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Record your Agree: A case study of the Arabic complementizer *ʔinn*[1]

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This research investigates the morpho-syntactic behaviour of the Arabic complementizer *ʔinn* in a range of Arabic varieties (Modern Standard Arabic, Jordanian Arabic, and Lebanese Arabic). It essentially argues that this complementizer SHARES (not DONATES or KEEPS, *pace* Ouali 2008, 2011) its unvalued ϕ-features with its complement T^0, something that makes *ʔinn* and T^0 separate agreeing heads. An inflectional suffix attached to *ʔinn* is treated as a PF reflex (i.e. an overt morphological realization) of valuation of *ʔinn*'s unvalued ϕ-features or lack thereof. This research also argues that the occurrence of such an inflectional suffix is ruled by the postulated AGREE CHAIN RECORD, an interface condition that demands an Agree relation to have a PF reflex, called a RECORD (i.e. an overt Case marking on the goal or, if not, a ϕ-affix on the probe). This way, we account for the complementary distribution of overt Case and ϕ-Agree in Arabic. We also show how a host of other phenomena, including word order agreement asymmetries in Modern Standard Arabic and lack of such asymmetries in Arabic vernaculars, fares well with this view.

KEYWORDS: Agree, Arabic, complementizer agreement, feature inheritance

1. INTRODUCTION

Investigating bound forms, including pronominal clitics and inflectional suffixes, has received much attention in current syntactic theory (see, in particular, Roberts 2010 and references cited therein). Such forms have been a window into how the phrase containing them, e.g. a DP or a VP, is syntactically derived and/or semantically interpreted. For instance, an occurrence of an object resumptive clitic on the verb while the object appears in a pre-verbal position in an Arabic clause has been taken as an argument that the object in such situations is base-generated in the left periphery of the respective clause, while the object resumptive clitic on the verb is used to absorb the accusative Case of the verb (see Ouhalla 1997 and

[1] I am deeply indebted to Professor Kersti Börjars, the editor of *Journal of Linguistics*, and the three anonymous *Journal of Linguistics* referees for their significant feedback that improved the work considerably and helped me put the argument on a more solid footing. I use the following abbreviations: 1, 2, 3 = first, second, third person; ACC = accusative; AS.PRT = assertion particle; ASP = aspect; COMP = complementizer; DEF = definite; DL = dual; F = feminine; GEN = genitive; IMPF = imperfective; M = masculine; NEG = negative; NOM = nominative; P = present; PL = plural; PROG = progressive; PRT = particle; PST = past; SG = singular.

Shlonsky 1997). A similar case is also manifested in several Romance languages under what is known as Clitic Left Dislocation (CLLD; see Cinque 1990). Note here that the object in such situations is mostly treated as a topic rather than a focus. See also Ouhalla (1989), Kayne (1991), Duarte & Matos (2000), and Devlin et al. (2015), among many others, for other examples where pronominal clitics and inflectional suffixes are deemed significant in making syntactic proposals of how the constructions under investigation are derived. Additionally, the distribution of such forms (i.e. pronominal clitics and inflectional suffixes) and, sometimes, their mobility across (sentential) elements have made them a reliable test which feeds into several arguments on sentence (underlying) structure and which is also used as empirical evidence for or against several syntactic processes such as pronominal incorporation and dislocation (see Fassi Fehri 1993 and Baker 1999).

Arabic is no different in this respect. Given the synthetic property of several constructions in this language, bound forms have received much attention among researchers who have worked on different syntactic domains, e.g. sentences and noun phrases (see Fassi Fehri 1993, 2012, Mohammad 1999; and Ouhalla 2001). Such attention, though, has not been paired with agreement among researchers on the (morpho-syntactic) status of some bound forms, including, but not limited to, the bound forms suffixed to the complementizer *ʔinn* 'that'.[2] Because of the overt ϕ-content of such forms, they are ambiguous between pronouns and inflections (Fassi Fehri 1993: 121). This ambiguity emerges because some forms of pronouns, i.e. bound pronouns, are similar in form to inflections. For instance, the two may appear as suffixes. In this research, the bound forms attached to *ʔinn* are explored in a range of Arabic varieties. The main argument defended here is that such forms are inflectional suffixes which are spelled out as a PF reflex (i.e. an overt morphological realization) of either valuation of *ʔinn*'s unvalued ϕ-features or lack thereof. Such valuation, if any, is executed through the Agree operation (Chomsky 2000, 2001) that is established between *ʔinn* and some other element to the extent that locality constraints allow it. This stand on the status of such bound forms implies our departure from traditional Arabic grammar and other works inspired by it, in which such forms are regarded as pronominal clitics, resulted from some pronominal incorporation into the head *ʔinn* (see Mohammad 1990, 2000).[3]

Our hypothesis that the bound forms attached to *ʔinn* are inflectional suffixes is similar to Shlonsky's (1997: 175) approach to Semitic bound forms. Shlonsky proposes that what appears as clitics or incorporated pronouns on lexical and some functional categories including *ʔinn* are all instances of agreement, labeled as

[2] *ʔinn* has several phonological alternants across Arabic varieties, including Modern Standard Arabic *ʔinna* and *ʔanna*, Lebanese Arabic *ʔənn*, and Jordanian Arabic *ʔinn*. *ʔinn* is used here as a cover term for this complementizer.

[3] Pronominal incorporation is understood in this paper following Fassi Fehri's (1993: 96) definition: 'a process by which a (phonetically realised) bound pronoun is generated in an argument position at D-structure, and later incorporated into a governor at S-structure'.

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agreement inflections. Shlonsky does not, though, provide a full-fledged account of such elements for Modern Standard Arabic (MSA) or for any other Arabic variety. He calls for a thorough investigation of this phenomenon in Arabic syntax. He states that '[t]his view of things suggests a rethinking of the syntax of the Standard Arabic COMP *ʔanna*/*ʔinna*, a matter I leave for future research' (Shlonsky 1997: 264). Looking at Shlonsky's work and other related research (see A. Ahmed 2015 and references therein), questions like why the inflectional suffix attached to the complementizer *ʔinn* occurs only in the VSO word order in MSA and why this suffix is always present in some other varieties such as Jordanian Arabic (where it appears in several variant forms) as well as Lebanese Arabic (where it often surfaces with a default form of agreement, i.e. [3SG.M]) are still open. Although there are some endeavours in related literature which have given some accounts of such bound forms, albeit exclusively for MSA, e.g. Mohammad (1990, 2000), the issue is not yet resolved given that such accounts have been posited in a way that is apparently indifferent to cross-linguistic evidence, as will be shown below (Section 3). This research sheds light on these questions, attempting to provide an answer for all of them in light of the latest advancements of the Minimalist Program, most notably Phase Theory and Feature Inheritance (Chomsky 2000, 2001, 2005, 2007, 2008, and related works by other researchers).

This paper proceeds as follows. Section 2 provides the main Minimalist assumptions we use to analyze the data. We also explain the notion of a RECORD which we argue is the condition that regulates overt Case and ϕ-Agree in Arabic. Section 3 sets the scene of the paper, introducing a brief overview of the current (or, as some call it, 'standard') view of the complementizer *ʔinn* and the status of the bound forms suffixed to this complementizer in MSA. This section also spells out the problems with this view, providing an opening route to the analysis of Jordanian Arabic (JA), in Section 4. JA represents the straightforward instance of complementizer agreement. Section 4 also postulates that *ʔinn* shares its unvalued ϕ-features with T^0, a state of affairs that turns the two heads into separate agreeing heads (i.e. probes). This analysis is extended to Lebanese Arabic (LA) in Section 5, which also discusses the differences between JA and LA with respect to how the inflectional suffix attached to *ʔinn* surfaces. In Section 6, we investigate relevant MSA facts. Here we also discuss the postulated Agree Chain Record (ACR), a condition on Agree chain formation that accounts for the occurrence of inflectional suffixes on lexical and functional categories in MSA, JA, and LA in a principled way. Section 7 concludes.

2. THEORETICAL FRAMEWORK AND THE NOTION OF 'A RECORD'

Given that the current paper uses the Minimalist Program as a theoretical construct to analyze the relevant data, we provide here the relevant assumptions of the Minimalist Program we follow. We also explain the notion of a RECORD and its motivation.

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In the Minimalist Program, heads and lexical items may enter the derivation endowed with (i.e. bearing from lexicon) uninterpretable, unvalued features, such as Case and ϕ-features. Such features should be valued (i.e. lexically specified) and deleted before the sentence derivation reaches the two interface levels of PF and LF (where the derivation is interpreted). This condition on valuation and deletion of uninterpretable, unvalued features is forced by the so-called Full Interpretation, a principle that demands nothing but interpretable elements at the two interfaces (see Chomsky 1986, 1995: Chapter 4). Valuation of such features is carried out by the Agree operation which 'establishes a relation (agreement, Case checking) between an LI [lexical item] α and a feature F in some restricted search space (its domain)' (Chomsky 2000: 101). A feature set that starts the Agree operation is referred to as a PROBE, which seeks to establish a relation with another set of 'matching' features, called the GOAL (Fuß 2005: 25). Carstens (2000: 350ff.) provides the following widely-accepted reformulation of Chomsky's (2000) definition of Agree:

(1) Agree operates between a probe α and a goal β iff
   (a) α has uninterpretable ϕ-features;
   (b) β has identical, interpretable ϕ-features;
   (c) β has an unchecked feature of structural Case;
   (d) α c-commands β;
   (e) there is no potential alternative goal Υ such that α c-commands Υ and Υ c-commands β;
   (f) the structural relation between (α, β) was not created by Merge (α, β).

Through the Agree operation, an agreement relation between two elements can be established at a distance. Consider (2) as an example of the Agree operation.

(2) There were several books on that table.

The probe *were* (whose underspecified form bears an unvalued Number feature) agrees in Number with the post-verbal subject *several books*, the goal here, which in turn carries a valued Number feature.

Additionally, under recent assumptions of the Minimalist Program, elements leave their canonical position due to the Move operation, which is a combination of the operations Agree and Merge (Chomsky 2000), i.e. Move to occur there should be an Agree relation between a head (i.e. a probe) whose Spec is the target of the Move operation and an XP element which is attracted by the EPP feature on the head itself to move to its Spec (see Roberts 2010). For instance, when the thematic subject leaves Spec,vP to Spec,TP in English, it should have entered into an Agree relation with T^0 prior to its movement to Spec,TP. The movement of the subject to Spec,TP is said to be triggered by the EPP feature on T^0. This implies that Move is parasitic on Agree, i.e. Move is Probe–Goal+EPP.

Furthermore, Chomsky (2000, 2001) argues that a sentence derivation is implemented through phases, i.e. propositional local domains with the ultimate

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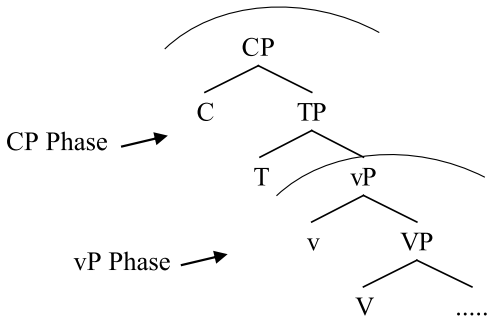
aim of reducing the computational complexity. For Chomsky, there are minimally two phases: a CP and a v*P (i.e. a vP with an external argument such as ergative and transitive verbs, but see Legate 2003 for the assumption that passives and unaccusatives are also phases in English). See (3) for a schematic representation of phases:

(3)



We shall claim below that *ʔinn* is a phase head that shares its unvalued ϕ-features with its complement T^0.

One of the key notions of the current paper is a PF RECORD. We essentially argue that overt Case and ϕ-agreement in Arabic are prompted because of securing a phonetic record of Agree relations between probes and goals. A record is defined as a phonetically overt realization of the Agree relation between a probe and its goal. For instance, the overt nominative Case morpheme *-u* on the subject *ʔalfaata* 'the girl' in the following MSA sentence counts as a phonetically overt realization (hence a record in our terms) of the Agree relation between T^0 and the post-verbal subject:

(4) ðahab-t ʔal-fataat-u ʔila ʔas-sooq-i (MSA)
go.PST-3SG.F DEF-girl-NOM to DEF-market-GEN
'The girl went to the market.'

Likewise, the suffix *-e* attached the complementizer *datt* in example (5) below from Katwijk Dutch is under our approach a record of the Agree relation between the complementizer and the pre-verbal subjects *we/jullie/hullie* (the example is taken from Haegeman & van Koppen 2012: 441, cited originally from Barbiers et al. 2006):

(5) . . . datt-e we/jullie/hullie gewoon lev-e
COMP-PL we/you.PL/they normal live-PL
'. . . that we/you/they live normally.'

The main motivation for the notion 'a record' is that dependency relations between elements should be realized beyond narrow syntax, i.e. at PF. We will argue below that this occurs in Arabic syntax. A record can be secured by overt Case on the goal. When overt Case is not available, a record is secured through a ϕ-agreement

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suffix (i.e. ϕ-affix) that expresses the morphological realization of the goal's ϕ-properties on the probe. We shall show that JA and LA make use of the latter strategy (using an ϕ-affix) to secure a record of Agree relations due to the lack of overt Case markings in these two Arabic dialects. On the other hand, MSA uses overt Case to perform this task as long as the goal can bear an overt Case marking morpheme. In this way, we account for the apparent complementary distribution between overt Case and ϕ-Agree in Arabic. We propose that such a distribution is subject to the postulated interface condition AGREE CHAIN RECORD, which forces an Agree chain to have a morphological realization through morphological case or, if there is none, ϕ-Agree. This essentially speaks for the assumption that overt Case (in Arabic) blocks ϕ-Agree instead of being supplementary to Agree as proposed by a number of researchers in related literature.

In the following section, we explore the existing view of the bound forms attached to the complementizer *ʔinn*, being pronominal elements. This view is shown to be problematic as it suffers from several problems.

3. SETTING THE SCENE

The view that enjoys near unanimity among modern and traditional Arabic grammar linguists with respect to MSA *ʔinn* is that it is a head (i.e. a complementizer) that assigns accusative Case. This view is supported by, for example, the fact that a pre-verbal subject is invariantly assigned accusative Case when it is preceded by *ʔinn*, as shown in the following pair:

(6) (a) ʔal-walad-u qaraʔa ʔad-dars-a (MSA)
DEF-boy-NOM read.PST.3SG.M DEF-lesson-ACC
'The boy read the lesson.'

(b) ʔinna ʔal-walad-a qaraʔa ʔad-dars-a (MSA)
COMP DEF-boy-ACC read.PST.3SG.M DEF-lesson-ACC
'The boy read the lesson.'

In (6a), the clause-initial subject *ʔalwalad* 'the boy' is assigned nominative Case (i.e. *-u*), while it is assigned accusative Case in (6b) (i.e. *-a*) being directly preceded by the complementizer *ʔinn*.

In a clause with VSO word order,[4] an inflectional suffix is forced to appear on *ʔinn*, irrespective of the subject being used or dropped, as the following examples demonstrate:

[4] A consensual view appears to hold among researchers on Arabic sentence structure that VSO is the unmarked word order in MSA. See Bakir 1980, EI-Yasin 1985, Moutaouakil 1989, Shlonsky 1997, Mohammad 2000, and Aoun et al. 2010 for discussion (we will return to this assumption in Section 6). For Fassi Fehri (Fassi Fehri 1993: 19) VSO is the unmarked word order in MSA, as it is 'the order found in so-called pragmatically neutral sentences, i.e. in sentences which require few mechanisms of interpretation and derivation'. By contrast, SVO word order in MSA is a marked option, where the subject serves as a topic rather than a true subject. On the other hand, several works onArabic dialects indicate that SVO is the unmarked word order.

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(7) (a) ʔinna-hu qaraʔa (ʔal-walad-u) ʔad-dars-a (MSA)
COMP-3SG.M read.PST.3SG.M DEF-boy-NOM DEF-lesson-ACC
'The boy read the lesson.'

(b) ʔinna-ha qaraʔ-at (ʔal-fataat-u) ʔal-riwajjat-a (MSA)
COMP-3SG.F read.PST-3SG.F DEF-girl-NOM DEF-novel-ACC
'The girl read the novel.'

Within traditional Arabic grammar, such an inflectional suffix counts as a pronominal element (Ibn Al-Anbari 1961; see also Owens 1988). Likewise, working within the generative practice, Mohammad (1990, 2000) and Benmamoun (1993), among others, argue that this suffix in such situations is a phonetic form of an expletive that is assigned accusative Case by *ʔinn*. The expletive is assumed to be in Spec,TP/IP and is forced to surface because it is assigned accusative Case. Mohammad (1990: 104) states: 'Since *ʔanna* has the property of assigning accusative Case, it can be used in order to create a non-nominative context. Such a context will bar *pro* from occurring in this position and force a lexical pronoun to appear'. It is clear that Mohammad's (1990, 2000) and Benmamoun's (1993) arguments are actually similar in substance to what traditional Arabic grammarians said long ago on the status of this suffix being a bound pronoun. However, in this article evidence is presented defending an alternative view, i.e. this suffix is not a bound pronoun but an agreement inflection. Despite the intuitive appeal of the traditional Arabic grammar's 'pronominal' view, it suffers from empirical evidence.[5] Neither Arabic prescriptive grammarians nor recent Arabic scholars who maintain the same position support this view with strong (empirical) evidence nor do they show to what extent MSA is similar to other natural languages or even to Arabic dialects in this respect.

One immediate challenge against this view (i.e. the inflectional suffix attached to *ʔinn* is a bound pronoun) is that it does not show how this analysis would carry over to other Arabic vernaculars where *ʔinn* does not retain its MSA behaviour.

See EI-Yasin 1985 and Jarrah 2017 for JA, Aoun et al. 1994 for LA, Shlonsky 1997 and Mohammad 2000 for Palestinian Arabic, Benmamoun 2000 for Egyptian Arabic, Mahfoudhi 2002 for Tunisian Arabic, and Fassi Fehri 1993 for Moroccan Arabic.

[5] One important remark here is that our argument that the bound forms attached to *ʔinn* are not pronominal does not preclude the 'strong' possibility that such forms are a result of a diachronic reanalysis (a case of grammaticalization) of cliticized pronouns in C^0 during some stage of development of these forms. According to Fuß (2005: 4), the historical development of agreement markers is usually assumed to follow universally from the following grammaticalization path (see Lehmann 1988 and Corbett 1993, among others):

Independent pronoun → weak pronoun → clitic pronoun → affixal (agglutinative) agreement marker → fused agreement marker → Ø

Under this approach, an affixal agreement marker is grammaticalized from a clitic pronoun which is originally developed from a weak pronoun. We leave this issue open for further research.

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For example, a suffix in JA is attached to *ʔinn* even in clauses with SVO word order, a syntactic environment where the suffix is prohibited to appear in MSA. Witness the following examples from JA:

(8) (a) ʔiʃ-ʃab ʔiʕtaraf ʔinn-hum (JA)
DEF-young.man confess.PST.3SG.M COMP-3PL.M
ʔiχwat-uh z^{h}arab-u ʔil-walad
brothers-his hit.PST-3PL.M DEF-boy
'The young man confessed that his brothers hit the boy.'

(b) min ʔil-mustaħiil ʔinn-ha ʔil-mudiirah (JA)
from DEF-impossible COMP-3SG.F DEF-director.F
ma waggaʕ-at-iʃ ʔil-garaar
NEG sign.PST-3SG.F-NEG DEF-decision
'It is impossible that the director did not already sign the decision.'

(c) ʕasa ʔinn-hinn banaat-ak ma rasabinn-iʃ (JA)
wish COMP-3PL.F daughters-your NEG fail.PST.3PL.F-NEG
'Wish your daughters did not fail (in the exam).'

In all examples in (8), an inflectional suffix is attached to *ʔinn* in the context of SVO word order.

A similar case is found in LA where the suffix has an invariant form, *-o* [3SG.M], irrespective of the word order used:[6,7]

(9) (a) biftikir ʔənn-o l-walad ʕam byi-lʕab (LA)
believe.1SG.M COMP-3SG.M DEF-child ASP 3-play
'I believe that the child is playing.'
(Aoun, Benmamoun & Choueiri 2010: 13)

(b) biʕtiʔid ʔənn-o l-bənt b-l-beet (LA)
believe.1SG.M COMP-3SG.M DEF-girl in-DEF-house
'I believe that the girl is in the house.'
(Aoun et al. 2010: 16)

[6] The transcription of some examples taken from other resources is adapted to be consistent with the IPA system followed in this paper.

[7] Aoun et al. (2010) show that when the clause following *ʔənn* has a dropped subject, the suffix attached to *ʔənn* occurs in different forms, depending on the featural content of the understood subject; consider the following example:

(i) biʕtiʔid ʔinn-un ʕam byi-lʕabo
believe.1SG COMP-them.F ASP 3-play.PL
'I believe that they are playing.' (Aoun et al. 2010: 15)

We will return to this observation in Section 5.

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Aoun et al. (2010) argue that the suffix *-o* appearing on *ʔənno* is a [3SG.M] inflection, and it is not a lexical component of the complementizer (see their discussion on page 137). See also Aoun, Benmamoun & Sportiche (1994), which labels this suffix (i.e. *-o*) as an agreement morpheme. Data from JA and LA dismisses the pronominal view of the suffix attached to *ʔinn*, given that Spec,TP (the potential site of the expletive *pro* under the pronominal view) is filled with a pre-verbal subject.

Additionally, the pronominal view is conceptually incomplete. What we can understand from it is that *pro* lexicalization is forced by Case requirements, something that is barely attested outside Arabic language. One might think of a possibility that *pro* lexicalization is an idiosyncratic property of Arabic, whereby accusative Case is not assigned to elements with no phonological content. Or *pro*'s lexicalization can be treated as an idiosyncratic property of accusative Case assignment with no relevance to Arabic. However, the two possibilities are directly dismissed when faced with how syntax works. Firstly, the way syntax works predicts that any phonological constraint (on elements receiving Case) should be outside narrow syntax (i.e. a post-Spell-Out operation). This is because *pro*'s lexicalization is best seen as a phonological requirement rather than a syntactic necessity. Whether or not *pro* is forced to be pronounced is a PF matter, as argued for by a number of researchers, including Holmberg (2005), who states that 'nullness is a phonological matter: the null subject is a pronoun that is not pronounced' (p. 538). So we do not need to make recourse to Case, a narrow syntax process when it comes to the choice between nullness and overtness. Additionally, given that *pro*'s lexicalization occurs after the spellout point, it has no semantic value, a fact that even Mohammad's (1990, 2000) approach (advocating the pronominal view) accepts. Even more serious is the assumption that *pro* should be lexicalized under an accusative Case assigner, a claim that is barely attested beyond Arabic. To the best of our knowledge, it has never been argued that a *pro* would be forced to surface when it is assigned accusative Case. A case in point is Italian. In this language, an object *pro* is attested and assumed to receive accusative Case with no lexicalization being forced (Rizzi 1986). The following sentence illustrates:

(10) Questo conduce a concludere che. . . (Italian)
this leads **pro** to conclude that
'This leads one to conclude that . . .'
(Shlonsky 1997: 252)

We find the same phenomenon in other *pro*-drop languages such as Imbabura Quechua (a South American indigenous language with the SOV word order) and European Portuguese, as shown in (11a) and (11b), respectively.

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(11) (a) Juzi rikurka. (Imbabura Quechua)
Jose **pro** saw
'Jose saw him/her/it.'
(Cole 1987: 597)

(b) a Joana viu na TV ontem. (European Portuguese)
the Joana saw **pro** on.the TV yesterday
'Joana saw him/her/it on TV yesterday.'
(Cole 1987: 598, cited from Raposo 1986)

The examples in (10)–(11) strongly undermine the assumption that *pro* lexicalization is sensitive to which Case is assigned to *pro*. Additionally, the pronominal view of the suffix attached to *ʔinn* has no way of accounting for why the proposed expletive surfaces as a bound form rather than a freestanding pronoun as it appears in tonic situations. The conclusion we arrive at here is that tying *pro* lexicalization to Case is less motivated both theory-internally and cross-linguistically, and even erroneous within a unified theorem of *pro* licencing.

Thus, the natural question to ask at this point concerns the status of the bound suffix attached to *ʔinn* in the VSO word order in MSA and why such a suffix does not appear when the SVO word order is used. We show below that this state of affairs follows from a condition that demands a morphological realization of Agree relations in Arabic to be obtained. We call this condition AGREE CHAIN RECORD (ACR); it can be satisfied by overt Case assigned to the goal by the probe. In such situations, there is no need to use a ϕ-affix of a goal on the probe. We show that the latter strategy is only used when the goal does not receive overt Case in Arabic. Data from JA and LA supports this proposal.[8] In these two dialects, there are no overt Case markings on nominals, hence Agree relations are recorded by a ϕ-affix of the goal on the probe. Discussion of ACR is delayed

[8] JA and LA are selected from other Arabic dialects as these two dialects are representative of many other eastern Arabic dialects. For example, Palestinian Arabic is similar to LA in that an invariant suffix must be attached to *ʔinn* as long as the clause has no dropped subject. In JA, this suffix is overtly inflected for agreement with the subject; JA is thus a unique case in this respect.

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till Section 6, which investigates the relevant data from MSA, where the alternation between overt Case and ϕ-agreement becomes clear.[9,10]

4. JORDANIAN ARABIC (JA)

Let us explore first complementizer agreement in JA. As it is the case with other eastern Arabic modern dialects, *ʔinn* in JA is only permitted to appear in non-root contexts, unlike in MSA, as the following examples from JA demonstrate:

(12) (a) (*ʔinn) ʔil-walad qaraʔ ʔid-daris (JA)
COMP DEF-boy read.PST.3SG.M DEF-lesson
'The boy read the lesson.'

(b) (*ʔinn) ʃuf-t ʔiz-zalamih (JA)
COMP see.PST-1SG DEF-man
'I saw the man.'

(c) (*ʔinn) miin katab ʔil-waadʒib (JA)
COMP who write.PST.3SG.M DEF-homework
'Who wrote down the homework?'

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[9] An anonymous *JL* referee asks whether any other complementizers have agreeing forms in Arabic dialects under investigation. As for JA and LA, there are no other agreeing complementizers. For instance, the complementizer *ma*, used in free relatives, and the relativizer *illi* do not express agreement with the subject or the preposed object. Note here that the fact that a language may have an agreeing complementizer and non-agreeing complementizers is already reported by several works. A case in point here is Lubukusu (a Bantu language spoken in the Western province of Kenya; Diercks 2010: 4) where the complementizer *oli*, which is used in comparatives, is a non-agreeing complementizer, whereas *li* 'that' is an agreeing complementizer (Diercks 2013). As for MSA, it was reported that *liʔanna* 'because', *kaʔanna* 'as if', *lakinna* 'but', *layta* 'if only', *laʕalla* 'perhaps/might' are complementizers (see H. E. Ahmed 2015). It is interesting that all of these complementizers show the same behaviour as *ʔinn* with respect to Case assignment and ϕ-agreement. The generalization we will make for *ʔinn* in MSA below is carried over to these complementizers. Additionally, the relativizer *ʔallaði* inflects for the ϕ-features of the DP the whole relative clause predicates about. However, as any proposal about this relativizer would take the discussion too far afield because it requires a background on relativization and further assumptions, we leave the discussion about it aside to another encounter.

[10] There are some languages where the complementizer agrees only with a certain element in specific contexts. For instance, in Bavarian (a West Germanic language, spoken in the southeast of German) complementizer agreement is limited to 2nd person contexts (Bayer 1984; and Fuß 2004, 2005, 2014). Consider the following examples from Bavarian (Fuß 2014: 52):

(i) (a) ob-st du noch Minga kumm-st (Bavarian)
whether-2SG you to Munich come-2SG
'whether you come to Munich'

(b) ob-ts ees/ihr noch Minga kumm-ts
whether-2PL you.PL to Munich come-2PL
'whether you(PL) come to Munich'

Fuß (2004) argues extensively that this restriction follows from a conspiracy of morphological and syntactic factors that guided the reanalysis of subject clitics as markers of verbal agreement in the history of Bavarian.

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On the other hand, *ʔinn* in JA and in other Arabic dialects introduces a wide range of embedded clauses such as clausal complements of verbs, adjectives, and nouns. It is also used to introduce some adverbial clauses (with the subordinator):

(13) (a) ʔabuu-i fakkar/ʔistaʁrab/ħizin ʔinn-uh (JA)
father-my believed/got surprised/regretted.3SG.M COMP-3SG.M
ʔil-walad sarag ʔis-sijjaarah
DEF-boy stole.3SG.M DEF-car
'My father believed/got surprised/regretted that the boy stole the car.'

(b) min ʔil-muhim ʔinn-uh (JA)
from DEF-important COMP-3SG.M
ʔil-waħad jilʕab ʔirjadˁah
DEF-one play.3SG.M sport
'It is important that one (anybody) does exercise.'

(c) lageet ʔid-dalil ʔinn-uh (JA)
found.1SG DEF-evidence COMP-3SG.M
ʔil-walad sarag ʔis-sijjaarah
DEF-boy stole.3SG.M DEF-car
'I found the evidence that the boy had stolen the car.'

(d) ʔabuu-i mabsˁuutˁ bilruʁam ʔinn-uh ʔaχuu-i ma
father-my happy although COMP-3SG.M brother-my NEG
dʒaab-iʃ ʕalaamih ʕaaljih ʔib-mawaad-uh (JA)
got.3SG.M-NEG mark high in-courses-his
'My father is happy although my brother did not get a high grade in his courses.'

ʔinn signals that the adjoining clause is subordinate in the sense that it depends on the matrix clause to form a well-formed sentence. From this it follows that *ʔinn* is a clause typer (i.e. an element that denotes the type of the clause being declarative, interrogative, imperative, subordinate, etc.).[11] Adopting Rizzi's (1997) split CP system, in which CP is replaced by Force Phrase > Topic Phrase > Focus Phrase > *Topic Phrase > Finiteness Phrase, *ʔinn* counts as the head of the Force Phrase and, as such, a phase head in the sense of Chomsky (2000, 2001).

Following the hypothesis that a phase head is the locus of ϕ-features, among other things (Chomsky 2007, 2008), we propose that *ʔinn* being a phase head is endowed, among others, with a set of uninterpretable, unvalued ϕ-features. Such features must be valued and deleted before derivations converge at LF, a state of affairs forced by the principle of Full Interpretation (Chomsky 1986, 1995). Given that such features are uninterpretable, they must be deleted, otherwise they survive until LF which in turn cannot read them, causing the sentence to crash.

[11] We leave it aside why this complementizer does not appear in root clauses.

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Chomsky (2007) assumes that the valuation of such features does not occur while they are on C^0; he proposes that such features pass down to T^0 under what is known as FEATURE INHERITANCE.

On the other hand, several works have challenged feature inheritance given that in some languages complementizers are agreeing elements, something that implies that there is no feature inheritance as such, and this condition should be relaxed. Among these works is the illuminating research by Ouali (2008, 2011), who convincingly argues that feature inheritance as formulated by Chomsky should entail three logical possibilities: DONATE, KEEP, and SHARE. Through DONATE, C^0 passes down its features to T^0 without keeping a copy of them; through KEEP, C^0 does not transfer its features to T^0; and through SHARE, C^0 transfers its features to T^0 but keeps a copy. Ouali (2011) shows how each possibility can account for some phenomenon in Tamazight Berber, including clitic doubling and anti-agreement effects. Ouali's analysis brings insights into our understanding of the behaviour of *ʔinn* in Arabic dialects. Suppose that *ʔinn* as a phase head is endowed with a set of unvalued ϕ-features which must be valued and deleted due to the principle of Full Interpretation.[12] Suppose also that JA opts for the SHARE possibility and thereby *ʔinn* percolates down its uninterpretable, unvalued ϕ-features to T^0 but keeps a copy of them.[13] Note here that Chomsky himself (in Chomsky 2013) adopts proposals by Ouali (2008, 2011), assuming that C^0 may keep a copy of the ϕ-set that is transferred to T^0, which then initiates a separate Agree operation (see Fuß 2014).[14]

An important note here is that examples (13) demonstrate that SHARE does not presuppose that the two heads share the same value of ϕ-features as sharing occurs before valuation; so each head can probe separately. Cross-linguistic evidence supporting this view (that C^0 and T^0 may agree with separate goals) is found in West Flemish External Possessor agreement. Haegeman & van Koppen (2012)

[12] The view that CP contains an Agr projection was originally developed in Shlonsky (1994) and was utilized to explain the distribution of complementizer agreement and subject clitics in West Flemish complementizer–subject agreement, the same phenomenon later analyzed by Haegeman & van Koppen (2012) under the Agree approach (Chomsky 2000, 2001).

[13] An anonymous *JL* referee asks where and how in the grammar is it specified that JA opts for SHARE. Actually, the theoretical reason behind opting for SHARE (or KEEP) was not even discussed in Ouali's work of Tamazight Berber or other pertinent works such as Haegamen & van Koppen's (2012) work on West Flemish. These works assume that there is SHARE because C^0 and T^0 can agree with the same or different elements. When C^0 does not always inflect for agreement, it is said that C^0 donates its ϕ-features to T^0. The culprit here is the surface form of the complementizer, whether it is inflected for ϕ-Agree or not.

[14] Our assumption that C^0 copies its unvalued ϕ-features to T^0 does not imply that other features of C^0 are copied to T^0 as well. Related research (e.g. Jiménez-Fernández & Miyagawa 2014) shows that some of C^0's features pass down (without keeping a copy) to its complement T^0 (under DONATE), whereas other features may remain on C^0 (under KEEP). Among the features that are mostly passed down to T^0 is the EPP feature. The results is that the subject moves to Spec,TP after C^0 donates its EPP feature to T^0, hence the subject's position in Spec,TP does not at any rate block any dependency between C^0 and T^0, i.e. the dependency relation between C^0 and T^0 is established before the merger of the pre-verbal subject in Spec,TP.

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proposed that T^0 and C^0 are associated with a separate set of uninterpretable features each. They observed that when the subject is a possessive construction, C^0 agrees with the external possessor, which is the most local goal for C^0, while T^0 agrees with the possessum, which is the subject here. Consider the following example (from Haegeman & van Koppen 2012: 4):

(14) . . . omda-**n** die venten tun juste
because-PL those guys then just
underen computer kapot **was**
their computer broken was.SG
'. . . because André and Valère's computer broke down just then.'

The complementizer *omda* agrees with the possessor *die venten* 'those guys', resulting in the situation that the inflectional suffix attached to *omda* comes out with the plural form. On the other hand, the Tense of *was* 'was' agrees with the possessum *underen computer* 'their computer'. T^0 and C^0 probe for goals separately (see Haegeman & van Koppen 2012).

Valuation of *ʔinn*'s uninterpretable ϕ-features is executed through the Agree operation (see Section 2 above). Now let us work out a concrete example. Consider the following sentence:

(15) ʔiʃ-ʃab ʔiʕtaraf ʔinn-hum ʔiχwat-uh
DEF-young.man confess.PST.3SG.M COMP-3PL.M brothers-his
z^{h}arab-u ʔil-walad (JA)
hit.PST-3PL.M DEF-boy
'The young man confessed that his brothers hit the boy.'

ʔinn, keeping a copy of its unvalued ϕ-features, probes the subject *ʔiχwatuh* 'his brothers' that bears a valued set of ϕ-features (the subject is situated in Spec,TP). As a result, *ʔinn*'s ϕ-features are valued by those of the subject (the goal here), yielding the surface form *-hum*, whose morphological specification copies that of the subject, that is [3PL.M].

It is worth noting that the realization of C^0's agreement features can be spelled out as an agreeing form that is attached to the complementizer is attested in several languages, as shown in the following examples from different languages:

(16) (a) . . . dat-te wy speul-t (East Netherlandic Dutch)
COMP-PL we play-1PL
'. . . that we play.'
(van Haeringen 1958, cited in Zwart 2006: 330)

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(b) Heit sei dat-st do soks net leauwe moa-st (Frisian)
dad said COMP-2SG you such not believe must-2SG
'Dad said that you should not believe such things.'

(Zwart 1993: 291)

Kpeinzen dan-k (ik) morgen goa-n. (West Flemish)
I-think COMP-1SG I tomorrow go-1SG
'I think that I'll go tomorrow.'

(Baker 2008: 146).

Further empirical evidence that the inflectional suffix attached to *ʔinn* is sensitive to the ϕ-content of the subject comes from the following JA example, where the suffix expresses the same ϕ-content of the new subject *ʔilbinit* 'the girl':

(17) ʔiʃ-ʃab ʔiʕtaraf ʔinn-ha
DEF-young.man confess.PST.3SG.M COMP-3SG.F
ʔil-binit z^{h}arab-t ʔil-walad (JA)
DEF-girl hit.PST-3SG.F DEF-boy
'The young man confessed that the girl hit the boy.'

Had the inflectional suffix expressed a different ϕ-value than that of the subject's (in an SVO clause), the resulting sentence would be ungrammatical, as demonstrated in the following ill-formed example:

(18) *ʔiʃ-ʃab ʔiʕtaraf ʔinn-ha
DEF-young.man confess.PST.3SG.M COMP-3SG.F
ʔiχwat-uh z^{h}arab-u ʔil-walad (JA)
brother-his hit.PST-3PL.M DEF-boy
Intended: 'The young man confessed that his brothers hit the boy.'

We assume, following the proposals by Haegeman (1992), Zwart (1993), Hoekstra & Smits (1997), Watanabe (2000), van Craenenbroeck & van Koppen (2002), Carstens (2003), and van Koppen (2005), that the affix attached to *ʔinn* is a PF reflex of uninterpretable ϕ-features on C^{0}.

The question that arises now is whether *ʔinn* probes the subject while the latter is in Spec,vP (the canonical position of subjects in JA; Jarrah 2017) or Spec,TP (the landing site of a pre-verbal subject in JA; Jarrah 2017). Given that T^{0} is an active probe, it is most likely that *ʔinn* probes the subject while the latter lies in Spec,TP because *ʔinn* cannot probe over T^{0}, given relativized minimality (taken here to be a locality intervention that is triggered when the intervener is of the same type as the probe or the goal with respect to the typology condition; see Rizzi 1990). In this respect, Boeckx (2003: 17) notes that 'an element β (c-commanding γ and c-commanded by α) blocks the establishment of an Agree-relation between two other elements α and γ even if β itself could not agree with α'. The lower

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probe (i.e. T^0) invokes a minimality effect against *ʔinn*'s probing the post-verbal subject. Furthermore, evidence that *ʔinn*'s probing is ruled by locality comes from *ʔinn*'s agreement with a preposed focalized object, as in (19a), or a topicalized object, as in (19b), when the latter appears in a pre-subject position:

(19) (a) ʔiʃ-ʃab ʔiʕtaraf ʔinn-uh
DEF-young.man confess.PST.3SG.M COMP-3SG.M

WALAD z^{h}arab-t ʔil-binit (JA)
boy hit.PST-3SG.F DEF-girl

'The young man confessed that it was a boy that the girl hit.'

(b) mustaħiil ʔinn-ha ʔatʕ-tʕaalibih
impossible COMP-3SG.F DEF-student.F

ʕatʕaa-ha ʔil-markaz musaaʕadih (JA)
give.PST.3SG.M-her DEF-centre help

'It is impossible that the student the centre gave (her) help.'

Intended: 'It is impossible that the (social) centre helped the student with some money.'

In (19), *ʔinn* agrees with the fronted object rather than the post-verbal subject with which T^0 agrees. Additionally, sentences (19) point to the assumption that the Case Activation Principle (a goal should have unvalued Case to enter into an Agree relation) is also not operating in JA, given that a goal can enter into another Agree relation with a different probe even if its structural Case is already assigned (see Carstens 2003 for an argument that the goal's unvalued structural Case is not a prerequisite of the Agree operation). The preposed focalized object in (19a) is argued to be base-generated as a complement of the verb in Arabic (see Ouhalla 1997). Note that it leaves a gap in its base position, an issue that is widely taken as evidence of A-bar movement of the preposed object to its surface position (see Aoun et al. 2010). Additionally, being a focus, the object here expresses a new piece of information that is not already shared with the hearer, hence the use of a non-specific/indefinite object. Although the object has already had its Case valued, it can enter into another Agree relation with *ʔinn*. This indicates that *ʔinn* agrees with either the subject or the object under closest c-command, i.e. the most local goal. As for (19b), *ʔinn* agrees with the dislocated object which functions here as a topic, expressing old, given information between the hearer and the speaker (hence the use of the object as a definite/specific entity). Note that the topicalized object is generated in situ and doubled by the so-called resumptive clitic on the verb (see Ouhalla 1997, among others). This indicates that *ʔinn* can agree with a topic or a focus. (20a) shows that *ʔinn* agrees with the subject unless the object intervenes between them (see (20c)/(19a,b)) in which case *ʔinn* agrees with the closer object. (20b), on the other hand, shows that *ʔinn* cannot agree with the object while the subject appears between them.

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(20) (a) [$_{CP}$ ʔinn $_{TP}$ Subj T $_{vP}$ <Subj> v $_{VP}$ V Obj]

(b) [$_{CP}$ ʔinn $_{TP}$ Subj T $_{vP}$ <Subj> v $_{VP}$ V Obj]

(c) [$_{CP}$ ʔinn Obj TP Subj T ……]

Table 1 shows the paradigm of subject/fronted object–*ʔinn* agreement in JA.[15]

Subject/fronted object		
Person.Gender	Singular	Plural
1.M	ni	na
2.M	ta	tu
3.M	uh	hum
1.F	ni	na
2.F	ti	in
3.F	ha	him

Table 1
The paradigm of subject/object–*ʔinn* agreement in Jordanian Arabic.

Let us now turn to JA instances with VSO word order. In VSO word order, the suffix attached to *ʔinn* in JA is also variant, reflecting the ϕ-content of the subject, as the following sentences show:

(21) (a) ʔiʃ-ʃab ʔiʕtaraf ʔinn-ha
DEF-young.man confess.PST.3SG.M COMP-3SG.F
z^{h}arab-t ʔil-binit ʔil-walad (JA)
hit.PST-3SG.F DEF-girl DEF-boy
'The young man confessed that the girl hit the boy.'

(b) Raaliban ʔinn-ha tooχudʕ
often COMP-3SG.F take.3SG.F.IMPF
ʔiʃ-ʃakwah χamis ʔajjaam (JA)
DEF-complaint.F five days
'It is often that the complaint takes five days (to process).'

[15] We use the term 'fronted object' to refer to the object occurring in a pre-subject position either by some movement or by base-generation.

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Given that T^0 invokes a minimality intervention effect that blocks *ʔinn* from probing the post-verbal subject, we cannot assume here that *ʔinn* agrees with the post-verbal subject even if the latter carries an inflection suffix that expresses the ϕ-content of the post-verbal subject. In this regard, several works have argued that in an Arabic VSO sentence, Spec,TP is filled with an expletive *pro* (Mohammad 2000: 91–93). We carry over this analysis to JA, assuming that *ʔinn* agrees with an expletive *pro* situated in Spec,TP. Evidence in favour of the existence of an expletive *pro* in Arabic can be adduced from the observation made by Fassi Fehri (1993: 40) that *pro* in Arabic can be surfaced and has ϕ-content; *pro* is inflected for Number and Gender. Fassi Fehri cites some examples from so-called nominal sentences, i.e. sentences that lack overt verbs (in the matrix clause), to support his analysis that expletive pronouns in Arabic bear ϕ-content.[16] Consider the following examples:

(22) (a) hum ʔal-dʒunood-u (MSA)
they.M DEF-soldiers-NOM
'It is the soldiers.' or 'That's the soldiers.'

(b) hunna ʔan-nisaaʔ-u (MSA)
they.F DEF-women-NOM
'It is the women.' or 'That's the women.'

(c) hum ʔal-dʒunood-u χaradʒ-u li-l-s^{h}alaat-i (MSA)
they.M DEF-soldiers-NOM went.out-3.PL.M to-DEF-prayer-GEN
'It is the soldiers (who) went out to pray.'

JA maintains a similar behaviour, as demonstrated below:

(23) (a) hum ʔan-naʃaama (JA)
they.M DEF-brave.man
'It is the brave men.'

(b) hinnih ʔin-nasʃmiyaat (JA)
they.F DEF-brave.women
'It is the brave women.'

For Fassi Fehri, there is an expletive *pro* that occupies Spec,TP (Spec,IP in his system). The *pro* in such sentences functions as a grammatical subject that is co-indexed with the thematic subject. The pronunciation of this expletive *pro* is a marked option that is always associated with emphasis. Let us suppose that Spec,TP in sentences (21) above is filled with a *pro* which is co-indexed with the post-verbal subject. Given that expletives are assigned Case (Bošković 1997, 2002; and Martin 1999) and have ϕ-content (Fassi Fehri 1993), they are qualified as a suitable goal with which *ʔinn* agrees. This situation eventually results in that

[16] For the sake of completeness, we note that Fassi Fehri indicates that the expletive *pro* that occurs in nominal sentences lacks Person feature.

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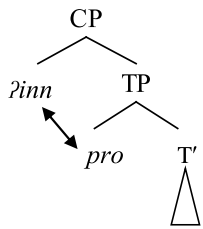
the inflectional suffix on *ʔinn* expresses the ϕ-content of the post-verbal subject with which the expletive *pro* is ϕ-co-indexed. *ʔinn*'s probing the expletive *pro* in Spec,TP is schematically represented in (24).

(24)



The question to be asked here is why the post-verbal subject in (21) above does not move to Spec,TP. The answer to this question lies in an answer to a different question, which concerns the position of a post-verbal subject in JA in VSO word order. One might assume that the post-verbal subject in (21) is located in Spec,vP. However, this assumption is dismissed on the grounds that the post-verbal subject in such cases (i.e. in VSO clauses) should be specific (and in most cases, definite), expressing old, given information. Sentences equivalent to those in (21) above with an indefinite post-verbal subject are ungrammatical or, as some of the informants call it, pragmatically odd (indicated by #).[17]

(25) (a) #ʔiʃ-ʃab ʔiʕtaraf ʔinn-ha
DEF-young.man confess.PST.3SG.M COMP-3SG.F
z^{h}arab-t binit ʔil-walad (JA)
hit.PST-3SG.F girl DEF-boy
Intended: 'The young man confessed that a girl hit the boy.'

[17] Unlike in the case of VSO word order, the subject in SVO word order may be definite or indefinite in JA:

(i) (ʔil-)walad qiri ʔid-daris
DEF-boy read.PST.3SG.M DEF-lesson
'The/a boy (had) read the lesson.'

(ii) qiri *(ʔil-)walad ʔid-daris
read.PST.3SG.M DEF-boy DEF-lesson
'The boy (had) read the lesson.'

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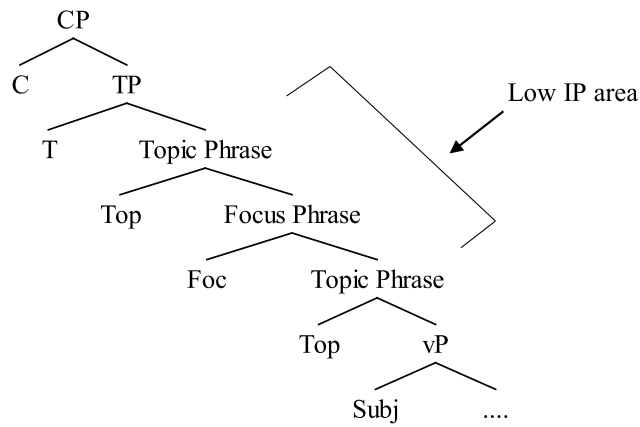
(b) #Raaliban ʔinn-ha tooχudˤ
often COMP-3SG.F take.3SG.F.IMPF
ʃakwah χamis ʔajjaam (JA)
complaint.F five days
Intended: 'It is often that a complaint takes five days (to process).'

In order to accommodate the observation that sentences (25) reveal, we resort here to Belletti's (2004) hypothesis of the so-called low IP area. Belletti argues for a discourse-related field that is located between TP and vP, where a recursive Topic Phrase and a Focus Phrase can be projected, as shown in the following diagram:

(26)



Given that the post-verbal subject in (21) should be specific (and definite), it can be suggested that the subject in such instances is a topic located in the low IP area, after leaving its canonical position, Spec,vP. Some evidence in favour of this option can be adduced from the fact that the post-verbal subject in a VSO clause should be accompanied by a downgrading intonation that, as Belletti (2004) mentions, is not a property of normal subjects. Assuming that there is no movement from an A-bar position to an A position (Hicks 2009), the topicalized subject in Spec,Topic Phrase (of the low IP area) is unable to move to Spec,TP, hence its inability to fill Spec,TP – the reason, we think, why the expletive *pro* is called for.[18] The derivation of VSO word order in JA is represented as follows (irrelevant details are omitted) (silent copies are set in < >):

[18] When the subject is nonspecific (and indefinite), it is preferred clause-initially with a contrastive reading (before the verb) or in a VOS clause with no contrastive reading:

(i) (a) ʔiʃ-ʃab ʔiʕtaraf ʔinn-ha
DEF-young.man confess.PST.3SG.M COMP-3SG.F
BINIT zʰarab-t ʔil-walad
girl hit.PST-3SG.F DEF-boy
'The young man confessed that it was a girl who hit the boy.'

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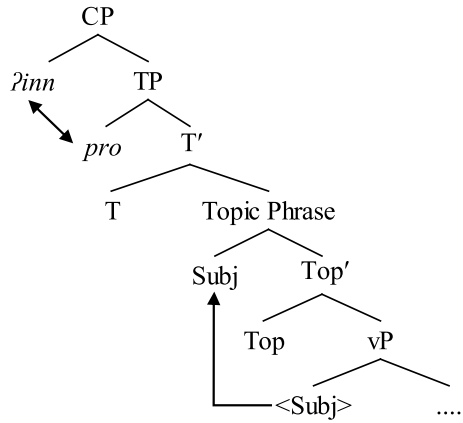
(27)



There is one last fact concerning JA complementizer agreement. In JA, when the subject is dropped (i.e. an understood subject/a referential *pro*), *ʔinn* should agree with this subject even if there is a preposed object, as shown in the following example:

(28) (a) biχsʕsʕoosʕ ʔil-bint fiih daliil
as.for DEF-girl there evidence
ʔinn-ha ʔil-walad zʰarab-t-uh (JA)
COMP-3SG.F DEF-boy *pro* hit-3SG.F-him
'As for the girl, there is evidence that the girl hit the boy.'

(b) *biχsʕsʕoosʕ ʔil-bint fiih daliil
as.for DEF-girl there evidence
ʔinn-uh ʔil-walad zʰarab-t-uh (JA)
COMP-3SG.F DEF-boy *pro* hit-3SG.F-him
Intended: 'As for the girl, there is evidence that the girl hit the boy.'

Although the expectation is that *ʔinn* agrees with the preposed object being more local to it than the referential *pro* (located in Spec,vP or in Spec,TP), *ʔinn* agrees with the latter. This observation is significant in revealing the actual mechanism of *ʔinn*'s probing in Arabic dialects. We discuss the account of this observation in the following section where the same observation arises in the LA context. We essentially argue, following Rizzi (1997), van Craenenbroeck (2004), Branigan

(b) ʔiʃ-ʃab ʔiʕtaraf ʔinn-ha
DEF-young.man confess.PST.3SG.M COMP-3SG.F
zʰarab-t ʔal-walad binit
hit.PST-3SG.F DEF-boy girl
'The young man confessed that a girl hit the boy.'

We leave these facts open for further research.

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(2011), and Omari & Branigan (2014), that *ʔinn* in Arabic dialects originates in FinP (the lowest layer of Rizzi's CP system) and then it raises to adjoin to Force^0, the head of the Force Phrase. We propose that *ʔinn* in JA starts probing when it is in Fin^0, where it can agree only with the referential *pro* under the *pro*–T^0 union (we explain this in the following section). If the thematic subject is not a referential *pro*, there is no agreement between *ʔinn* and the thematic subject given that the latter does not make a union with T^0. In the next step, *ʔinn* raises to Force^0, where it also commences probing if its ϕ-feature set remains unvalued. Here *ʔinn* agrees with the most local goal. The same situation occurs in LA, with the exclusion that *ʔinn* does not probe when it raises to Force^0, something that gives rise to the observation that *ʔinn* in LA only agrees with the referential *pro*.

To summarize, JA selects the possibility of SHARE of the feature inheritance. C^0 passes down its ϕ-content to T^0 and leaves a copy, a matter that makes C^0 an agreeing head. *ʔinn* agrees with the pre-verbal subject or the preposed object, depending on which one is most local to C^0. This reflects that valuation of *ʔinn*'s ϕ-features is ruled by locality, an expected result under an Agree model to license the formal features. Additionally, this section claims that T^0 blocks *ʔinn*'s probing, creating a minimality effect.

In the next section we investigate the morpho-syntactic form of the inflectional suffix attached to *ʔinn* in LA.

5. LEBANESE ARABIC (LA)

In LA, the inflectional suffix attached to *ʔinn* in most cases has an invariant form, *-o*. Aoun et al. (1994) argue that LA complementizer *ʔinnu* should be decomposed into a C unit, i.e. *ʔinn*, and an agreement morpheme *-u*/*-o* [3SG.M].[19] Put in the terms developed in this work, the inflectional suffix attached to *ʔinn* in LA is assigned the default form of agreement. Shlonsky (1997: 264) mentions that this suffix should not be confused with the affix that expresses the truly agreement features [3SG.M]. For him, the former should be an impersonal Agr affix that manifests a default specification of features.

(29) ... ʔinn-u 1-mʕalme tiʒi (LA)
COMP-3SG.M DEF-teacher come.3SG.F.IMPF
'... that the teacher is coming/will come.'

In order to account for the use of the default inflectional suffix on *ʔinn* in (29), Shlonsky proposes that Spec,AgrC in such situations is filled with a phonetically null *it*-like pronoun, which enters into agreement with C^0. The problem here, however, is why there should be an AgrC at all in such cases. It is widely attested that default agreement is a sign of lack of agreement (see e.g. Bhatt 2005 and

[19] LA *ʔinn* is referred to in Aoun et al. (1994) as *ʔinnu*, whereas it is *ʔinno* in Aoun et al. (2010). It is clear that it is the same complementizer, but with two different transcriptions.

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Baker 2008). Contra Shlonsky (1997)), we propose that the default inflectional suffix on *ʔinn* in LA is used because *ʔinn* fails to value its unvalued ϕ-features. This implies, first, that *ʔinn* has *u*ϕ-features, whose valuation is realized as an inflectional suffix appearing on *ʔinn*, albeit with the default form when they are not valued.[20] This also suggests that, like JA, LA opts for the SHARE option, rather than DONATE or KEEP. It is not DONATE because the presence of an inflectional suffix (even in the default form) would be a mystery. Secondly, for instances with a dropped subject (e.g. a referential *pro*), the inflectional suffix should express the ϕ-content of the dropped subject and hence the situation that the suffix has variant forms, as we show below. Note that the KEEP option is also excluded because T^0 is overtly inflected for agreement (i.e. the verb *tiiʒi* 'come' in (29) agrees in ϕ-features with its subject). Thus, it is clear that C^0 shares its ϕ-content with T^0 (recall that SHARE does not presuppose that the two heads share the same ϕ-features as sharing occurs before valuation– each head can probe separately).

Let us first account for the obvious observation that the ϕ-features of *ʔinn* are assigned the default form (i.e. [3SG.M]) in the presence of an overt subject. What is the reason for that? It cannot be the option that *ʔinn* always agrees with an expletive (in Spec,TP) whose ϕ-features are fixed. Note that the thematic subject is what normally occupies this position in LA (after leaving Spec,vP). Several works on Arabic vernaculars argue extensively that the thematic subject moves to Spec,TP in such dialects in SVO clauses (Mohammad 1990, 2000; Bolotin 1995; Benmamoun 2000; Harbert & Bahloul 2002; and Aoun et al. 2010). One significant observation at this point is that the default form of the suffix remains as such even in instances that include a preposed object. Consider the following sentence, provided by one LA informant:

(30) ʔana ħakiitl-uh ʔinno Mona
I told.3SG.M-him that Mona
ʃaaf-ha ʔil-ʔistaaz (LA)
see.PST.3SG.M-her DEF-professor
'I told him that the professor saw Mona.'

Given the default form of the inflectional suffix attached to *ʔinn*, one possibility suggests itself: *ʔinn* no longer probes in this Arabic variety. Put succinctly, *ʔinn* is unable to probe, thereby valuing the ϕ-features of *ʔinn* as default. It is a well-known observation that the default form of agreement is appealed to when the content of unvalued features is not valued (Fassi Fehri 1993). The question that needs an answer is why *ʔinn* cannot probe. There should be some factor that prevents *ʔinn* from probing, hence the result that *ʔinn* is an inactive probe. If we assume that one probe cannot agree with a goal in the presence of another probe between them, then it follows that *ʔinn* cannot probe the subject in the presence of T^0. Given that the unmarked word order in Arabic varieties is SVO

[20] An important point here is that the default agreement form in Arabic is [3SG.M].

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(see footnote 4), *ʔinn* should wait until the subject moves to Spec,TP, so escaping the intervention effect invoked by T^0, as is the case in JA. So the question is why *ʔinn* does not agree with the subject when the latter moves to Spec,TP, or, in other words, why *ʔinn* does not wait in LA?[21] As we have shown above, an Agree relation between a probe and a goal is impervious to whether the goal has its structural Case valued or not. One might suggest in this context that subject movement to the Spec,TP does not occur in the audible syntax so *ʔinn*'s ϕ-features are valued as default given T's intervention effect. However, this suggestion would not be plausible when we consider instances with dislocated elements. It is hard to assume that object topicalization/focalization occurs in post-syntactic components. So the possibility of any reason relating to post-syntactic factors is dismissed right away.

As for why LA *ʔinn* does not wait until movement to the left periphery is accomplished, as is the case in JA, we suggest that *ʔinn* in Arabic originates in Fin and then moves to Force (to check the Force feature; see Omari & Branigan 2014), along the lines of Rizzi (1997), van Craenenbroeck (2004), and Branigan (2011). Suppose that *ʔinn* in JA still probes while it is in Force, so it can agree with an element moving or being base-generated in the CP domain. On the other hand, *ʔinn* in LA originates in Fin. Suppose that in LA *ʔinn*'s Agree only occurs while it is in Fin, *ʔinn* in LA cannot agree with any element that is dislocated to the left periphery (see our analysis of the two examples in (33) below as empirical evidence). Additionally, it cannot agree with the thematic subject which originates in Spec,vP given the intervention effect of T^0. This state of affairs leads to the situation that *ʔinn* in LA is typically assigned the default value.

The question to ask here, as an anonymous *JL* referee notes, is why the derivation does not crash when C^0 does not find an accessible goal within its c-command domain, as its unvalued ϕ-features are not valued but are instead assigned the default value? If our analysis is on the track, it can be postulated that an Agree relation is triggered to set some context-dependent value to the unvalued ϕ-features. When no context-dependent value is possible, e.g. because of the intervention of some categories, such unvalued ϕ-features are assigned the default form as a last resort to salvage the derivation. This entails that the default form of agreement is used when Agree fails (see Preminger 2014 for pertinent discussion).[22]

The question that arises now is how we can account for the instances where *ʔinn* is inflected for agreement in LA. Note first that in such situations, the

[21] A number of researchers have recently argued that an element may delay its probing till an appropriate goal becomes available within its search domain. See, in particular, Carstens (2016).

[22] Note that the availability of a last resort strategy does not guarantee that all sentences might be grammatical. Ungrammaticality may emerge when unvalued ϕ-features are left without assignment (as in **He be good*) or when they are assigned the wrong value when the Agree relation can be implemented (as in **They goes home early*).

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subject should be phonologically null (i.e. a *pro*), as demonstrated in the following example:

(31) biʕtiʔid ʔinn-un ʕam byi-lʕabo (LA)
believe.1S COMP-them.F ASP 3-play.P
'I believe that they are playing.'
(Aoun et al. 2010: 15)

Consider also the following examples, provided by two LA informants:

(32) (a) ʕam jiħk-u ʔinn-ha
ASP speak.PROG-3PL.M COMP-3SG.F
fil-it min ʔil-beet (LA)
leave.PST-3SG.F from DEF-house
'They have been speaking that she left home.'

(b) ʔahama ʃii ʔinn-un bad-un tirʔaajih (LA)
important thing COMP-3PL.M want-3PL.M promotion
'The most important issue is that they want a promotion.'

Given our discussion of JA agreeing complementizers above (see Section 4), *ʔinn* should be able to probe here. This correlation between the subject being a *pro* and *ʔinn* being able to probe needs an exploration. In order to account for this correlation, we draw on Holmberg's (2009) theory of null subjects and agreement (advocated independently for Arabic in Al-Horais 2012). Under this theory, T^0 probes the referential *pro* located in Spec,vP to value its own *u*ϕ-features. The referential *pro* counts a ϕP subject which mainly consists of a set of valued (i.e. lexically specified) ϕ-features. For Holmberg (2009: 94–95), 'when T probes a ϕP subject, and has its unvalued ϕ-features valued by the subject, the resulting union of the ϕ-features of T^0 and the subject yields a definite pronoun'. This union is made possible through incorporation of a ϕP subject into T^0 by making the ϕ-feature values of the subject pronoun copied by T^0. Holmberg (2009: 97) states:

> I take incorporation of a ϕP in T to be a direct effect of Agree, in the sense of Chomsky (2001). This works as follows: finite T has a set of unvalued ϕ-features, and therefore probes for a category with matching valued features . . . The defective subject pronoun has the required valued ϕ-features, and therefore values T's *u*ϕ-features, which is to say that the ϕ-feature values of the subject pronoun are copied by T.

Following the incorporation of a ϕP subject into T^0, T^0 becomes now endowed with a set of interpretable ϕ-features whose content is identical to that of the referential *pro* in Spec,vP. We suggest that *ʔinn* probes T^0 in such situations, resulting in that the inflected ϕ-content of *ʔinn* being identical to that of the dropped subject. T^0 does not invoke an intervention effect against *ʔinn*'s probing the post-verbal *pro* since *ʔinn* probes T^0 itself, which acts here as a goal, due to its union with the referential *pro*. This argument can be supported by examples with

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a referential *pro* subject and a fronted object. In such examples, *ʔinn* agrees with the referential *pro* both in JA and LA, as evidenced in the following examples:

(33) (a) ... ʔinn-un l-kteeb ʒaboo-h (LA)
COMP-3PL.M DEF-book bring.PST.3PL.M-it
'... that the book they (had) brought.'

(b) ... ʔinn-hin ʔil-waadʒib ħillinn-uh (JA)
COMP-3PL.F DEF-homework solve.PST.3PL.F-it
'... that the homework they (had) done.'

One might wonder here why such a mechanism is not available when the subject is an overt DP. In this regard, Roberts (2009: 76) argues that a goal to be incorporated into its probe should be a defective goal, defined as follows: defective goals always delete/never have a PF realisation independently of their probe. Overt DP subjects always have a PF realization independent of their probes (e.g. T^0), something that blocks the incorporation of an overt subject into T^0. Here, the inflectional suffix attached to *ʔinn* is assigned the default form. Consider the following LA examples (adapted from Aoun et al. 1994: 202):

(34) (a) fakkar ʔinn-o raaħo l-baneet (LA)
thought.3SG.M COMP-3SG.M left.3PL DEF-girls
'He thought that the girls left.'

(b) fakkar ʔinn-o raaħit Zeena (LA)
thought.3SG.M COMP-3SG.M left.3SG.F Zeena
'He thought that Zeena left.'

(c) *fakkar ʔinn-un raaħo l-baneet (LA)
thought.3SG.M COMP-3PL left.3PL DEF-girls
'He thought that the girls left.' LA

(d) *fakkar ʔinn-a raaħit Zeena (LA)
thought.3M COMP-3SG.F left. 3SG.F Zeena
'He thought that Zeena left.'

Examples (34c, d) indicate that *ʔinn*'s ϕ-content must be assigned the default value (i.e. [3SG.M]); otherwise the sentence becomes ill-formed. This can be straightforwardly explained under the analysis developed here. The full DP post-verbal subject cannot constitute a union with T^0, which as a result does not become a goal.

Another issue that should be addressed before we pursue our investigation of *ʔinn* in MSA concerns the issue of which principle excludes the situation in which T^0 locally probes the lower subject and then C^0 locally probes T^0, resulting in the correct agreement suffix on C^0 without any movement, as raised by an anonymous *JL* referee. Our solution to this issue is that T^0's ϕ-features vanish in syntax once they are valued by the post-verbal subject. They cannot count as an eligible goal with which *ʔinn* can agree, simply because they are no longer

syntactically existing (see Holmberg 2005 along these lines). The morphological suffix that appears on the verb is inserted (or created) in morphology as a reflex of this valuation. Note here that *pro*-incorporation with T^0 is different because T^0 in such a situation copies the interpretable valued features of *pro*, which are still syntactically active, and hence can enter into a further Agree relation with a different probe.

In this section, we have addressed the syntactic behaviour of *ʔinn* in LA. We have argued that *ʔinn* starts in Fin^0, where it also starts probing. *ʔinn* can only agree with the referential *pro* which makes a union with T^0, given the defective nature of the *pro*. We have also argued that *ʔinn* in LA raises to $Force^0$, where its unvalued ϕ-features are assigned the default form when the thematic subject is not a *pro*. We have effectively argued that *ʔinn* is unable to probe when it raises to $Force^0$ in LA, contrary to the situation in JA, where *ʔinn* is able to probe if its ϕ-content is not assigned a value. In result, *ʔinn* can agree with a pre-verbal subject or a preposed object in JA.[23]

In the next section, we explore the morpho-syntactic behaviour of *ʔinn* in MSA. Here the interaction between overt Case and ϕ-Agree becomes evident as MSA still maintains its overt Case markings. We will argue that overt Case and ϕ-Agree are used to secure what we call a record (i.e. a morphological realization) of Agree relations. When the goal receives overt Case, there is no need to spell out the valuation of ϕ-features of the probe. On the other hand, when the goal is not able to receive overt Case (e.g. a goal is a phonologically null element), ϕ-features of the probe are spelled out.

6. Modern Standard Arabic (MSA)

This section is concerned with the morpho-syntactic behaviour of *ʔinn* in MSA. In the previous sections, *ʔinn* has been argued to be an agreeing head in JA and LA. The difference between these two varieties can be seen in terms of whether *ʔinn*'s probing can occur in $Force^0$. In JA, *ʔinn* probes elements in Fin^0 and $Force^0$, whereas LA *ʔinn* does so just in Fin^0, hence the enforcement of the default valuation of *ʔinn*'s uninterpretable ϕ-features in cases where the subject is not a *pro*. It has been shown already that when the thematic subject is a *pro*, *ʔinn* agrees with this *pro* given its union with T^0.

As for MSA, we assume that this variety selects SHARE, like JA and LA. What appears challenging at the first blush is the observation that an inflectional suffix is only attached to *ʔinn* in the context of VSO word order. In other word orders

[23] The question that arises here is why this difference between JA and LA is present in the first place. An anonymous *JL* referee notes that the differences in complementizer agreement in the Arabic dialects under investigation could well be due to differing degrees of grammaticalization of the construction. According to our analysis, an agreeing complementizer does not lose its ability of probing instantly, but it loses it gradually, i.e. when it probes in its base position but not in its surface position, as is the case in LA. We leave this topic open pending further research.

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beginning with the subject or the object, there is no inflectional suffix whatsoever used on *ʔinn*. Consider the following examples:

(35) (a) ʔinna(*hu) ʔal-walad-a qaraʔa ʔad-dars-a (MSA)
COMP DEF-boy-ACC read.PST.3SG.M DEF-lesson-ACC
'The boy read the lesson.'

(b) ʔinna(*hu) ʔad-dars-a ʔal-walad-u qaraʔa-hu (MSA)
COMP DEF-lesson-ACC DEF-boy-NOM read.PST.3SG.M-it
'The boy read the lesson.'

(c) ʔinna-*(hu) qaraʔa ʔad-dars-a (MSA)
COMP-3SG.M read.PST.3SG.M DEF-lesson-ACC
'He read the lesson.'

It is evident that when *ʔinn* is followed by a nominal, there is no inflectional suffix attached to it (witness (35a, b)), whereas this suffix is obligatory when *ʔinn* is followed by a verb.

In this regard, Mohammad (1990, 2000) claims that the inflectional suffix is a PF form of the expletive *pro*, which is situated in Spec, TP. As shown in Section 3 above, this claim suffers from theory-internal problems and lacks cross-linguistic corroboration. The obvious observation regarding the sentences in (35) is that when the structural Case assigned by *ʔinn* has an overt form, i.e. a morphological from, there is no inflectional suffix used on *ʔinn*, whilst the inflectional suffix is used when there is no morphological Case. One might assume here that this inflectional suffix is a clitic having the effect of absorbing the Case assigned by *ʔinn*. But the question that still remains open is why *ʔinn*'s Case is not assigned to null elements such as *pro*. We argue that the use of an inflectional suffix in the presence of a *pro* must be treated from a different perspective, which considers the reason behind Agree and Case assignment themselves.

Postponing the discussion of OVS/OSV sentences for a moment, the derivation of Arabic VSO and SVO word orders has received much attention from researchers. The view that would be qualified as a consensus is that the VSO word order in MSA is unmarked, whereas the SVO word order is marked in the sense that the latter is derived from the former (see Aoun et al. 1994 and Aoun et al. 2010). Let us start with the unmarked word order. In the VSO word order, it has been long assumed that Spec,TP is filled with a *pro* (Mohammad 1990, 2000). This view concurs with Bobaljik & Jonas' (1996) assumptions that Spec,TP is present in all languages as an A position intermediate in an articulated IP structure (see Aoun et al. 2010: Chapter 3 for further discussion in this matter). If we pursue the line of research that argues that this *pro* is co-indexed with the post-verbal subject hence sharing the same ϕ-content, it can be assumed that the *pro* has a set of ϕ-features which are interpretable. As such, this *pro* is qualified as a goal with which *ʔinn* can agree when there is no intervening goal. *ʔinn* having *u*ϕ-features is a probe that agrees with the *pro*, assigning the accusative Case to it, just like *ʔinn* agrees with other pre-verbal elements in JA. As a result of this

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valuation, a PF reflex of valuation of *ʔinn*'s uninterpretable ϕ-features appears on *ʔinn* as an inflectional suffix. Following this assumption, we need to resolve the remaining issue of why there is no PF reflex when *ʔinn* agrees with a nominal (a subject or a fronted object). Given that the pre-verbal subject is assigned Case by *ʔinn*, it is most likely that the former enters an Agree relation with the latter, resulting in the subject being assigned the accusative Case by *ʔinn*.

One might suggest that *ʔinn* shares its ϕ-features with its complement T^0, when there is no intervening argument between them, whilst it donates such features to T^0 in the presence of the subject (or the object) in a pre-verbal position. Although this suggestion accounts for the presence/absence of the inflectional suffix on *ʔinn* in MSA, it faces a serious problem of why *ʔinn* may choose between these two possibilities. Additionally, this suggestion is undermined when JA (and LA) are taken into account, as *ʔinn* here always shares its ϕ-features with T^0. As we have shown earlier, in the case of SVO word order, *ʔinn* agrees with the subject as evidenced by Case assignment (see Schütze 1997, Chomsky 2001, and Soltan 2006 for the relation between Case and Agree, but see Pesetsky & Torrego 2004 and Al-Balushi 2011 for different proposals). The valuation of *ʔinn*'s ϕ-features is executed by the subject, so the expectation is that the PF content of the features on *ʔinn* is the same as that of the subject. Let us suppose that *ʔinn* forms an Agree chain with the subject, resulting in the assignment of the accusative Case on the latter. Let us suppose further that such a chain should be recorded (i.e. having a phonetically overt realization) in the PF, following the effects of one condition, labelled Agree Chain Record, formulated as follows:

(36) *Agree Chain Record* (ACR)
An Agree chain must be recorded at PF.

Due to economy conditions on presentation, this record (R) is confined to one realization, i.e. $0 > R > 2$ (0 refers to no record; 2 refers to two records and more). On these grounds, the PF reflex of valuation of *ʔinn*'s ϕ-feature is deleted when it agrees with the pre-verbal subject as ACR is secured through the overt structural Case assigned to the subject by *ʔinn*. The same analysis extends to instances where *ʔinn* agrees with the object in the context of a VSO word order, as in (35b) above, reproduced for convenience in (37a), and to similar examples in the context of an OVS word order, in (37b):

(37) (a) ʔinna(*hu) ʔad-dars-a ʔal-walad-u
COMP DEF-lesson-ACC DEF-boy-NOM
qaraʔa-hu (MSA)
read.PST.3SG.M-it
'The boy read the lesson.'

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(b) ʔinna(*hu) ʔad-dars-a qaraʔa-hu
COMP DEF-lesson-ACC read.PST.3SG.M-it
ʔal-walad-u (MSA)
DEF-boy-NOM
'The boy read the lesson.'

ʔinn agrees with the object in (37), resulting in assigning a new structural morphological Case to the object. Given that ACR is secured through Case assignment, the PF reflex of valuation of *ʔinn*'s ϕ-features is dropped in PF. This reasoning automatically accounts for why this reflex is obligatory when *ʔinn* agrees with the *pro*. Since the latter does not have overt ϕ-content, ACR must be obtained in a different way, which is the PF reflex of valuation of *ʔinn*'s *u*ϕ-features, i.e. an inflection suffix of goal appearing on the probe. ACR does not force the goal, if null, to appear when the Agree relation is established, but it forces a ϕ-realization of this Agree to occur on the probe.

This reasoning helps us resolve the puzzle that although the uninterpretable ϕ-features are expected to delete, they may survive at PF (see Chomsky 1995, among many others, on the deletion of uninterpretable ϕ-features). Under the analysis proposed here, such features are just a record of an Agree relation, forced by ACR. As far as Arabic is concerned, the PF reflex of valuation of *ʔinn*'s *u*ϕ-features is held to manifest a record of the Agree operation when Case falls short of doing so. One might wonder here why ACR should exist at all. The answer to this question is tied to an answer of another question which is why there is Agree at all. Miyagawa (2010) argues that Agree occurs to establish a dependency relation, while Move is used to keep a record of the dependency relation beyond narrow syntax (so that semantic interpretation and information structure can make use of it) (p. 33). Contra Miyagawa, we propose that dependency relations between elements cannot be recorded only through Move. They can be recorded through, if any, overt Case assignment and PF reflexes of ϕ-features, which are more economical strategies. The examples in (38) below are ungrammatical with a suffix attached to *ʔinn* because the Agree relation between *ʔinn* and the pre-verbal subject/pre-verbal object is recorded twice, using overt Case and ϕ-agreement, hence violating economy conditions on presentation.

(38) (a) ʔinna(*hu) ʔal-walad-a qaraʔa
COMP DEF-boy-ACC read.PST.3SG.M
ʔad-dars-a (MSA)
DEF-lesson-ACC
'The boy read the lesson.'

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(b) ʔinna(*hu) ʔad-dars-a ʔal-walad-u
COMP DEF-lesson-ACC DEF-boy-NOM
qaraʔa-hu (MSA)
read.PST.3SG.M-it
'The boy read the lesson.'

It appears that, as an anonymous *JL* referee notes, deletion of the extra realization of the Agree relation is cheaper than spelling out both links of the Agree chain.

One piece of empirical evidence in favour of the assumption of securing one PF record of Agree operation comes from the notorious facts on the subject–verb agreement in MSA. One of the heavily investigated phenomenon in MSA is that the observation that the verb shows partial agreement with the subject in VSO, as in (39a) below, while it shows full agreement in SVO word order, as is the case in (39b) (Mohammad 1990, 2000; Fassi Fehri 1993; Aoun et al. 1994; Shlonsky 1997; Benmamoun 2000; and Aoun et al. 2010; the examples are adapted from Musabhien 2009: 23).

(39) (a) wasʕala ʔal-ʔawlaad-u (MSA)
arrive.PST.3SG.M DEF-boys-NOM
'The boys arrived.'

(b) ʔal-ʔawlaad-u wasʕal-u (MSA)
DEF-boys-NOM arrive.PST-3PL.M
'The boys arrived.'

Before showing how this interplay between agreement and word order is empirical evidence in favour of ACR, one remark on the base-generation of the pre-verbal subject is in order. Several studies both in traditional Arabic grammar (i.e. the Basran School, see Al-Balushi 2011 for discussion) and in the Arabic generative enterprise (see Al-Ghalaayyini 1981 and Soltan 2007) argue that the pre-verbal subject in SVO word order is a topic rather than a genuine subject.[24] Soltan (2007) in particular shows that the subject in this situation is base-generated in its surface position rather than a product of movement. Soltan (2007) provides several pieces of evidence (from binding, idioms, Case, overt resumption, etc.) that Spec,vP is filled with a *pro* in an SVO clause. Recall from our discussion above that Spec,TP in the VSO word order in MSA is filled with a *pro*. Following this reasoning SVO and VSO sentences are represented as follows:

(40) SVO: S T ***pro*** V
VSO: ***pro*** T S V

[24] Within Arabic tradition research, the subject in the SVO word order is called *mubtadaʔ*, lit.: 'that which it is begun with'. There are certain restrictions of the form of the subject in such situations, most notably the subject should be definite. If the subject is indefinite, it must be specific to occupy the initial slot of the clause (see Al-Ghalaayyini 1981, but see Ayoub 1981 for special cases where an indefinite, nonspecific subject can appear in an SVO clause).

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Within these structures in (40), T^0 (or the verb) agrees with the post-verbal *pro* in SVO sentences, while it agrees with the DP subject in a VSO clause. Given ACR, a record of the Agree operation between T^0 and the DP subject in a VSO clause and between T^0 and the *pro* in as SVO clause must be obtained. In the former case, i.e. a VSO clause, the Agree relation is recorded through the overt nominative Case assigned to the subject by T^0. As such, there is no need for T^0 to have a PF reflex of valuation of its $u\phi$-features by the subject, something that results in the impoverished agreement between the verb and the subject. In an SVO clause, the Agree relation is held between T^0 and the *pro*, a matter that forces this PF reflex on T^0. Whatever Case is assigned to *pro*, it has no PF value, making Case insufficient to secure ACR. This line of analysis dispenses with the exception postulated by Shlonsky (1997: 188) to account for subject–verb agreement in MSA. For Shlonsky, subject–verb agreement in MSA is lexical in the sense that a verb is selected from the lexicon bearing subject agreement. In our terms, subject–verb agreement is an instance of Agree whose output is subject to ACR, which should be secured to the minimum limit.[25]

One complication at this point comes from the fact that Gender and Person features still appear on T^0. We suggest that this realization of Gender and Person features is forced because nominative Case, being the default Case in Arabic (Mohammad 1988 and Ouhalla 1994), is not enough alone to qualify as a record. It can be qualified as a record as long as other features such as Gender and Person are spelled on the probe.

The question that arises here concerns how JA and LA react to ACR. Given that these varieties lack overt morphological Case (see Brustad 2000: 27 and Aoun et al. 2010: 15), the PF reflex of valuation of *ʔinn*'s $u\phi$-features is the method that secures ACR. Once there is an Agree relation between *ʔinn* and some other

[25] This analysis can carry over to the instances widely known in Arabic literature as a clitic left dislocation (Aoun, Choueiri & Hornstein 2001). In such cases, the clause-initial object is assumed to be base-generated in the left periphery, while its thematic position is filled with a resumptive pronoun, as shown in the following example from MSA (Soltan 2007: 51):

(i) ʔal-kitaab-u qaraʔa-hu Zayd-un
DEF-book-NOM read.PST-3SG.M-it Zayd-NOM
'The book, Zayd read it.'

The resumptive pronoun *-hu* being a suffix is assumed to be a placeholder that is cliticized onto the verb. A likely scenario following the proposal developed in this paper is that this pronominal suffix is an inflectional suffix resulting from an Agree relation between v/V and the object *pro*. Given that Case assigned to the object *pro* should be abstract given nullness of the *pro*, an Agree reflex is the way of securing a record of the Agree relation between the verb and the object *pro*, due to ACR. (See Chomsky 2007 among others on little v having $u\phi$-features valued by the object.) However, one complication here is how we account for the fact that in JA and LA, there is no record of the Agree relation between the verb and its full DP object. Here, we suggest that ACR can be optionally applied to dependencies where the probe and goal obtain a strong thematic relationship, like the dependencies between the verb and its object. We leave this issue open for further research.

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entity, the PF reflex of valuation of *ʔinn*'s *u*ϕ-features is triggered, given that spoken Arabic has no overt Case-marking system.

In view of this and on the grounds of the Arabic varieties under discussion, it can be postulated that there are two stratagems available to secure ACR, namely an overt Case marking and ϕ-agreement. The choice between these stratagems is not free, but subject to a strict order, governed by economy principles of language. In Arabic, this order is shown as follows: overt Case > PF reflex. To the extent that this reasoning is correct, it accounts for why the option of partial agreement is missing in Arabic vernaculars (in VSO), as in Moroccan Arabic (Fassi Fehri 1993), LA (Aoun et al. 1994), Palestinian Arabic (Mohammad 2000), Egyptian Arabic (Jelinek 2002) Tunisian Arabic (Mahfoudhi 2002), and JA (Jarrah 2017). As Case is no longer morphological in Arabic varieties, the Case option is excluded, hence the recourse to the ϕ-agreement of valuation of T's *u*ϕ-features, even if the subject appears post-verbally. (See the appendix on the interaction of *ʔinn* with coordinated subjects and its behaviour in constructions with unbounded dependencies.)

7. Conclusion

This paper has argued that the view of the long Arabic tradition with respect to the status of the bound pronominal forms attached to *ʔinn* is empirically untenable if reference is made beyond MSA. Evidence from three Arabic varieties and some other natural languages supports the view that such forms are inflectional suffixes produced as a PF reflex of valuation of *ʔinn*'s *u*ϕ-features. The current work has provided one account of such forms in Arabic varieties, arguing that *ʔinn* shares its ϕ-content with T^0, turning the two heads into separate probes. It shows that Agree relations established between each of them and a probe must have a record due to the postulated ACR. This record is first secured by morphological Case. A PF reflex of Agree relations as a ϕ-affix on the probe is only called for when Case assignment fails to have an overt record of the Agree relations between a probe and its goal.

This paper, of course, raises several questions about the relation between Case and Agree in syntax and phonology. Our proposal argues that they have the same function in Arabic, i.e. recording Agree relations, hence, *ceteris paribus*, their complementary distribution. We have shown that in Arabic this recording is first secured through an overt Case marking, if there is any, through ϕ-Agree. We leave it open how this proposal can carry over to other languages and whether ACR is secured through the same mechanisms in Arabic.

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APPENDIX

ʔinn's agreement in coordinate structures and unbounded dependency constructions

Here we discuss two issues raised by an anonymous *JL* referee: (i) what happens in the case of coordinated subjects, both pre- and post-verbally, and (ii) what forms of the complementizer occur in cases of unbounded dependency constructions (where the subject is fronted and is separated by an island from its thematic position).

Let us start with the first issue. In MSA, a coordinated subject may appear pre-verbally and post-verbally. In the former case (i.e. pre-verbally), *ʔinn* does not inflect for either the first member of the conjunction or both members. This follows from our assumption that overt Case assignment blocks overt agreement on the probe (recall that *ʔinn* in MSA is an overt Case assigner). Consider the following sentence:

(A1) ʔinna(*hu/*humma) ʔal-walad-a w-ʔal-fataat-a
COMP(3SG.M/3DL.M) DEF-boy-ACC and-DEF-girl-ACC
qaraʔ-aa ʔad-dars-a (MSA)
read.PST.3DL DEF-lesson-ACC
'The boy and the girl read the lesson.'

The pre-verbal coordinated subject is assigned accusative Case by *ʔinn*. On the other hand, in the case of a post-verbal coordinated subject, *ʔinn* agrees with whatever the main verb agrees with. For instance, if the main verb agrees with the first member of the conjunction, as in (A2a), *ʔinn* should also agree with the first member of the conjunction. On the other hand, if the verb agrees with the two members, as in (A2b), *ʔinn* should agree with the two members, as well. Consider the following examples:

(A2) (a) ʔinna(hu/*humma) qaraʔ-a ʔal-walad-u
COMP(3SG.M/3DL.M) read.PST.3SG.M-IND DEF-boy-NOM
w-ʔal-fataat-u ʔad-dars-a (MSA)
and-DEF-girl-NOM DEF-lesson-ACC
'The boy and the girl read the lesson.'

(b) ʔinna(*hu/humma) qaraʔ-aa ʔal-walad-u
COMP(3SG.M/3DL.M) read.PST-3DL DEF-boy-NOM
w-ʔal-fataat-u ʔad-dars-a (MSA)
and-DEF-girl-NOM DEF-lesson-ACC
'The boy and girl read the lesson.'

If we pursue the line of research that the pre-verbal *pro* whose ϕ-content is underspecified is co-indexed with the post-verbal subject and hence share the same ϕ-content, it can be assumed that *ʔinn* agrees with this *pro*; hence, it

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inflects for the *pro* expressing whatever the ϕ-content of the post-verbal subject. Assuming Aoun et al. (1994), it can be suggested that when the post-verbal subject is a true instance of a coordinated mono-clausal subject, the *pro* and the main verb show agreement that inflects for the first member of the conjunction (i.e. (A2a)). When the post-verbal coordinated subject is a result of two clauses (one of them is elided), the *pro* and the main verb show dual agreement as far as the examples in (A2) is concerned (i.e. (A2b)).

As for JA, with the context of a pre-verbal coordinated subject, the general tendency among JA speakers is that *ʔinn* agrees with the first element of the conjunction, not the two members.

(A3) (a) ʔiʃ-ʃab ʔiʕtaraf ʔinn-uh/*hum
DEF-young.man confess.PST.3SG.M COMP-3SG.M/3PL.M
ʔaχoo-h w-ʔuχt-uh zʰarab-u ʔil-walad (JA)
brother-his and-sister-his hit.PST-3PL.M DEF-boy
'The young man confessed that his brother and his sister hit the boy.'

(b) ʔiʃ-ʃab ʔiʕtaraf ʔinn-ha/*hum
DEF-young.man confess.PST.3SG.M COMP-3SG.M/3PL.M
ʔuχt-uh w-ʔaχoo-h zʰarab-u ʔil-walad (JA)
sister-his and-brother-his hit.PST-3PL.M DEF-boy
'The young man confessed that his brother and his sister hit the boy.'

On the other hand, in the context of a post-verbal coordinated subject, as in (A4) below, judgments reveal that JA patterns with MSA in this respect; *ʔinn* agrees with whatever the main verb agrees with. For instance, if the main verb agrees with the first member of the conjunction, *ʔinn* should also agree with the first member of the conjunction. On the other hand, if the verb agrees with the two members, *ʔinn* should agree with the two members, as well:

(A4) (a) ʔiʃ-ʃab ʔiʕtaraf ʔinn-uh/*hum
DEF-young.man confess.PST.3SG.M. COMP-3SG.M/3PL.M
zʰarab ʔaχoo-h w-ʔuχt-uh ʔil-walad (JA)
hit.PST.3SG.M brother-his and-sister-his DEF-boy
'The young man confessed that his brother and his sister hit the boy.'

(b) ʔiʃ-ʃab ʔiʕtaraf ʔinn-*uh/hum
DEF-young man confess.PST.3SG.M COMP-3SG.M/3PL.M
zʰarab-u ʔaχoo-h w-ʔuχt-uh ʔil-walad (JA)
hit.PST-3PL.M brother-his and-sister-his DEF-boy
'The young man confessed that his brother and his sister hit the boy.'

We extend the analysis of MSA concerning such cases to the two examples above.

Taken together, all grammatical examples in this section reveal that *ʔinn*'s ϕ-probing is almost similar to other probes where locality is an important factor, e.g. *ʔinn* agrees with the first member of a pre-verbal conjunction.

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As for the second issue, of what forms of the complementizer do we see in cases of unbounded dependency constructions (where the subject is fronted and is separated by an island from its thematic position), the data shows no different behaviour of the complementizer *ʔinn* with respect to e.g. a fronted subject that has an unbounded dependency with a *pro* inside the complementizer *ʔinn*'s clause. In cases of the complementizer *ʔinn* in MSA, *ʔinn* agrees with fronted subject, witness:

(A5) (ʔamma) biχusʕoosʕi ʔal-fatat-i f-qad ʕalima
PRT as.for DEF-girl-GEN PRT-AS.PRT know.PST.3SG.M
ʔab-i ʔad-daliil-a ʔann-ha qad
father-my DEF-evidence-ACC COMP-3SG.F AS.PRT
saraq-at (MSA)
steal.PST-3SG.F
'As for the girl, my father found the evidence that she had stolen (something).'

Following the related literature (e.g. Aoun & Choueiri 1999), the most appropriate analysis of the subject of the embedded clause under the DP *ʔad-daliila* 'the evidence' is that its subject is a referential *pro* base-generated in Spec,vP (see Aoun & Benmamoun 1998).

Concerning *ʔinn*'s Agree with the *pro* subject, it can be suggested that *ʔinn* agrees with it in the same way as it agrees with the referential *pro* in Lebanese and Jordanian Arabic. *ʔinn* agrees with T^0 which copies the features of a ϕP subject. The same situation arises in JA and LA, as shown in the following examples:

(A6) (a) biχsʕoosʕ ʔil-binit ʔaboo-i ʕirf
as.for DEF-girl father-my know.PST.3SG.M
ʔad-daliil ʔinn-ha sarag-at (JA)
DEF-evidence COMP-3SG.F steal.PST-3SG.F
'As for the girl, my father found the evidence that she had stolen (something).'

(b) biχsʕuusʕ ʔasʕsʕabijjeh bajj-i ʕirf
as.for DEF-girl father-my know.PST.3SG.M
ʔil-birhaan ʔinn-ha saraʔ-t (LA)
DEF-evidence COMP-3SG.F steal.PST-3SG.F
'As for the girl, my father found the evidence that she has stolen (something).'

These examples ascertain that the complementizer *ʔinn* inflects for ϕ-content of the fronted subject by virtue of having an Agree relation with the referential *pro* that is used in such cases to replace the thematic subject in Spec,vP.

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