inadequacy of tense presents a significant obstacle to nominative SC assignment. Despite the expectation for a CEC tense event to coincide with the tense of the matrix clause, the data indicates that this is not the case, as the tense in the embedded clause does not occur at the same time as the matrix clause event. Thus, a genuine tense is not encoded in the control subjunctive clause, unlike in the tensed indicative control embedded clause. Therefore, mood can assign SC in the CEC. The researcher proposes that the existence of the subjunctive verb and the complementizer creates agree relation between v^{*0} and mood⁰. This enables the inheritance of features, resulting in the valuation of verb and mood. In this context, moodP is proposed to be selected by Fin⁰, and an agree relation takes place, resulting in a valued Mood⁰ by Fin⁰. The embedded subject and object are assumed to enter agree relation with mood⁰ and v^{*0} , resulting in the subject and object getting assigned for nominative and accusative cases.

Index Terms—case, mood, Arabic, control clause, subjunctive

I. INTRODUCTION

The study of syntax within Arabic presents a compelling landscape where the roles of agreement and tense to assign the case of noun phrases (NPs) of embedded clauses become pivotal. Recent studies have introduced these grammatical features to carry significant implications for understanding sentence structure in Arabic, especially in contexts where embedded clauses interact with matrix subjects and verbs. Thus, a central inquiry arises: How do agreement and tense in Arabic control embedded clauses that do not optimally account for assigning structural case? This question opens avenues for examining the association between syntactic mechanisms and their functional outcomes in control embedded clause structures.

The objective of this literature review is to show the structure of the control embedded clause in Arabic grammar and relate this topic to the existing studies, elucidating the differences of agreement and tense as they manifest in Arabic syntax. By navigating through various theoretical perspectives, this paper aims to clarify the implications of these grammatical features and their impact as it regards case assignment, particularly in the embedded control clause, showing how these two features cannot assign a control embedded clause structural case.

The Arabic language exhibits a complex system for licensing the structural case of embedded clauses, particularly when agreement and tense are deficient. This investigation delves into how mood, specifically the subjunctive, plays a pivotal role in this process, drawing on insights from various linguistic studies.

A control embedded clause is a dependent (subordinate) clause where the subject is controlled by the subject of the matrix clause. Standard Arabic (SA) has various embedded clause constructions. Control embedded clauses are often used to express relationships where the subject of the embedded clause is controlled by the subject of the matrix clause. This type of control clause is known as obligatory control. It resembles that of English, where the subject of the infinitive is understood or identified with the argument (subject or object) of the main verb. This clause exhibits an agreement feature that indicates co-reference between the subject of the matrix clause and the subject of the embedded clause. Thus, the subject of the matrix clause should control the subject of the embedded clause through certain features of verbs that provide an expectation that the subject of the main clause is also the one performing the action (or bearing the state) like that of the embedded clause.

In Arabic syntax, embedded clauses are complex structures that serve various functions within sentences. Usually, they function as complements to verbs or adjectives, offering essential information while remaining subordinate. The formation of these embedded clauses may vary from that of main clauses, particularly in terms of agreement and tense. Therefore, understanding their frameworks is significant for understanding structural case assignment, especially in light of questions regarding how certain finiteness features interact to impact case assignment.

II. CASE ASSIGNMENT IN EMBEDDED CLAUSES

The embedded clause's noun phrase is assumed to have a nominative case. However, in certain contexts, Standard Arabic demonstrates a subject-verb-object complement structure where the subject determiner phrase (DP) is assigned an accusative case (ACC) (Fassi Fehri, 1993; Shlonsky, 1997). A specific type of context involves a subject preceded by complementizers such as *inna*, *?anna*, *ka'anna*, *layta*, and *la'alla*. In this form, the embedded clause is headed by such a complementizer and must exhibit an overt subject that is assigned as an accusative case after the complementizer, as illustrated in (1a). In Arabic grammar, the sentence is ungrammatical if the subject is assigned a nominative case in such construction, as seen in (1b).

- (1) a. attalib-u ?axbaran-i ?anna Ali-an kassar-a ?shubak-a
 The student. NOM told 1sm-me that Ali. ACC break. perf the window.
 'The student told me that Ali broke the window.'
- b. * ?limt-u ?anna ?l-walad- a zar-a ?l-madienat-a
 know.pst. I that the-boy. NOM visit.pst the-city
 'I knew that the boy visited the city.'

Example (1a) demonstrates that the subject *Ali-an* appears in the accusative case when preceded by a complementizer.

Another context of the CEC subject accusative case is in a construction when a preverbal subject is followed by a tenseless verb of a non-finite clause, such as in an embedded subjunctive clause that has a tenseless verb in which the subject of the embedded non-finite verb receives accusative case (2a). Additionally, this phenomenon also happens when the post-verbal embedded subject receives a nominative case (2b).

- (2) a. ?radt-u ?l-mu?lim-a ?an yulqi muhadarat-an
 Wanted. I the-teacher. ACC Comp deliver a lecture
 'I wanted the teacher to deliver a lecture.'
- b. talabt-u ?an yaktub-a ?ttalib-u qissat-an
 request. I Comp write.3.sm the-student. NOM story. ACC
 'I requested the student to write a story.'

According to these examples, the accusative subjects in Standard Arabic can be assigned case by the functional elements (e.g., a complementizer). Various linguistic studies support this proposal, including those by Fassi Fehri (1993) and Benmamoun (2000), who suggest that complementizers and negation particles assign accusative case to a determiner phrase. Still, linguists like Chomsky (1995), Rizzi (1997), É. Kiss (2002), and Haegeman (2004) argued that a DP following a complementizer or negation particle is not a subject but rather a topic that has moved from its base position within the verb phrase shell. A topic—a DP that has moved from its base position within the verb phrase to a higher position in the clause, such as Spec-CP or a topic position in the left periphery—would mean the DP is not receiving its nominative case; rather, it is a topic in the accusative case. The real subject is represented by a null pronoun (*pro*) located lower in the structure. In the construction *?anna Ali-an*, *Ali-an* is a topicalized element in the left periphery, assigned accusative by *?anna*.

The complementizer can also occur as the head of verbless sentences, or what is known in traditional grammar as "the nominal sentence" (Ryding, 2005) or topic-comment construction. Likewise, the DP that follows the complementizer is assigned an accusative case, as demonstrated in (3a). Furthermore, the embedded clause may feature a null complementizer of the strict subject-verb order, with the subject assigned to the obligatory accusative case, as shown in (3b).

- (3) a. ?nna ?tta?ir-a jamil-un
 comp the-bird. ACC beautiful. NOM
 'Indeed, the bird is beautiful.'
- b. danant-u ?l-walad-a gad-a ?ssayarat-a
 pst.think.I the-boy. ACC drive.3sm the-car. ACC
 'I thought the boy drove the car.'

The hypothesis suggested in this topic posits that the embedded clause is a tense phrase (TP) where the accusative case on the preverbal subject is assigned by the association of the probe of the matrix verb. This proposal has two shortcomings. First, it is possible to insert an overt complementizer in contexts, as demonstrated in (3a). Second, adverbial phrases may occur between the matrix verb and the embedded clause (Costa, 1997; Cinque, 1999; Belletti, 2004). They demonstrated that in such constructions, the verb is unable to probe the subject of the embedded clause, as illustrated in (4). Consequently, the occurrence of the adverb in this position blocks the matrix verb from probing the subject of the embedded clause. This adverb, intervening between the matrix verb and the embedded complementizer phrase (CP), can be a barrier to agree relation in such a structure.

- (4) dhanant-u sarahatan ?nna ?rrajul-a ghadar-a bakiran
 think.pst. I frankly that the-man. ACC leave. pst earlier.
 'Frankly, I thought that the man had left earlier.'

Standard Arabic manifests some particles that indicate negation, such as *lam*, *lan*, and *la*. Typically, the negation particles appear at a sentence-initial position followed by the verb (5a). However, according to scholars such as Fassi Fehri (1993), Benmamoun (2000), and Ryding (2005), if these negation particles are followed immediately by a subject determiner phrase, then the sentence will be rendered ungrammatical (5b).

- (5) a. *lam* *taktub* *ʔlbint-u* *ʔddars-a*
 neg-pst write. the-girl. NOM the-lesson. ACC
 ‘The girl didn’t write the lesson.’
 b. **lan* *ʔlbint-u* *taktub* *ʔddars-a*
 neg.fut the-girl. NOM write.fem.pre the-lesson. ACC
 ‘The girl didn’t write the lesson.’

The important issue in this discussion is that the subject determiner phrase that immediately follows a negation particle such as *la* should receive the accusative case. In Arabic syntax, a subject DP comes right after this negation particle and typically receives the accusative case instead of the expected nominative case. When *laa* negates a verb (often in present tense or imperative/jussive mood), it may trigger a structure where the verb does not fully assign the nominative case. The negation particle disrupts the verb’s ability to assign nominative. Instead, the subject DP following *laa* gets the accusative case (marked by a final *-a* or *-an* suffix). If the subject DP is not case-marked accusative, the sentence will be ungrammatical. Thus, a typical control embedded clause non-finite context in SA in which the subject appears in the accusative case in the subjunctive complement. This type of subjunctive clause is introduced by a specific functional particle such as *ʔan*, *kay*, *li*, *likay*, and *hatta*. It is observed that the verb following the particle lacks tense. This subjunctive complement can be negated by using the particle *la*, as shown in (6), and these subjunctive clauses are primarily non-finite, having an embedded temporal tense. To advocate tense by relating both the matrix and embedded clause events’ occurrence simultaneously will revive tense, as a case assigner would be unconvincing. The control embedded clause event is expected to occur after that of the matrix event but not before. In this paper, the analysis reveals that the tense feature cannot assign a case in certain constructions because the embedded event has been noticed in some constructions to occur before the matrix clause event. This instantiates that tense [T] cannot assign case to the embedded subject of CEC (see Section 5).

- (6) *ʔlfariq-u* *la* *yuhriz* *ʔhadaf-an*
 the-team neg.pre score goals. ACC
 ‘The team doesn’t score goals.’

In discussing the subjunctive embedded clause subject structure, it is important to note that the clause appears in three forms. One of these forms in the control structure that contains a subject of the embedded clause is *pro*, which is co-referential with the subject of the matrix clause (7).

- (7) *qultu* *lah-u* *ʔureed-u* *ʔan* *ʔarhala*
 said.I to-him 1.sg.want. I that *pro* leave.
 ‘I said to him that I want to leave.’

Second, the subjunctive complement clause displays an obviation structure where the nominative subject appears after the embedded verb. In this structure, the subject should not precede the particle (8).

- (8) *ʔttaman-a* *ʔan* *yanam-a* *ʔttifl-u*
 1.sg.wish that sleep.3.sg.msc the-child. NOM
 ‘I wish the child would sleep.’

The third type of the subjunctive embedded clause is the Exceptional Case Marking (ECM)-like type. It has a surface subject that can occur in two positions, either following the embedded verb (9a) or preceding the functional particle *ʔan* (9b).

- (9) a. *ʔmart-u* *ʔan* *yahdur-a* *ʔttalib-u*
 order.I that to come.3.sg.msc the-student. NOM
 ‘I ordered that the student come.’
 b. *ʔmart-u* *ʔttalib-a* *ʔan* *yahdur-a*
 order. I the-student. ACC that to come.3.sg.msc
 ‘I ordered that the student come.’

In sentence (9), the embedded subject in both sentences displays two distinct case markers. In (9a), the pre-verbal subject is assigned a nominative case as a result of following the embedded verb and has an accusative case, like (9b), when the subject precedes the particle *ʔan*. This indicates that the preverbal subject DP can exhibit a nominative or an accusative case depending on its syntactic position. Therefore, the researcher assumes that functional categories like negation particles and complementizers can assign case. For instance, the complementizers are proposed to assign an accusative case to a subsequent DP, and similarly, a negation particle can assign an accusative case to that DP as well.

III. CONTROL EMBEDDED CLAUSE VERB FINITENESS

Finiteness, a morphosyntactic feature studied by linguists concerning force (Matthews & Rizzi, 1997), is the focus of our research on verb inflection. In this work, the researcher studies verb finiteness as relevant to verb inflection manifested through [number, person, and gender] features. Moreover, a fully inflected verb for tense is crucial for case

assignment to the noun phrases. This research posits that a verb is inflected for the functional features including tense, agreement, and mood, which are determined by the verb's features within its inflectional domain (Al Balushi, 2011, p. 128). Drawing on cross-linguistic research, the linguistic studies on finiteness focused on two main domains: clausal finiteness, where a finite verbal form occurs in an independent declarative clause, and non-finite verbs, found in dependent clauses. The second domain of finiteness is closely associated with verb inflection, which is considered the central feature that indicates person, number, gender, and tense. This involves agreement in clausal finiteness through ϕ -features. Therefore, a finite verb is assumed to be inflected for tense and agreement. However, in certain languages, like Arabic, there is inconsistency in the full inflection or real inflected tense of the finite verb. In certain paradigmatic forms of Arabic verb-subject-object order, the verb inflects for tense, not for the full form of agreement. In contrast, the Portuguese infinitival clause is inflected for agreement but not for tense. This contrasts with the findings of Nikolaeva (2007), who argues that neither tense nor agreement can be considered universal categories responsible for determining finiteness. This variability in verb finiteness across languages leads to the classification of verbal inflectional morphology. The status of the clausal head is constructed through clausal finiteness, with tense and agreement inflection heads referring to the finite clause.

Complement finiteness is presented in the complement domain in which both inflection (INFL) and complement (C) heads coordination result in the emergence of a new form of finiteness. Platzack and Holmberg (1989) argued that finiteness functions as an operator in C^0 , which must be realized to assign the nominative case. Therefore, the correlation between I^0 and C^0 is crucial for case licensing. From a similar perspective, Kayne (1994) argued that the realization and integration of both I^0 and C^0 are necessary for finiteness, with C^0 encoding tense as proposed by Stowell (1982). Rizzi (1997) offered a groundbreaking idea in the field about the Split-Comp-Hypothesis, suggesting that the C^0 domain serves as a Fin^0 head of force⁰ and Top⁰. Additionally, he argued that agreement and tense compose a new form of finite feature that can be analyzed through functional heads in an IP main domain. Thus, comp-finiteness varies from inflectional finiteness since it includes the feature-containing tense, agreement, and mood.

Briefly, the researcher contends that the concept of finiteness, when viewed in its inflectional form, is distinguished by markers such as [T], [AGR], and [mood]. The presence or absence of these features determines whether a verb is finite or non-finite. Our proposition further extends to provide I^0 of I-finiteness to have [\pm tense], [\pm mood], or [\pm AGR] by ϕ -features. This substantial inflectional finiteness can be projected as XP, thus leading to the projection of a TP, MoodP, and AGRP. For example, the instantiation of a T^0 as a head of [T] projects as TP where the structural case licensing is possible.

The researcher concluded that having a verbal category in CEC is essential to receiving a structural case assignment based on the previously provided information. Verifying that the verb satisfies the AGR, tense, and mood properties necessary for inflectional finiteness is crucial. An agreement feature that connects the reference of the matrix clause NP and the embedded clause's subjects is thus observed in an embedded finite clause.

IV. AGREEMENT AND CASE

Agreement serves a fundamental role in the architecture of Arabic syntax. It establishes the grammatical relationship between different elements in a sentence, such as subjects and verbs or nouns and adjectives. It ensures that these elements correspond in phi-features (gender, number, and person), creating a coherent syntactic structure. In the context of controlling embedded clauses, agreement is typically intertwined with the syntactic function of verbs. The main clause agreement has an impact on embedded clauses, which are subordinate constructions inside sentences. Many scholars have observed that these elements interact to create a variety of syntactical outcomes across different sentence structures. For example, Saeed (2015) sheds light on how agreement operates within subjunctive complements, positing that the nuances of agreement can dictate the nature of relations established within these constructs. Likewise, Alatawi (2016) presents a minimalist analysis of the left periphery in Arabic, offering insight into how agreement frames the boundaries and interpretations of embedded structures. He contends that the traditional roles of agreement and tense cannot fully account for case assignment in embedded clauses, as these aspects appear to function independently in some circumstances. This approach suggests the possibility that case assignment is influenced by factors other than matrix clause features.

Arabic has two potential word-order agreement patterns: verb-subject-object and subject-verb-object, each corresponding to distinct agreement patterns. The pre-verbal subject order displays complete agreement for both nominal and pronominal subjects, as seen below.

- | | | | | |
|---------|-------------------------|--------------------|-----------|-------------------|
| (10) a. | Ahmed | kasar-a | ʔl bab-a | Full ϕ - SVO |
| | Ahmed.3.sg.msc | pst.break.3.sg.msc | the- door | |
| | 'Ahmed broke the door.' | | | |
| b. | huw-a | kasar-a | ʔl bab-a | Full ϕ - SVO |
| | he.3.sg.msc | pst.break.3.sg.msc | the door | |
| | 'He broke the door.' | | | |

In contrast to the full agreement pattern in subject-verb-object order, the post-verbal subject shows both full and partial agreement. It triggers partial agreement on the verb and only includes gender and person, while the number feature of verb-subject-object verbs is invariably singular, as shown below.

- (11) a. qarʔ-a-t ʔl ban-t-u ʔl-kitab-a Full ϕ - VSO
 pst.read.3.sg.fem the.girl.3.sg.fem. NOM the-book. ACC
 ‘The girl read the book.’
 b. qarʔ-a-t ʔl-bana-t-u ʔl-kitab-a Partial ϕ - VSO
 pst.read.3.sg.fem the.girls.3.plur.fem. NOM the-book. ACC
 ‘The girls ate the bread.’

In (11b), the verb *qarʔ-a-t* is inflected for the third singular feminine, showing agreement with the subject *ʔl-bana-t-u* in person and gender but disagreeing in number. This incomplete agreement leads to a defective agreement because the verb *qarʔ-a-t* does not fully agree with the subject *ʔl-bana-t-u*. This observation challenges the proposals made by Soltan (2007), Schutze (1997), and Chomsky (2000) regarding the assignment of nominative as a reflection of ϕ -features valuation on I⁰. The incomplete nature of ϕ -agreement in this context highlights a disassociation between case assignment and ϕ -features as shown.

The pronominal subject, on the other side, is exhibited in two forms: lexical and suffixal. The lexical form aligns perfectly with subject-verb agreement (12a). The suffixal form includes the suffix –a attached to the verb (12b), where it exhibits a match and tendency to agree with the verb. The suffixal pronoun does not demonstrate partial agreement because the verb is selected as singular, and the attachment of the suffix at the end of the verb serves to pluralize the verb, similar to the suffixal subject pronoun.

- (12) a. how-a rabih-a ʔl-jaa’zat-a
 he.3.sg.msc.NOM pst.win.3.sg.msc the.prize.sg.fem. ACC
 ‘He won the prize.’
 b. rabih-a ʔl-jaa’zat-a
 pst.win.3.sg.msc (-u.he).3.sg.msc the. prize.sg.fem. ACC.
 ‘He won the prize.’

The previous examples present the argument that deficient agreement cannot assign case in embedded clauses that have gained traction in recent syntax research. Saeed (2015) argues that rather than being assigned in these subordinate structures, the case in Arabic is often governed by the higher clause. This contention challenges the idea that agreement can provide direct influence, as the features from the matrix clause do not consistently result in case assignment within the embedded structure. Instead, the embedded clause case assignment may rely on alternative syntactic mechanisms, such as mood as a functional head and the agree operation, whereby the case assignment relationship is established to ensure that the control embedded clause subject receives the appropriate case.

In a broader context of agreement and case, verb-object agreement plays a significant role in ensuring that defective agreement can also be observed in verb-object constructions, where there is a mismatch in [gender and number] features between the verb and object in post-verbal subject forms (see example 13, below). However, example (14) demonstrates some level of agreement in the verb-subject-object form, specifically in terms of the [person] feature. The subject can be overt, as shown in (13), or it can be null, appearing at the beginning as in (15a), typically exhibiting full agreement between the verb and object in terms of [number and gender] features. In contrast, when the object suffix is attached to the verb (14b), zero agreement is observed. This highlights the challenges posed by limited contexts in the presence of verb-object agreement.

- (13) Ali-un kalam-a ʔl-banata-a Partial ϕ - V-O
 Ali.3.sg.msc. NOM pst.talk.3.sg.msc the girls.3.plur.fem. ACC
 ‘Ali talked to the girls.’
 (14) qad-a Ali-un ʔssayara-t-a
 pst.drive.3.sg.msc Ali.3.sg.msc. NOM the.cars.3.plu.fem. ACC
 ‘The man drove the cars.’
 (15) a. (ʔnna) nadait- hu
 (I.1.sg.msc. NOM) pst.call.3.sg.msc. him. 3.sg.msc. ACC
 ‘I called to him.’
 b. (ʔnna) nadait-u-huna
 (I.1.sg.msc.NOM) pst.call.3.sg.msc. them. 3.plur.fem. ACC
 ‘I called to them.’

These examples demonstrate that object-verb agreement is typically partial, regardless of the subject and object represented by the lexical, pronominal, or suffixal form. Clearly, I-finiteness in these clauses is not achieved through ϕ -features. The subject and object verb agreement is impoverished because the verb disagrees fully NPs. This supports the argument that the embedded clause, as in (15), demonstrates a verb that only agrees with the subject in terms of the [number] feature (see 16, below).

- (16) wafaq-a ʔlmʔlim-u ʔnn yaTHhab-a ʔtulab-u ʔrihlat-an
 pst.approve.3.sg.msc the.teacher.NOM comp pre.go.3.sg.msc the.students.3.plur.msc trip.3.sg.fem.ACC
 ‘The teacher approved the students to go on a trip.’

It should be noted that the verb selected in these clauses does not exhibit full agreement either with subjects or with objects. While certain structures in both orders demonstrate full agreement,¹ other evidence and structures indicate that agreement cannot be optimally incorporated into the process of structural case licensing of the CEC. The idea is that ϕ -features on the embedded I^0 are typically incomplete in most word-order forms. This, consequently, gives rise to ϕ -defectiveness, as argued by Chomsky (2001), where the ϕ -defective probe ϕ -incomplete on I^0 results in an unassigned case to the NP goal.

V. CASE BEYOND TENSE COMPETENCE

Tense situates events or states in time, informing readers when events occur—whether in the past, present, or future—and plays a key role in verb conjugation. There seems to be certain evidence from the literature that tense [T] is an inherent I-finiteness feature of the control embedded clause besides agreement association with nominative case assignment. This research tested Chomsky's (1995, p. 368; 2001, p. 6) proposal that tense carries an intrinsic feature that must be checked to assign the nominative case. Accordingly, the full inflected tense can assign the nominative case. According to the proposal, the case in the control embedded clause of the T-bar modified by *to* is assigned to PRO as nominative at the *to*-tense phrase. The situation gets more complex when an infinitival construction is considered as a [-T] clause despite efforts to suggest a complement clause to indicate temporal time relations. Likewise, Pesetsky and Torrego (2000, 2004) put forward the uninterpretable tense feature *uT* proposal, stating that structural case is assigned as a reflex to *uT* on D. To clarify, [T] is assumed to have interpretable tense [*iT*] and [*uT*], and nominative case is assigned under the features matching between the probe and goal that results in case valuation. Stowell's (1982) work shares many similarities with current proposals considering infinitival complements as either tensed or tenseless, depending on various syntactic structures and properties. It is argued that the future *irrealis* infinitive inherently possesses a tense feature. The time of the infinitival event may occur either before or after the utterance time (*uT*). Stowell's study made a distinction between control infinitival clauses as [+tense] and raising and ECM infinitives are characterized as lacking tense [-tense]. This distinction is associated with the PRO case being unvalued when full tense is required. These proposals worked on tense reduction on the semantic aspect of [T] for satisfying the case assignment requirement of I-finiteness, specifically in rescuing tenseless structures. This is necessary due to the presence of defective tense in Arabic, which is linked to the presence of the verb. In this regard, the researcher finds that PF of small clauses, such as imperative and equational, poses a significant challenge to the [T] feature when represented by a non-finite clause like the imperative infinitive. Additionally, the absence of lexical and auxiliary verbs in equational structures complicates the issue further in terms of encountering the tense feature.

Tense in Arabic displays similarities to the English infinitival clause, presenting a theoretical challenge of tense realization and representation. It is argued to have an intrinsic feature that contributes to assigning nominative case. However, the Arabic [T] feature is primarily realized through the verbal category. As a result, the absence of a verb, as seen in equational sentences, results in the absence of tense. Consequently, case assignment cannot be obtained as the result of defectiveness or absence of [T] at Phonetic Form. This is evident in imperative and equational sentences, as shown in the examples below.

- (17) ?ftah- Ø ?l-bab-a
 impr.open.pre.2.sg the-door.3.sg.msc. ACC
 '(You) open the door.'
- (18) ?ttalib-u muTHabir-un
 the.student.3.sg.msc. NOM hardworking.3.sg.msc
 'The student is hardworking.'

These are examples where the [-T] feature responsible for case licensing is completely absent. This situation in Arabic reveals various forms of the manifestation of tense. The [T] element is primarily seen in lexical verbs, which are inflected for both present and past tense. Additionally, the tense is realized through the auxiliary verbs. Further, it is encoded in some particles such as *lan* and *lam*. All the occurrences are expected to project tense phrases. However, the efficacy of these particles to carry tense may be questionable due to their semantic denotations and inconsistent inflections. Such particles tend to be stative, lacking consistent inflections to signify past, present, and future forms. Therefore, considering the complexities surrounding tense, the researcher agrees with Al-Balushi (2011, p. 30) that tense absence in the sentence creates a significant challenge for nominative case licensing.

The CEC verb exhibits a distinct verbal form from that of the matrix clause. The embedded clause contains a temporal tense that is dependent on the tense of the matrix clause. It is important to interpret the tense of the embedded clause in relation to the tense of the matrix clause. The event/action of the embedded clause is anticipated to occur after the event or action of the matrix clause (19a), and not before it (19b).

- (19) a. qarrara-Ø ?l-muzari'-u ?l-aan-a [?an yazzra'-a pro ?l-arda gadan]
 pst.decide.msc-Ind the-farmer.NOM now. Comp Impf-cultivate.msc.sub ec the-land. ACC tomorrow.

¹ In both orders, SVO and VSO, Arabic exhibits ϕ -complete I^0 but is still impoverished because verb selection is variable in the same structure paradigm, which could select a verb that shows ϕ -incomplete with the subject. The selection can also occur in the subject paradigm, where a singular or plural can be selected for the same singular verb (11b), where the plural subject *?l-bana-t-u* could be replaced by a singular subject, *?l-bint-u*, and the sentence still remains grammatical.

‘The farmer decided today to cultivate the land tomorrow.’

- b. *qarrara-Ø ?l-muzari-ʕu ?l-aan-a [ʔan yazzraʕ-a pro ?l-arda ?l-bariha]
 pst.decide.3.sg.msc-ind the-farmer. NOM now Comp impf- cultivate.msc.sub ec the-land. ACC yesterday.
 ‘The farmer decided today to cultivate the land yesterday.’

Sentence (19b) is ungrammatical after the substitution of the event carrier *?l-arda* of (19a) with *?l-bariha*. This is due to the matrix clause verb *qarrara* -decide, which indicates a lack of an independent tense operator. The tense of the embedded clause appears semantically odd, providing clear evidence that the subjunctive verb distinctly encodes perfect and imperfect tense. Therefore, it is expected that the control embedded clause tense event is to occur at the time of the event/action in the matrix clause. Both sentences in (19) provide evidence that CEC has defective tense. This is, simply, because the embedded subjunctive clause does not occur at the same time as the matrix clause event or after. This state has been demonstrated by Cowper (2005, p. 27), who has illustrated this point by discussing the temporal tense of the embedded clause lacking a clear temporal index, indicating dependency on the governing clause for temporal reference. Cowper also noted that the Arabic subjunctive clause I⁰ has the missing precedence.² The existence of the feature indicates whether the verb in the clause is marked for [\pm past]. To put it more simply, the previous discussion demonstrates the event in the embedded control subjunctive clause is not understood to happen before the action of the main verb. As a result, it does convey a specific or a real tense. In this regard, it is important to compare subjunctive constructions to their indicative counterparts, which can distinguish between perfect and non-perfect tense distinctions, as shown in (20) below.

- (20) qal-a-Ø ?l-muʕlim-u ?l-yawm-a [ʔnna-hu sharah-a ?ddars-a bil-ʔmsi]
 pst.say.3.sg.msc-ind the-teacher. NOM today Comp-he pst-explain. msc-ind the- lesson. ACC
 with-the-yesterday. GEN
 ‘The teacher said today that he explained the lesson yesterday.’

The event encoded in the embedded clause can be interpreted as the action/event occurring before the event in the matrix clause. Therefore, the indicative verb in (20) serves as strong evidence that the "I-finiteness" feature of this clause includes a genuine [T].

Despite the discussion of that CEC having defective [ϕ] and [T], the subjunctive CEC verb still maintains its finite feature property. This assertion is backed by Cowper's (2002, 2005) Feature Geometry proposal regarding inflectional features. She proposed the subjunctive verb form incorporates both [proposition] and [finite] features. According to her proposal, the subjunctive verb clauses should exhibit agreement and structural case assignment. In this context, Cowper revises the status of subjunctive finite verb status, regardless of its lack of connection to the temporal moment of speech, to be valued for tense. Based on this proposal, the subjunctive verb is considered finite and cannot be exclusively interpreted in the moment of speech like the indicative verb. Instead, it should be interpreted concerning the events of the matrix clause following the geometry of inflection. The subjunctive verb may lack deixis but still maintains a T-deixis relation with that of the matrix clause.

Synthesizing these arguments and analyzing pertinent structures reveals a complex landscape where conventional theories of case assignment are subject to significant scrutiny. It is evident that while agreement and tense play important roles in syntactic structure, their role in assigning structural case within control embedded clauses is constrained. This intricacy challenges the existing approaches and prompts further investigation into the distinctive feature or mechanism the researcher accounts for CEC structural case assignment.

VI. TOWARDS MOOD FEATURE

This section explores the subjunctive mood, which establishes a relationship between the main clause and the embedded clause, enabling the embedded clause subject to receive the appropriate case. Mood as an I-finiteness feature will be discussed, while also suggesting that control embedded clause verbs have [Mood]; thereby, structural case can be checked for the CEC noun phrases. The proposal is based on two key ideas of Rizzi's (1997) and Landau's (2004). Rizzi (1997, p. 284) posits that the finite verb forms exhibit distinctions not only in tense and agreement but also in mood. Further, he posited that the Comp domain has similar finiteness feature properties that the INFL domain has. Thus, based on this insight and drawing from Cowper's (2002, 2005) proposal that subjunctive clauses consist of finite verbal forms, it can be argued that the subjunctive verbal form of CEC in Arabic carries a subjunctive mood feature. This property instantiates the clause to be finite, as seen in (21), where the verb *yahdur-a* conveys subjunctive verbal mood.

- (21) lam yahdur-a ?-rraʕeis-u ?l-ʔdʒtmʕ-a
 neg-pst impf-attend.3.sg.msc.sub the-president. NOM the-meeting. ACC
 ‘The president did not attend the meeting.’

In sentence (21), the particle *lam* indicates and assigns the subjunctive mood to the CEC. This particle is merged in Fin⁰, where it functions as a subjunctive mood marker, as seen in (21), to denote a past event. The use of the particle in this construction is proposed to provide a clear indication of mood rather than tense (Cowper & Hall, 2007).

² “Reference” means that the requirement for the verb is to indicate a distinction between past vs. non-past. In other words, a verb in Arabic must be inflected to show either a perfect or imperfect tense. Through this process of tense realization, an I⁰ carries a virtual [T] feature that can contribute to assigning case.

The second idea is based on facts from Hebrew and Balkan languages of the obligatory control clause in which Landau (2004) argued that such languages exhibit finite control, where control extends into finite clauses. Finiteness, according to Landau, is evident in both tense and agreement markers. His analysis revolves around checking [T] and [AGR] on I⁰ and C⁰. This argument of obligatory control finite clauses contrasts with English constructions, which involve non-finite obligatory control clauses. In Hebrew and Balkan languages, the obligatory control clause is in the subjunctive mood. Likewise, Aygen (2002) proposes a significant shift from the traditional view that nominative case is inherently related to tense or agreement. Instead, she posits that nominative case can be assigned by mood and modality. Aygen argues that Turkish subjects can receive nominative case in non-finite clauses, such as nominalizations or subjunctives, even when tense is not overtly marked and agreement might not be fully inflected. Therefore, she contends that the nominative case is assigned by mood, rather than solely on finiteness. Mood, whether subjunctive or indicative, can independently trigger the assignment of nominative case, regardless of tense and agreement status. In some languages, mood is located in higher functional projections (e.g., MoodP or ModP) above TP, or potentially within the CP domain. Aygen suggests these heads can assign the nominative case to the subject, particularly in non-finite or modal contexts. Thus, these studies support the researcher's idea that the embedded verbs of CEC are in the subjunctive mood. In some constructions, mood is exhibited by specific particles regarded as mood indicators. Furthermore, in these languages, the obligatory clause uses the subjunctive complementizer, which is obligatory in the existence of an embedded topic/focus. These two structural features are also clear in Arabic CEC, as seen below.

- (22) haawal-a-Ø ʔttalib-u_i [ʔnn yatahadTH-a *pro*_i]
 pst.try.3.sg.msc.ind the-student. NOM comp Impf-talk.3.sg.msc.sub ec
 'The student tried to talk.'

This sentence shows the imperfect tense as indicated by the verb *haawal-a*, which is associated with the presence of the particle/ (Comp) *ʔan* in the embedded clause. However, this particle also performs as a mood marker. Conversely, the embedded verb *yatahadTH-a* is in a subjunctive mood, which is assigned by the complementizer. This demonstrates the argument that Arabic has another intrinsic feature of the finite control clause represented by [Mood]. This mood feature on the verb instantiates Mood⁰, projecting MoodP.

Arabic verb tense, particularly imperfective, can occur in the subjunctive mood, which carries syntactic relation and allows for head projection, the position where case can be checked and assigned. According to Wright (1967), Standard Arabic verbs relating to tense can be classified into two patterns: perfective and imperfective. The perfective pattern has one form: the past suffixal verb form, while the imperfective includes five forms of mood: indicative, subjunctive, jussive, imperative, and energetic. However, Wright's classification appears to be inconsistent, as the indicative mood can imply present tense through the perfective form, and the subjunctive form carries subjunctive and optative moods in addition to other functions. In light of this, the researcher refers to Fehri's (1993) proposal of modality that is expressed by independent morphemes such as *qad* and *sawfa*. These mood particles include various classes of temporal and syntactic context. The mood markers are thus morphological elements that convey syntactic dependency relations between verb/tense negatives and their complements. Consequently, such mood elements can be interpreted as head projection in the syntactic representation.

The Arabic subjunctive mood is used to express intent, purpose, expectation, permission, and necessity through various functions of verbs. Syntactically, subjunctive mood verbs typically follow specific particles such as the subordinating conjunction *ʔan*, the negative particle *lan*, and the subordinate particle *likay*, which indicates an optative mood (Benmamoun, 2000). This can be observed in the examples (23a, b, c), respectively.

- (23) a. howa yurid-u ʔan yaʔt-i
 he.3ms want.ind comp 3.sg.msc.come.sub
 'He wants to come.'
 b. lan yaktub-a ʔddars-a
 neg.fut Impf.write.3.sg.msc the. lesson.3sm. ACC
 'He will not write the lesson.'
 c. yadrus-u ʔttalib-a likay yanjah-a
 impf. study.3.sg.msc the. student.3.sg.msc so that 3sm. pass.sub
 'The student studies so that he will pass.'

A key distinctive feature of the subjunctive mood is its requirement for a specific particle, as seen in (24a, b). The absence of this particle results in a non-subjunctive mood sentence.

- (24) a. ʔttalib-u ʔan yaʔti ʔl-madrasat-a
 the-student.NOM comp impf. come.sg.msc.subj the-school. ACC
 'The student will not come to the school.'
 b. ʔttalib-u lan yaʔti ʔl-madrasat-a
 the-student. NOM neg come.sg.msc. subj the-school. ACC
 'The student will not come to school.'

The subjunctive verb indicates a future action or event in association with the tensed negative particle as in (23b), or in an embedded non-finite clause following the subjunctive complementizer *ʔan*, as in (24a). This construction is subordinate to the information provided in the matrix clause and is governed by various particles.

VII. CASE CHECKING IN CEC

In the preceding section (6), it was shown that CEC has MoodP; hence, a structural case is proposed to be assigned in the clause structure. Now, we see how the CEC case-checking process takes place, as illustrated in sentence (25) and its incorporation into the clause structure in (26).

- (25) *hawal-a-Ø* *?ttalib-u_i* [*?an yaqra-a* *pro_i* *?nnass-a*
 pst.try.3.sg.msc.ind the-student. NOM comp impf-read.3.sg.msc.sub ec the-text. ACC
 ‘The student tried to read the text.’
- (26)

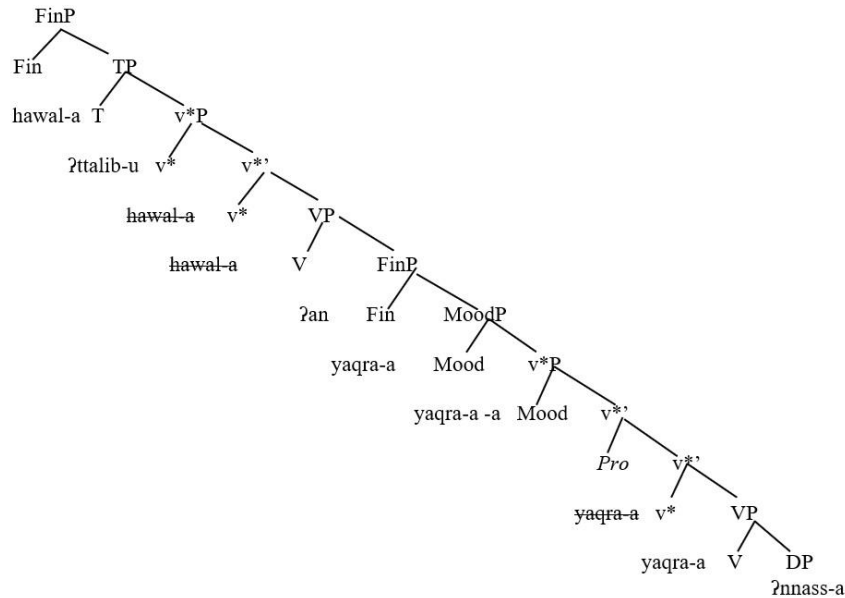


Figure 1. Tree Diagram: CEC Structural Case Assignment by Mood

To explain the process of case assignment, merge operation, and case checking within an embedded clause, the following sequential steps can be followed. Firstly, the embedded verb *yaqra-a* is merged in V^0 with the valued finite verbal feature and with the unvalued case object *?nnass-a* within the complement. The v^{*0} is merged at the verbal position with VP to form a v^*P projection. The external *pro* is merged in Spec- v^*P . The valued [V] feature is associated with v^*P selection by $Mood^0$. The agree operation³ (which involves the valuation of uninterpretable features) takes place in v^*P , where v^{*0} enters an agree relation with $Mood^0$, resulting in a valued verbal category and valued [Mood] feature. Now, with the mood feature valued, the MoodP is selected by Fin^0 . Now, the agree relation takes place between Fin^0 and $Mood^0$, resulting in valuing [Mood] by Fin^0 , consequentially valuing [Mood] on v^{*0} . Subsequently, the embedded subject *pro* is co-referential with the matrix subject *?ttalib-u*, while the object *?nnass-a* enters in an agree relation with $mood^0$ and v^{*0} , respectively. As a result, the embedded subject and object get the case feature valued as nominative and accusative, respectively.

After explaining how the case is checked and assigned in the control embedded clause, the subsequent inquiry revolves around how the case is checked in the matrix clause. While the same procedure for case checking in the embedded clause can be applied, there are some distinctions in the matrix clause. The main clause is typically in the indicative mood and thus possesses the [T] feature. As suggested by Chomsky (1993, p. 7), T^0 is proposed to raise independently to AGRS, forming [T-AGRS], where agreement and case features of DP are checked. The [T] feature, now, can assign the case as a nominative to the lexical DP subject *?ttalib-u* in sentence (25). However, an important consideration in CEC is that it could be an obligatory clause where the embedded clause subject *pro* is obligatorily co-referential with the matrix subject *?ttalib-u*, as seen in (27). Alternatively, the CEC may demonstrate non-OC features, illustrated in (28), where the embedded clause subject *?bnah-u* is referentially dependent on the lexical NP. In this scenario, the DP is assigned a nominative case from the embedded mood⁰.

- (27) *haawala-Ø* *?-ttifl-u_i* [*?an ya-msik-a* *pro i/*j* *?l-koora-t-a*
 pst.try.3sm-ind the-child. NOM Comp impf-catch.3sm.sub ec the-ball-fem. ACC
 ‘The child tried to catch the ball.’

- (28) *qarrara-Ø* *?l-falah-u* [*?an ya-hruTH-a* *?bnah-u* *?l-?rda-a*
 pst.decide.3sm-ind the-farmer. NOM Comp impf-plow.3sm.sub son.NOM-his the-land-fem.Acc
 ‘The farmer decided that his son plow the land.’

³ The agree operation plays a central role in licensing the structural case of embedded subjects. In Arabic, the operation entails the valuation of uninterpretable features on both the probe (e.g., T or v) and the goal (e.g., the embedded subject). This operation ensures that the embedded subject is assigned the appropriate case, even in the absence of complete agreement and tense features.

VIII. CONCLUSION

This paper explains how ϕ -incomplete serves as clear evidence of the disassociation between case assignment and ϕ -features. It also illustrates how subject and object verb agreement is impoverished because the verb disagrees completely with the NPs. Likewise, the limited realization of tense through the verbal category presents a significant challenge to CEC case licensing, as it encodes intrinsic features that are meant to interpret and assign case, as proposed by Chomsky (2000). Tense, typically following a regular timeline occurrence, presents an issue in CEC construction, as the event occurs before that of the main clause. This discrepancy primarily impacts the embedded clause rather than the matrix, where the indicative mood is associated with [T] occurrences with v^*0 , forming [T-AGRS] that assign nominative structural case to the DP subject.

The study also provides insight into particles such as *lan* and *lam* that are associated with the subjunctive mood. This mood is attributed to the embedded verb to validate mood⁰ to project moodP, in which case it can be assigned. The research demonstrated how a CEC construction particle indicating the future is associated with the event/action of the embedded clause that is governed by the matrix clause. Consequently, it is assumed that matrix and embedded events occur separately. Notably, a remarkable feature of co-referentiality between the matrix and embedded NP subjects is highlighted in the CEC context. The obligatory embedded clause subject *pro* is considered co-referentially independent of the subject of the matrix clause. This status is contrasted with the non-obligatory clause that is coreferential with the subject of the matrix clause. The nominative case is assigned to both the *pro* and DP of such clauses by mood⁰. Our research revealed a distinction in mood between the matrix clause, which features the indicative mood, and the embedded clause. This mood is associated with [T] and forms T⁰, allowing for [T-AGR] where the DP is assigned for the nominative case.

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