A Person approach to personal passive in standard Arabic*

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Abstract

We develop a novel approach to personal passive in Standard Arabic (SA), building on 'implicit arguments' and the Person feature associated with the passive morphology (PM) attached to the verb.We propose that the PM is projected as a PassP (Passive Phrase), headed by Pass which has a Person (Prsn) feature which counts as an EPP feature. The article provides an Agree analysis of passive and the distribution passive arguments.We propose that both arguments are merged in their canonical positions:pro, i.e. the external argument, is merged as a specifier of vP, hence valuing its θ-role of agent and Case. Assuming that pro in personal passives is generic/indefinite, it is referentially 'weak,' and thus it cannot value Pass's Prsn feature. Pass, then, probes for the only DP in its domain, i.e., the internal argument (or the (passive) syntactic subject (henceforth, Syn-subj)), and triggers it to remerge in its Spec. It is also assumed that this 'remerging' is an A-movement, based on the fact that Spec-PassP is an A-position. In Spec-PassP, the Syn-subj values T's ϕ-features. T's EPP is assumed to be satisfied via V-raising to T.

Keywords:

Personal passives - morphological/periphrastic passive - implicit arguments - person - Case bundles - Agree - A-movement - generic pro - standard Arabic - mono-/di-transitive passive constructions.

الملخّص

تتنــاول هـذه الورقـة موضـوع المبنـي للمجهـول الشـخصي في العربيـة الفصيحـة، وتقـترح منهاجـا مبنيـا عـلى الموضوعـات المضمـرة. يفترض الباحـث ان ضمـير الغائـب (ض) هـو الفاعـل او الموضـوع الخارجـي للمجهـول. كـون ض هـو الفاعـل المضمـر في المجهـول يكتسـب دليـلا مـن القرينـة في المبنـي للمعلـوم، وبطريقـة نحويـة حوسـبية مشـابهة لمـا في الاخـير؛ ويعـد هـذا احـد افتراضـات البرنامـج الادنـوي الهامـة والتـي يسـعى البحـث لاثباتـه. كـما يفـترض الباحـث ان صرفـة المجهـول (صـم)- المضافـة الى الفعـل- مرتبطـة ودالـة عـلى والوجـود النحـوي والحوسـبي لــ ض، ويفـترض ايضـا ان صـم لهـا مجـال تركيبـي مـج تـر، ومخصـص (مخـص)، و اب ب، والـذي يتطلـب تاويلـه مركـب حـدي (مـر حـد) في مخصـص مـج تـر. ض ينتـج ابتـداءا في المخصـص الفعلـي الوظيفـي (مـخ ف ظ) ويبقـى في مكانـه لان سـمته الشـخصية «ضعيفـة» بحيـث لا يسـتطيع اشـباع سـمة ا ب ب للمخصـص مـج تـر. في مـخ ف ظ يتـم اشـباع الـدور المحـوري لــ ض والاعـراب الخـاص بـه. ولان ض «ضعيـف» فانـه لا يسـتطيع اشـباع ا ب ب لــ مـج تـر، ولـذا فـان اب ب يقـوم بتحريـك نائـب الفاعـل (او مـر حـد) الى مخصـص مـج تـر، كـما يبرهـن الباحـث ان عمليـة تحريـك نائـب الفاعـل الى مـج تـر هـي عمليـة اساسـية في بنـاء المجهـول الشـخصي في العربيـة، خلافـا لمـا يـراه بعـض النحـاة.

الكلمات المفاتيح:

العربيـة - المجهـول الشـخصي - المجهـول الصرفـي/التركيبـي - الشـخص - الادنويـة - أ-حركـة - ض عـام - حزمـة الاعـراب.

Résumé

Cet article traite une approche de la passif personnelle en arabe standard, en se basant sur les modèles des 'arguments implicites' et personnelle caractéris-tique en inflexion du verbe. L'auteur propose que pro est l'argument externe de passif et que pro est le sujet rétrogradé du prononçiable (pro)nom de la structure actif vient de son association avec la morphologie du passif (MP). Nous pro-posons que le MP est projeté comme PassP (phrase du passif), dirigé par le Pass qui a une caractéristique Prsn comme une variante du EPP. L'article présente un compte Agree du passif et la distribution/répartition de pro, où les deux ar-guments sont base-générésdans leurs positions canoniques. pro est base-générét comme spécificateur de vP, donc, la évaluation de son θ-rôle de l'agent et Cas. Si pro en passifs personnels est générique/indéfinie, il est référentiellement 'faible', donc, ne peut pas évaluerles Prsn de la Pass, de plus Pass des sondes pour la seule DP dans son domaine, à savoir l'argument interne (ou passif) sujet (syntaxiques (désormais, Syn-subj)), et déclenche à remerge dans Spec-PassP.

Mots-clés:

Arabe - passif personnelle - morphologique/périphrastique passif - personne - minimalisme - A-mouvement - pro générique - faisceaux de Cas.

Introduction

Most languages of the world exhibit passivization in the syntax. There are two major types of passives in natural languages, viz. personal and impersonal, though languages differ in allowing passivization in both spheres.[3] For instance, languages like Arabic allow both, while some languages like English allow only personal. Some other languages like Hindi and Finnish allow only impersonal passives, while some others like Malayalam, Hungarian and Tongan allow neither (see e.g. Abraham and Leisio 2006, Kiparsky 2013). This article tackles only personal passives in Standard Arabic (SA), and develops a theory underlying (1).

(1) a. pro is the external argument in personal passives

   b. The PM is projected as PassP (Passive Phrase)

Elaborating on (1), we develop a novel approach to personal passives in Arabic. In this approach, *pro* is assumed to be the subject (external argument) of personal passives. Given the verbal nature of passive morphology, Pass is deemed as a verbal head, i.e. an extension of the verbal projection. Adopting a cartography-based approach to verbal projections (see e.g. Cinque 2006, Cocchi 2008), we propose that the PM is projected as PassP, posited lower than TP. The proposal ensues from the typical richness of Person inflection SA exhibits. This typical richness of inflection is associated with an unpronounced pronoun (or *pro*) as the null subject in finite clauses in Null Subject Languages (henceforth, NSLs), including Arabic. The proposal also provides a minimalist mechanism for θ-role assignment. It is configurational in nature: each syntactic configuration is associated with one or more θ-roles. For example, the θ-role of agent is assigned in the syntactic configuration $[_{vP} […] [v]]$, because it is associated with it, while the θ-role of theme, patient, etc. is assigned in the configuration $[V[…]]$, again because it is associated with it (cf. Baker 1997, 2008, Collins 2005).

The article provides an *Agree* analysis for (1): *pro* is merged as the specifier of *v*P;[4] where its θ-role of agent is assigned/valued at *Merge*, and its Case is valued via *Agree* (cf. Hornstein 1999). Assuming that *pro* in personal passive is generic/indefinite, it is deficient, and so it cannot value Pass's Prsn feature which is personally strong. Pass, then, probes for the only DP in its domain, i.e. the Syntactic Subject (henceforth, Syn-subj), and triggers it to remerge in its Spec. It is also shown that this 'remerging' is an A-movement, providing empirical evidence from the use of floating quantifiers and adverbs. In Spec-PassP, the Syn-subj values T's φ-features in a downward probing via *Agree*. For T's EPP, we assume, following Alexiadou and Anagnostopoulou (1998, 2001), among

others, that it is satisfied via V-raising to T.

The rest of the article goes as follows. In section 2, we briefly review the *Principles and Parameters* (P&P) account of personal passive cross-linguistically, shedding light on the position it presumes for Arabic passivization. In section 3, we discuss the status of the agent in personal passive constructions. In particular, we argue that the θ-role of agent is not absorbed by passivization, but rather remains intact. In section 4, we present our proposal, detailing its underlying tenets and the possible feature-specifications of Pass and *pro*, and the features of T. In section 5, we attempt an account of personal passives in Double Object Constructions (DOC), showing how Case-Absorption fails to account for these passive structures, and how the proposal developed here straightforwardly accounts for them. In section 6, we tackle the movement of the Syn-subj, providing empirical evidence for that based on the strength of Pass's Prsn feature. we argue that this movement is an A-movement, and conclude with a brief account of Prsn's strength. Section 7 concludes the paper.

2. Passivization in P&P

The assumption that passive is different from active stems from the fact that no language expresses active and passive in the same way (Kiparsky 2013). Earlier than P&P, passivization as in (2) below was viewed as a syntactic operation which involves a movement of a constituent (usually a DP) from an object position to a subject position (traditionally known as an Argument position (A-position) each).

(2) a. Ali can drive **this car**.

   b. **This car** can **be** driv**en (by Ali)**

To account for the changes in (2b), such as the movement of the internal argument, the insertion of *be* and the PM *–en* and the optionality of *by*-phrase; Chomsky (1957: 42f) originally formalizes (3) as a passivization rule (see also Shormani 2000).[5]

(3) passivization rule

Active:	DP	Aux	V	DP
	1	2	3	4
Passive:	4	2+be	3+en	(by+1)

2.1. Passivization effect

In P&P, it was assumed that passivization typically involves a two-facet process: detransitivization and dethematization (see e.g. Chomsky 1981, 1986, Jae-

ggli 1986, Baker et al. 1989, Haegeman 1994, Ouhalla 1991, Radford 1997). The former lies in absorbing the verb's ability to assign an Acc Case to its internal argument (i.e. the object). The latter, however, lies in absorbing the verb's ability to assign a θ-role to its external argument (i.e. the subject). Since Spec-IP is a non-theta marked but Case-marked position, and since the internal argument lacks Case, it surfaces in Spec-IP, thus, functioning as the syntactic subject of passive (conforming to the *Principle of Greed*). Occurring in a *by*-phrase form results in assigning a different Case to the internal argument, i.e. Acc (or Obl) ique. The P&P account of the lexicalization process representing detransitivization and dethematization a transitive verb X undergoes is roughly outlined in (4) and (5), respectively (Shormani 2000: 79).[6]

(4) Detransitivization

a. X $\longrightarrow$ V, (subject, object)

b. X $\longrightarrow$ V, Ǿ, (object)

(5) Dethematization

a. X $\longrightarrow$ V, (agent, patient)

b. X $\longrightarrow$ V, Ǿ, (patient)

   As far as Arabic is concerned, the P&P account of passivization seems to be different from that of English. First, consider (6) and (7), the former is active and the latter is passive (in both past and present).

(6) k**a**ta**ba**/yakt**u**bu ʕaliyy-un d-dars-a
       wrote/writes   Ali-NOM   the-lesson-ACC
 'Ali wrote/writes the lesson.'

(7) k**u**ti**ba**/yukt**a**bu   d-dars-u
       pass.wrote/write   the-lesson-NOM
       'The lesson was/is written.'

   Unlike English, (6) and (7) show that passivization in Arabic is morphological. Taking passivization in Arabic from a P&P perspective, (8) could be taken as a passivization rule in this language.

(8)

Active:	V	DP	DP
	1	2	3
Passive:	1	3	#[6]

Another difference between both languages lies in that while by-phrases are possible in English, they are not so in Arabic.

However, comparing (8) to (3) above, it seems that passivization effect in Arabic is similar to that of English, particularly in terms of P&P dethematicization and detransitivization. One such similarity between the two languages concerns movement. (8) implies that there is some sort of movement the Syn-subj undergoes. As we will show in section 5, the Syn-subj does move in Arabic. However, where it moves depends on the word order since Arabic has two word orders, i.e. VS(O) and SV(O). In this article, we will adopt the VS one, setting aside the controversy in this regard.[8] We will also assume that *pro* is merged in Spec-*v*P and the Syn-subj raises from its canonical position (i.e. the complement of V) to Spec-PassP (Shormani 2000).

2.2. Morphological vs. periphrastic passive

From the point of view of passive verb formation, there are two types of passive in natural languages, viz. morphological and periphrastic. The latter is said to be formed by a verbal complex consisting of an Aux, *be* in English, *ist* in German, *er* in Icelandic, etc. and a passive particle (or PM) affixed to a nonfinite verb. The former, however, is said to be formed by an affix affixed to a finite verb. Languages like English, German, Icelandic, etc. have periphrastic passive while languages like Modern Greek, Irish, Arabic, etc. have morphological passive. Periphrastic passive is exemplified in (9a) from English; (9b) and (9c) exemplify morphological passive in Modern Greek and Arabic, respectively.

(9)　a. The books **are written**.

b. Afto	to	vivli-o	ðiavas-ke-ti	(apo tin Maria).
this	the	book-NOM	read-pass-3SG	(by the Maria)
'This	book	was	read	(by Maria).'

c. yu-ktabu　d-dars-u

pass-write　the-lesson-NOM

'The lesson is written.'

In (9a), it is clear that in English periphrastic passive (setting aside other things) is formed by the Aux *be* (*are*) and the PM *–en*. Morphological passive as in (9b) from Modern Greek and (9c) from Arabic, on the other hand, is formed by affixing the PM *–ke* and *–u-* (Modern Greek, and Arabic, respectively) to the verbs *ðiavas* and *ktab* (*read* and *write* in Modern Greek and Arabic, respectively).[9,10]

A substantial property specific to morphological passive is that, in addition to the PM, other inflections representing tense, aspect/mood and agreement are also affixed to the passivized verb, hence forming a verbal complex, while in periphrastic passive it is *be* that is inflected for such features. As far as Arabic is concerned, the passive verb is formed by what is so called passive melody, consisting of two vocalic affixes (specifically infixes, we return to this point in section 4.2).

3. The status of the agent

There have been several attempts proposed in the literature to account for how the agent θ-role is assigned and what assigns it in passive. In the early P&P, in English, for instance, it was assumed that the agent θ-role is assigned by the preposition *by* to the thematic subject DP in the by-phrase constituent, and that the PM *–en* is base-generated inside VP as a clitic (see e.g. Chomsky 1981, 1982). Later P&P studies assumed that the *–en* is an argument, and is assigned an external θ-role (see e.g. Jaeggli 1986). The claim was that if *–en* is an argument, it must be base-generated in a θ-marked position at D-structure.[11] However, the problem was that it is difficult to base-generate *-en* outside VP for its cliticizing nature. Since then, many proposals have been suggested to solve such a problem. We will just briefly review three studies, two preminimalist, namely Jaeggli (1986) and Baker et al. (1989), and one minimalist, viz. Collins (2005), discussing their proposals and showing how they each fail to account for certain properties of personal passives cross-linguistically.

For instance, Jaeggli (1986) proposes the so-called 'θ-transmission' mecha-nism, whereby the θ-role is 'transmitted' from the verb to the preposition *by*, based on assuming that the preposition *by* itself does not assign a θ-role. The mechanism of transmitting the θ-role, Jaeggli argues, takes place as follows. Since the PM *–en* absorbs the Case and the external θ-role of the verb, it trans-mits this θ-role from the verb to the *by*-phrase as a whole. This θ-role, then, percolates to *by*. Finally, *by* assigns this θ-role to the DP (its complement) (Jae-ggli 1986: 590). Although this analysis suffers from several problems, we will just consider the notion of 'transmission' from a minimalist perspective. The assumption of 'transmission of the external θ-role is not reliable from a mini-malist perspective for the fact that minimalism requires a mechanism in which the external argument is assigned a θ-role in the passive to be 'totally' similar to that in the active. In minimalism, θ-role assignment is configurational, i.e. each syntactic configuration is associated with one or more θ-role. For instance, the syntactic configuration [$_{vP}$ […] [*v*]] is associated with the θ-role of agent, actor,

etc. However, the configuration [V[…]] is associated with the θ-role of theme, patient, etc.[12]

Another attempt has been done by Baker et al. (1989) who argue that the passive morpheme –*en* is an argument which "forms a chain with a full" DP, which, if it "forms the coda of the chain may be overtly realized as a *by*-phrase, giving rise to long passives" in the same way clitics are doubled (Baker et al. 1989: 223). They propose that –*en* is base-generated in I in D-structure, which then gives it the status of a nominal argument outside VP, and is lowered onto the verb at S-structure, though lowering is not motivated.[13] This status entails that –*en* receives the agent θ-role (or otherwise 'the logical-subject θ-role" in Baker et al's (1989: 220) sense. This analysis was very convincing and elegantly accounted for several properties of passive, specifically 'implicit arguments' (i.e. PROs), one of the tenets the proposal developed here is based on. Still, however, Baker et al's theory fails to account for passivization cross-linguistically (I return to this issue in sections (4 and 5)).[14]

From a minimalist perspective, Collins (2005) rejects Case-absorption theory, questioning the assumption made regarding the θ-role assigned to the DP after *by*, specifically if *by* is not a θ-role assigner, which comes closer to Jaeggli's (1986) ideas, as noted above. Collins argues that *by* is a dummy element presumably necessitated by the syntax to assign Case to the DP-agent. He supports his argument with examples like (10), where the DP occurring after *by* is not an agent (from Collins 2005: 82).

(10) a. Danger was sensed by John

b. A black smoke was emitted by the radiator

c. That professor is feared by all students

d. Mary was respected by John

He also finds it difficult to answer the question as to why is (11a) example possible but not the one in (11b)? He argues that since *by*-phrase occupies Spec-*v*P as a result of sequencing "Merge(by, John), and Merge(PP, *v*P), there is nothing to enforce this sequence of operations instead of a different sequence Merge(by, [DP the book]), and Merge(write, PP) yielding" (11b) (Collins 2005: 93).

(11) a. The book was written by John

b. *John was written by the book

Collins concludes that it is the verb that assigns such a θ-role to the external argument proposing (12) as a *smuggling approach* to passive (Collins 2005:

96).[15]

(12) a. active: v assigns external theta-role,
        v checks accusative Case
    b. passive: v assigns external theta-role
        Voice[by] checks accusative Case

Although Collins's theory has accounted for a large set of data (though in English), we think this theory needs to be further refined to account for certain facts across-languages, specifically the obligation/optionality of by-phrase (see e.g. Kiparsky 2013, for a criticism).[16]

To conclude this section, the fact that *by*-phrases (or agent phrases) are not compulsory in periphrastic passives gives rise to a serious problem, presumably the major one these analyses suffer from. To put it differently, in the absence of the agent-phrases in languages like English, and given that languages like Arabic do not allow such phrases, the question as to what constituent the agent θ-role is assigned remains unanswered. We attempt an answer to this question (among other related issues) in the following section.

4. A person approach to personal passive in SA

In this section, we develop an approach to passive in SA, based mainly on Person feature associated with the PM attached to the passivized verb, and implicit arguments. The proposal, therefore; abstracts away from Case-Absorption theory. However, before discussing our proposal, some light should be shed on the status of the passive morphology. We tackle this in the section to follow.

4.1. The status of PM

In almost all languages, passivization is formed by means of a passive morpheme. However, the way this morpheme behaves differs from a language or a set of languages to another language or a set of languages. In English and Romance languages, the PM is attached to a nonfinite verb, which, according to CAT, is a clitic attached to I. The finite verb in such languages is said to be an Aux (*be* in English, for example). In languages like Finnish, Modern Greek, Irish, Arabic, etc. the passive morpheme is not a clitic, but rather an affix affixed to a finite (but not nonfinite) verb.

In P&P, it is claimed that in periphrastic passive the PM is a nominal clitic (see e.g. Jaeggli 1986). In morphological passive, however, the PM is said to be a verbal affix (affixed to the passivized verb) (see e.g. Ouhalla 1991). Thus, in P&P the PM was said to have two different parameterized 'values' as illustrated in (13).

(13) PM parameter

(i) PM is nominal (i.e. [+N]) in periphrastic passive

(ii) PM is verbal (i.e. [+V]) in morphological passive

(13) presumably marks the substantial difference between periphrastic and morphological passives. As for (i), the PM has a nominal status (say clitic, for example) base-generated in I, and receives the Acc Case from the verb. Given this, the internal argument is left without Case; it is enforced to move to a Case-position (possibly Spec-IP, where it is assigned Case by I, see also Radford 1997), on the one hand. On the other hand, since the PM in morphological passive is a verbal affix, affixed to the verb, it can neither receive Nom Case nor a θ-role.

There are three issues to address here: i) assuming for the movement that (13) accounts for periphrastic passives, morphological passives are likely left unaccounted for by CAT. It is not clear which constituent in morphological passives absorbs (and receives) the Case and the θ-role of the verb, ii) there is good evidence cross-linguistically that there are in-situ objects which receive Case and θ-role from the verb, though passivized. Double object constructions and impersonal passives of transitive verbs are just two examples, and iii) it is untenable to consider the PM -*en* in passive to be different from that in active. If we consider the active participle –*en* different from its passive counterpart, we are likely dealing with two distinct morphemes of the same entity. This in fact imposes a construction-specific complication, being added to the grammar, which is not allowed by minimalism. The fact that the PM –*en* in English, for example, is verbal comes from its active participle counterpart as (14) shows.

(14) Ali has writt**_en_** a book.

In (14), the participle –*en* does not absorb the verb's ability to assign Acc Case. Nor does it absorb the external θ-role the verb assigns to its external argument. Thus, we hypothesize that the PM in both periphrastic and morphological passives is a verbal element, which is minimalist in nature. We also claim that the mere difference between both is with respect to finiteness and nonfiniteness of the passivized verb. In periphrastic passive, the PM is attached to a nonfinite verb, whereas in morphological passive it is attached to a finite verb.

4.2. The proposal

Given that the PM (say [-u-] in Arabic) is verbal, and since [-u-] is a passive inflection, it may well be argued that passivization is a verbal feature that has to have its own projection like any other inflection, say, tense inflection, which

projects to TP. Thus, adopting a cartography-based approach (see e.g. Rizzi 2004, Cinque 2006, Cinque and Rizzi 2010, Cocchi 2008), where 'features have a privative status and project their own categories', (15) could be hypothesized (cf. (1b)).

(15) The PM is projected as PassP

However, the PM affix [-u-] in Arabic is not the only morpheme that represents passive. Consider (16).

(16) y*u*-kt*a*bu   d-dars-u

pass-write   the-lesson-NOM

'The lesson is written.'

Given our discussion so far, we are now in a position to determine what exactly constitutes the PM in Arabic (personal) passive. Traditionally, it was assumed that morphological passive as in (16) is formed by affixing the PM [–u-a-] to the verbal root *k-t-b* in imperfective aspect.[17] This is due presumably to the non-concatenative nature of Arabic morphology. The root *f-ʕ-l* (traditionally known as *mizaan* 'measure') is taken as the vocalic tier (though it can also be two or four). If we symbolize this tier as C_1--C_2--C_3 (three basic sounds of the passivized verb, see also McCarthy 1979, 1981, Benmamoun 1999, 2000, Bahloul 2008, Lacks 2009, Danks 2011), then (17) could be hypothesized as a general rule representing the verb *y-u-ktab-u* in (16).

(17) $uC_1C_2 a\, C_3$ ➔impf

If (17) represents the Arabic passivized verb in imperfective, then there seems to be another rule concerning perfective passivized verbs. Consider the (incomplete) perfective passivized verb in (18a).[18]

(18a) k-*u*-t-*i*-b

(18a) gives rise to another possible rule for perfective passivized verbs in Arabic. The PM in (18a) is [-u-i-], which can be represented by (18b).

(18b) $C_1 uC_2 i\, C_3$ ➔prf

As is clear in (17) and (18b), there are two patterns, namely [-u-a-] in the imperfective stem of the verb, and [-u-i-] in the perfective one. Note that [-u-] comes before C_1 in imperfective while it comes after C_1 in perfective. The second vowel, be it [-a-] or [-i-], comes before C_3.

The two patterns in (17) and (18b) can be said to constitute the passive melody in Arabic. The assumption that the patterns [-u-a-] and [-u-i-] constitute the

passive melody in imperfective and perfective, respectively, stems from the fact that they alternate with the active melody. McCarthy (1981: 385), for instance, argues that passive melody alternates with the active melody, depending on the perfective vs. imperfective stem of the verb. Consider (19) and (20) which exemplify the active melody vs. passive melody in perfective and imperfective stems in Arabic, respectively.

(19) a. k*a*t*a*ba   ʕaliyy-un   d-dars-a

      3act.wrote   Ali-NOM   the-lesson-ACC

      'Ali wrote the lesson.'

   b. k*u*t*i*ba   d -dars-u

      3pass.wrote   the-lesson-NOM

      'The lesson was written.'

(20) a. y*a*qri*ɖ*u   ʕaliyy-un   l-maal-a…

      3act.rent   Ali-NOM   the-money-ACC

      'Ali rents the money...'

   b. y*u*qr*a*ɖu   l-maal-u…

      3pass.lend   the-money-NOM

      'The money is lent....'

   In (19a) and (19b), the active *a* alternates with *u* in passive, and the active *a* alternates with *i* in passive. Likewise, in (20a) and (20b), the active *a* alternates with *u* in passive, and the active *i* alternates with *a* in passive[19].

   Given the fact that the passive morpheme [-u-] is constant in both perfective and imperfective, and what changes is only the second member of the passive melody, and since this change depends on imperfectivity vs. perfectivity, it is then reasonable to postulate that in SA [-u-] can be taken as the passive exponent (i.e. [-u-] is the passive formative) and that [-a-/-i-] is the imperfective/perfective exponent. Given the fact that (im)perfectivity is verbal in nature, it follows that [-a-/-i-] can be taken as the exponent of verbalization in the sense of (see e.g. Kratzer 1996, Embick 1998, Harley 2013). If this analysis is true, it, then, follows that [-u-] can be merged in Pass and -a-/–i- in *v.* Taken all these properties and given (15), we propose (21) as the clausal projection in personal passives.

(21)
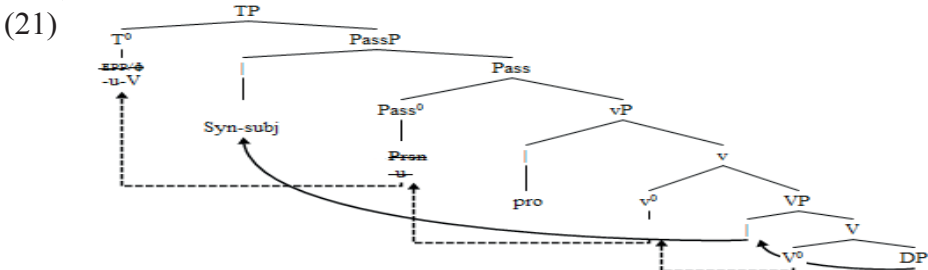
Given that in Arabic passivization is morphological, and since V is a root, we assume that the V-root (the consonantal tier) is merged in V (i.e. its canonical position), and then raises to T (through *v* and Pass). Given that the PM *–u-* is the passive formative, and *–a-/-i-* is the exponent of verbalization, it could be hypothesized that *–u-* is generated in Pass, and *–a-/-i-* in *v*, each, thus, constitutes a probe (some sort of EPP, see Roberts 2010b). It follows that each triggers the verb to move (or incorporate) (on)to it. We assume that the triliteral consonantal root is generated in V^0. The consonantal root then raises to *v*, where *–a-/-i-* is incorporated onto it, and then to Pass where *–u-* is incorporated also (on)to it. When both morphemes are incorporated onto the verb, the whole complex raises to T^0, where tense inflection (Tns_{infl}) is suffixed to it. As for T, the same triggering mechanism can also be hypothesized here, i.e. T may well be argued to be endowed with a feature constituting a probe, hence triggering the verbal complex to raise to it. Let *–u-* be α and *–a-/-i-* β, the incorporation/vocalization process is roughly schematized in (22).

(22) $[_T^0 \ [\alpha\text{-}\beta\text{-}V^0\text{-}Tns_{infl}] \ …. \ [_{Pass}^0 \ \alpha\text{-} \beta V^0] \ …[_{v0} \ \beta \ V^0] ………[V^0]$
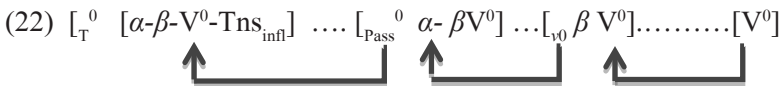
Note that the result of incorporating the passive melody [-u-] and [-a-/-i-] onto the consonantal root is a passive stem, that is, it does not "show mood, agreement, or case, gender, or number marking (McCarthy 1981: 385, fn. 2, see also Spyropoulos et al. 2015). When the melodic passive verbal root reaches T^0, it is inflected for tense and φ-infl. We propose that *pro* in passive is merged in Spec-*v*P, and remains in situ (given the VSO word order adopted in this article).

Let us now return to the question imposed in the previous section, i.e. what constituent the agent θ-role is assigned to in Arabic personal passives, given that agent-phrases are not allowed. The assumption that the agent θ-role is active is clear from passive structures like (23).

(23) a. ʔuqifa   r-rajul-u   li-ʔixbaar-i-hi   bi-l-ħaadiθ-i
         pass.stop   the-man-NOM   to-tell-GEN-him   with-the-accident-GEN
         'The man was stopped to tell him about the accident.'

     b. qutila   r-rajul-u   ʕamd-an
         pass.killed   the-man-NOM   deliberately-ACC
         'The man was killed deliberately.'

The use of purpose clauses as in (23a), and modifying adverbials as in (23b) indicates that a controlling agent of some sort does exist in passives. Compare and contrast (23) with (24) below; while agentive controlling is possible in passives such controlling is not possible in inchoative constructions.

(24) a.*n̩tafaʔa   n-nuur-u   li-ʔiš ʕaar-i-him   bi-l-xat̩ar-i
      put off   the-light-NOM   for-warning-GEN-them   of-the-danger-GEN.

  b. *nšawa   l-laħm-u   ʕamd-an
      roasted   the-meat-NOM   deliberately-ACC

Thus, the possibility of agentive controlling in the syntax in passive indicates that passive structures have an 'implicit subject' which is the logical subject. This implicit subject has been identified by Baker et al. (1989) as PRO. It has also been identified as *pro* (Pieroni 2000, Maling and Sigurjónsdóttir 2002, Abraham and Leiss 2006, Sigurðsson 2011). In addition, the assumption that the logical subject has a 'discourse interpretation' as the doer of the action explicitly suggests that it is also semantically active[20].

As far as active constructions in consistent NSLs are concerned, there is another factor that contributes to *pro's* activeness in active as well as in passive constructions. That *pro* in these languages is syntactically and semantically active stems from its being associated with person inflection attached to the verb. This is so due to the '*pro*-drop' property NSLs are characterized with, where the typical richness of inflection in finite clauses is always associated with a silent (unpronounced) pronoun, i.e. *pro* (see e.g. Roberts 2010a, Shormani in press, for consistent NSLs like Arabic, Italian, Spanish, etc. and partial NSLs like, Finnish, Hebrew, etc.). The assumption that *pro's* activeness in passive is similar to that of active is minimalist in nature, because it is not construction-specific. This *pro* functions as the syntactic subject in active, which means that it is assigned a θ-role of agent, and we will argue, in what follows, that *pro* is assigned the same θ-role in personal passives in Spec-*v*P. First let us consider (25).

(25) a. The thematic subject of personal passive is *pro*
    b. The internal argument must be promoted; else,
    c. The structure is an instance of impersonal passive[21]

If (25) is on the right track, we expect *pro* to still be able to receive the same θ-role its active counterpart does, but the question is how? Another question concerns (25b), i.e. why is it that the internal argument has to raise? In the rest of this section, we will try to provide answers to these two questions, among other related issues. We will also outline the syntactic framework adopted in this article.

Since *pro* is basically referential in Arabic, and since this referentiality is associated with person feature, i.e. 1, 2, or 3 in active, as morphologically indicated by person inflection attached to the verb, we assume that this referentiality

is not specified in passive.[22] Thus, if PM unpecifies/suppresses the thematic subject in Arabic (and perhaps cross-linguistically), it is expected that *pro* is personally referentially unspecified in passive. Since this referentiality is associated with 'person,' and since what changes is only the person inflection in the verb as (26c) shows, (i.e. *ta-* in the active becomes *y-* in the passive, i.e. 2 becomes 3, respectively), it follows that the PM attached to the verb suppresses and/or weakens the referentiality of *pro* in passive.[23]

(26) a. ʔ**a**-ktubu   d-dars-a
        1.act.def-write   the-lesson-ACC
        'You write the lesson.'

   b. **ta**-ktubu   d-dars-a
       2.act.def-write the-lesson-ACC
       'You write the lesson.'

   c. **y-u**-ktabu   d-dars-u
       3-ind.**pass**-write   the-lesson-NOM
       'The lesson is written.'

In (26a & b), the verb is in active, and agrees with the subject in all features. The fact that the passivized verb *y-u-ktab-u* in (26c) agrees with the Syn-subj *d-dars-u* (the 'logical object') in gender, number and person accounts without any further ado for the assumption that the PM in Arabic personal passives underspecifies the subject and promotes the object. Furthermore, since the specification of person (changed from definite in the active into indefinite/generic in the passive) is brought about by PM, i.e. *-u-,* (27) could be hypothesized to hold for personal passives in Arabic (and perhaps across languages, Maling and Sigurjónsdóttir 2002, Fassi Fehri 2012).[24]

(27) Personal passive is a person nonpecification/impoverishment of the external argument

Given that the difference between an active structure and a passive one is the PM, it follows that the changes brought about by passivization are due only to the PM. In terms of (27), then, it is expected that the PM nonspecifies/impoverishes this subject's person status into a covert pronoun, i.e. *pro*. This non-specification/impoverishment of the logical subject parallels strengthening of the PM's person feature.
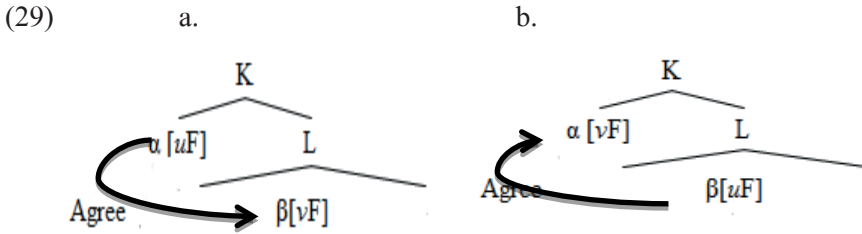
4.3. Agree

As for the framework adopted here, *Agree* is taken as an agreement relation established between two matching nodes α and β (Probe and Goal, respectively)

as stated in (28).

(28) *Agree* takes place in two directions, i.e. downwards or upwards

(28) can be illustrated in (29a) and (29b), respectively.

(29)   a.   b.

That *Agree* can take place in a bidirectional way is a well-documented phe-
nomenon cross-linguistically (see Baker 2008). When valuing Prsn feature, the
probing is downwards, but when valuing other features, the probing is upwards.

4.4. Person specifications

In this section, we will discuss the person specifications of *pro* and Pass. As
for *pro,* we have been postulating that in personal passives *pro* is referentially
underspecified, and therefore; it may have a non-specified [Prsn] feature. The
fact that *pro* is non-specified stems from its deficiency with respect to binding
phenomenon, either binding secondary predicates as in (30a), or anaphora as in
(30b)[25].

(30) a. *yu-ħšar-u   n-naas-u   yawma l-qiaamati   zurafaatin wa-ʔahaada
           pass-killed the-men-NOM day   the-judgment groups   and-individuals

   b. *ʕullima   nafs-u-hu   hunaa
       pass-taught   self-NOM-him   here

Thus, if the above analysis is on the right track, the following statement could
be hypothesized.[26]

(31) In Arabic personal passive, *pro* is a generic/non-specified pronoun

That *pro* in personal passives is indefinite/non-specified follows from its ge-
neric/arbitrary nature. It also follows from its possible interpretation. In other
words, in personal passives *pro* could be interpreted as [+Human] as in (32a),
[-Human] as in (32b).[27]

(32) a. quriʔa   l-kitaab-u
          pass.read   the-book-NOM
          'The book was read.'

      b. ʔu-kila   š-šajar-u

pass-ate   the-trees-NOM
'The trees were eaten.'

In (32a), *pro* can only be interpreted as [+human] since 'reading' is a human property. In (32bs), however, *pro* can only be interpreted as nonhuman, because humans do not 'eat' 'trees.'

Note also that *pro* can have both types of interpretation found in examples like (32), i.e. as [+/-Human]. This is illustrated in (33).

(33) ʔu-kila   l-laħm-u
    pass-ate   the-meat-NOM
    'The meat was eaten.'

In (33), *pro* can be interpreted as both human and nonhuman, simply because there are animals like *lions* that can be included.

These feature specifications of *pro* make it probably unable to value Pass's [Prsn] (which is strong, see below), hence *pro* remains in situ, i.e. Spec-*v*P.[28] We also assume that *pro* has default φ-features, in conformity with *pro identification requirement,* which holds at PF (see also Holmberg 2005, 2010, Roberts 2010a, among other related works).

As for Pass, given the assumption that Pass is the projection of the PM, and is associated with a person feature, it follows that its person feature is unvalued/uninterpretable by analogy with T, for instance. We assume that this person feature is valued differently from valuing any φ-feature. We assume that Pass's Prsn feature is some sort of EPP, and if so, the following statement is hypothesized.[29]

(34) [uPrsn] of Pass necessitates a (φ-complete) DP to be remerged in its Spec.

(34) states that there must be a φ-complete DP in the sense of Chomsky (2000, 2001) to move to Spec-PassP to satisfy the Pass's Prsn feature, but since *pro* in personal passives is referentially non-specified, as assumed above, it is expected that it cannot value Pass's Prsn feature. That *pro* is non-specified in passive stems from the fact that it has no specific referent in the discourse. It is rather deficient, which stems from passivization effect, as noted so far. Given this, it is expected that *pro* will remain in situ, i.e. Spec-*v*P. And since no element, but the Syn-subj (or otherwise the internal argument) in Pass's domain, has these features, Pass probes downwards, triggering the Syn-subj to move and remerge in its Spec[30] .

Notice that the movement of the Syn-subj to Spec-PassP conforms to the standard assumption assumed by *Agree* system. In other words, in *Agree* system,

the movement of a *goal* to the Spec of a *probe* is driven by EPP *Move*. Since the Prsn feature has an EPP nature, its satisfaction does not require valuation in its technical sense, as it is the case in valuing φ-features, for instance (cf. Chomsky 2000: 102).

4.5. T's features

In this section, we will shed some light on the features of T in passive. Since T is finite in morphological passive, as we have postulated so far, we hypothesize that T has the set of features presented in (35), including a strong EPP feature.

(35) {[uφ], [uEPP], [df Nom]}

That T has a default Case feature in active VS clauses, in general and in passive ones in particular, is evidenced from structures like (36), where the DP *r-rajul-a,* occupying Spec-TP, is assigned an Acc Case by the C(omplementizer) *ʔinna*.

(36) ʔinna   r-rajul-a   jaaʔa
     That   the-man-ACC came
     'Indeed, the man has come.'

The fact that T in personal passives has a person feature is evident from structures like (37), where the person inflection *t-,* i.e. 2 is attached to the verb *ħtaram*.

(37) **t**-u-ħtaram-uuna   fii   kulliyyat-i
     2-pass-respect-mpl in   college-my
     'You are respected in my college.'

That T in personal passives has gender feature is also clear from structures like (38).

(38) a. jumiʕa-**t**   n-nisaaʔ-u
        pass.gether-**F**SG   the-women-NOM
        'The women were gathered.'

     b. jumiʕ-**a**   r-rijaal-u
        pass.gather-**M**SG the-men-NOM
        'The men were gathered.'

(38a) and (38b) indicate also that T has no Num feature, i.e. in both the verb is singular while the Syn-subj is plural.

Given the conclusion that the Syn-subj is remerged in Spec-PassP, T's φ-features are valued via *Agree* established between T and the Syn-subj in a downward probing (see (29a) above).

As for EPP feature of T in SA, since the word order adopted in this article is

VS, there are three postulations: i) T has EPP. It follows that VS order has null EXPL(etive) in Spec-TP (see e.g. Rizzi 1982, 1986, Mohammad 1990, 2000), ii) it does not have EPP, and hence no null EXPL in Spec-TP is expected, and iii) VS has EPP, but it is satisfied differently (see e.g. Alexiadou and Anagnostopoulou 1998, 2001, Platzack 2004, Aoun et al. 2010).[31]

However, the postulation (i) cannot be maintained, simply because if it were so, it is expected that SVO and VSO languages (say, English and Arabic, respectively), would behave similarly, which cannot be correct. As for (ii), it seems that it is not unproblematic. The problem lies in that if T had no EPP, it would be difficult to account for SVO structures like (39) below, where the subject/topic/CLLD-element is a pronounced pronoun.[32]

(39) huwa   ʔakala t-tuffaaħat-a
      he   ate   the-apple-ACC
     'He ate the apple.'

If the above (i) and (ii) cannot be maintained, then, only the postulation (iii) is left as a possibility. We assume, following Alexiadou and Anagnostopoulou (1998), Platzack (2004) and Aoun et al. (2010), that in pro-drop languages, EPP of T is valued by V-raising to T.[33] Aoun et al. (2010: 44), for instance, argue that in VS languages "agreement on the verb can fulfill the EPP, thus, obviating the movement of the verb." In addition, Alexiadou and Anagnostopoulou (1998: 494) point out that one substantial property of NSLs including Arabic is that in such languages EPP can be satisfied "via verb raising [to T] because they have verbal agreement morphology with the categorical status of a pronominal element."[34] They add that no overt expletive subjects are used, which means that topics are merged somewhere outside the thematic domain (i.e. external to v/VP, possibly in Spec-TP).[35]

Under the analysis proposed here, passivization does not absorb the verb's ability to assign Acc Case. However, there arises a question here as to how the verb's Acc Case feature is discharged. Put differently, if the internal argument is attracted by Pass to its Spec, hence assigned a Nom Case, it follows that v's Acc Case feature will remain discharged, which leads to the divergence of the derivation at LF. To account for how v's Acc Case feature is discharged, there are two possible scenarios that could be hypothesized. The first scenario concerns passive structures of monotransitive verbs. This scenario goes as follows. Since the Syn-subj leaves a trace after moving to Spec-PassP, and since this trace is a variable (cf. Chomsky 1991, Zwart 1996), it could be argued that this trace receives v's Acc Case feature. The second scenario concerns personal passive of

ditransitive verbs, and we tackle it in the next section.

5. Passives in double object constructions

The core property of DOCs such as the English *Ali gave Alia a book* is that they contain ditransitive verbs, *gave* here, and that the verb assigns Case to two internal arguments, namely the DPs *Alia* and *a book*. However, before examining how the proposal developed here accounts for passives in DOCs, first, let us very briefly review P&P accounts of such structures.

The standard P&P assumption (regarding Case assignment in general) is that Case is assigned by a head to its DP complement (Chomsky 1981, 1986, Radford 1997, Haegeman 1994, Bobaljik and Wurmbrand 2007, among many others).[36] In the case of passive, the P&P account of passive cross-linguistically is that the passive morpheme was considered an argument which is assigned Case and a θ-role it absorbs (Chomsky 1981, Baker et al. 1989, Jaeggli 1986, Baker 1988, among others, see also section 3). However, if this were true, it would be difficult to account for structures like (40), representing personal passives in DOC.

(40) ʔuʕtia   muħammad-un   kitaab-an
     pass.gave Mohammed-NOM book-ACC
     'Mohammed was given a book.'

In (40), although the verb *ʔuʕtia* is passivized, it still behaves like transitive, assigning the internal argument *kitaab-an* an Acc Case. Thus, the existence of personal passives like (40), where the ditransitive verb *ʔuʕtia*, though passivized, still assigns a Case to its internal argument, refutes the assumption that Case Absorption is a core property of passive. Along these lines, Kiparsky (2013: 12) holds that passivization is *not* intransitivization, but rather a demotion that "reduces the valency of a predicate (the number of its direct arguments) by one, passives of ditransitives are transitive."[37]

However, if Case is absorbed by passivization, the question is: how is it that the verb is still able to assign a Case to the direct object in DOC (or transitive impersonal) passives? Before attempting to answer this question, let us see how P&P accounts for this phenomenon. For instance, Larson (1988) argues that in transitive structures in general and ditransitives in particular, there are two Acc Cases assigned by the verb: one is structural and the other inherent, and that DOCs involve both and one inherent. He holds that "the double object construction is simply an instance where the two Cases are "pulled apart" and assigned to different arguments" (p. 360). In DOC passive constructions, he argues, it is only the ability of the verb to assign structural Case to the indirect object that is absorbed, while its ability to assign inherent Case to the direct object remains

intact. Consider the active DOC in (41a) and its passive equivalent in (41b).

(41) a. ʔuʕtia   ʕaliyy-un muħammad-an   kitaab-an
         gave   Ali-NOM   Mohammed-ACC   book-ACC
         'Ali gave Mohammed a book.'

      b. ʔuʕtia   muħammad-un   kitaab-an
         pass.gave   Mohammed-NOM   book-ACC
         'Mohammed was given a book.'

However, this analysis suffers from several problems. We will consider only two. The first one is that if transitives, as Larson claims, be they mono- or di-transitive, have two Cases, it follows that monotransitive and ditransitive are similar which is not the case. For instance, in monotransitive structures like (42), the direct object would be assigned two cases, which is not possible due to a violation of Case Criterion.[38]

(42) John kicked the ball.

Further, if we assume that passivization absorbs the structural Case, there is nothing that can block passivization from absorbing the inherent Case. The second, and presumably the severe, problem Case-Absorption theory suffers from is that it fails to account for the Acc Case assigned to the internal argument in impersonal passives of transitives. Consider impersonal passive structures like (43) (cf. Shormani to appear).

(43) "li-yu-jzaa   qawm-an bi-maa   kaan-uu ya-ksib-uu-na"   (Qur'an)[39]
      to-3pass-award people-ACC by-what were-PL 3act-do-PL.IND
      'People will be awarded according to what they have done.'

Syntactically, the internal argument, namely *qawm-an* in (43), is not promoted. It turns out that it is assigned an Acc Case, and this assigner is invariably the verb. The transitive verb *yu-jzaa*, though passivized, seems to still be able to assign the internal argument an Acc Case. Semantically, it seems also that this internal argument is assigned a θ-role of *patient* by such a verb.

Examples like (43) indicate that passivization does not absorb the verb's ability to assign Case. The transitive verb *y-u-jzaa*, though passivized, assigns the internal argument, namely *qawm-an*, an Acc Case. However, since this article mainly deals with personal passives (cf. Shormani to appear).[40]

We return now to show how the proposed approach accounts for DOC personal passive. In particular, we attempt to answer the question posed above. The standard minimalist assumption is that Case is an interpretable/valued feature encoded on a functional head, here v^0, and values the unvalued Case fea-

ture of a Noun Phrase, viz. its complement. Recall that we have postulated that in monotransitive passive structures, *v*'s unvalued Case feature is assigned to the Syn-subj's trace. The second scenario can now be articulated. In DOC passive structures, it is presumably possible to argue that "case corresponds to a syntactic bundle of features rather than a single feature" (Matushansky 2010: 119). From a morphosyntactic perspective, Matushansky argues that what really matters then is how such a bundle is spelled-out. She proposes that "[t]he PF realization of each particular bundle of Case features (the morphological case) is resolved by language-specific vocabulary insertion rules" (p.119). She also adds that Case bundles are assigned to terminal nodes, and these nodes value the unvalued Case features of their complements.

However, Matushansky's analysis seems to be based on Case-Absorption since she assumes that *v* is absent in passives, which is not unproblematic, as we have seen so far. In cases where *v* is present, however, "every argument below it receives its features (accusative)" (Matushansky 2010: 120). This seems to suggest some sort of solution to active DOCs. In passive, where *v* is absent, she argues, "every argument below T… is marked nominative" (p. 120). There arises a question in this juncture: is *v* really absent in passives?

To address this question, there are three possible answers: i) *v* is absent in passives as held by Matushansky (2010) seen above, ii) *v* is present but semantically contentless (cf. Marantz 1997, Bruening 2011). For instance, Bruening (2011) assumes that like in active, there must be a functional projection that immediately dominates the DP-object in passive. This projection is *v*P headed by *v*, and is positioned between PassP and VP (see also Bruening (2012, 2014). He assumes that in active, *v* is a Case-licensing head, but in passive, merging with Pass cancels *v*'s Case-licensing property, and instead Pass becomes a Case-licensing head. As a result, Bruening assumes that *v*P is semantically contentless. Although semantically vacuous, he argues, *v*P is required in passive structures because of adverb placement requirement. The problem with these two views, however, is that they are built on Case-Absorption, and so, they fail to account for DOC passives.[41] And iii) *v* is present and is still able to function as a Case-licensing head (as a phase head). As for ditransitives, i.e. DOC passives, Kiparsky (2013) assumes *v* to be present and assign an Acc Case to its internal argument. There is good evidence in support of the presence of *v* in personal passives. One such piece of evidence is that given our argument above that the logical subject of passive is referentially non-specified, *v* is still able to assign the agent θ-role to a silent pronoun, i.e. *pro*, as the thematic subject of passives. Given this, se-

cond, Spec-*v*P must be the position, where this is done. Third, *v* is still able to assign Acc Case to the internal argument in DOC (and transitive impersonal) passives, and fourth, it could be argued that the Syn-subj's trace (as in monotransitive passives) can also receive Case from *v* in DOC passives.

Given this, we think that Matushansky's (2010) proposal of *Case bundle* could be modified and extended a step further to 'accommodate' passive structures as well. Thus, if a *Case bundle* is assigned to a terminal node, the following statement holds for passive.

(44) A terminal node's Case bundle can value the unvalued Case feature of *at least* one DP

(44) has a further implication, i.e. it could be extended to account even for monotransitive passives. Given our assumption that Case *bundles* are assigned to terminal nodes, in monotransitive passives, then, *v*'s *Case bundle* values the unvalued Case feature of (at least) one DP, which is the trace in V-compl(ement) position.

As for DOC passive, *v*'s Case *bundle* values two unvalued Case features of both the trace and the direct object. Given this, let us now see how the proposal accounts for DOC passives like (45).

(45) Ɂuʕtia   muħammad-un   kitaab-an
     pass.gave Mohammed-NOM book-ACC
     'Mohammed was given a book.'

Given the deficiency of *pro*'s [Prsn] feature, it cannot value Pass's Prsn feature. Pass then probes for a φ-*complete* DP, which is in this case the indirect object, and triggers it to remerge in Spec-PassP. Remerging the indirect object (the Syn-subj DP) in Spec-PassP, it values Pass's Prsn feature. Pass's valued Case feature values the indirect object's unvalued Case feature via *Agree* in an upward probing, hence spelled out as nominative. It also values T's unvalued features, namely φ-features via *Agree* in a downward probing. The head *v*'s *Case bundle* then values the trace's and the direct object's unvalued Case features in situ via *Agree*, though sometimes, the direct object has to move to Spec-*v*P as (46a & 46b) show.

(46) a. Ɂuʕtia   muħammad-un   kitaab-an   fiʕl-an
       pass.gave Mohammed-NOM book-ACC surely-ACC
       'Mohammed was surely given a book.

   b. [$_{TP}$ [$_{T}$ [Ɂuʕtia]$_i$ [$_{PassP}$ [$_{DP}$ muħammad-un]$_k$ …[$_{vP}$ [pro] [$_{vP}$ [kitaab-an]$_j$ [$_v$ [t$_i$] [$_{VP}$ [$_{AdvP}$ [fiʕl-an] [$_{VP}$ [t$_k$] [$_V$ t$_i$ [$_{DP}$ [t$_j$]]]]]]]]]]]]

c. * ʔuʕtia   muħammad-un   fiʕl-an   kitaab-an
    pass.gave Mohammed-NOM surely-ACC book-ACC

Note that in (46b), there are 'multiple specifiers' of *v*P and VP (cf. Radford 1997). In the former, *pro* and the direct object are positioned: *pro* occupies the higher Spec-*v*P, while the direct object moves from its base-generating position to the lower Spec-*v*P. In the latter, the Syn-subj, namely *muħammad-un*, moves from its base-generating position, i.e. the higher Spec-VP to Spec-PassP. Finally, the adverb *fiʕl-an* stays in its base-generating position, i.e. the lower Spec-VP. Unless this movement is undergone, the sentence is ungrammatical, as the direct object *kitaab-an* remains in situ as (46c) shows.

I return now to *pro* and how its unvalued θ-role and Case features are valued. Given Matushansky's (2010) proposal and the mechanism of Case valuation, i.e. *Case bundle*, we think that this mechanism could be extended to the behavior of Pass. As for *pro*'s Nom Case feature, and given (34), it could be argued that Pass also values the unvalued Nom Case feature of *pro*. Pass has a valued Nom *Case bundle* which is able to value more than one unvalued Case feature, namely *pro*'s and the Syn-subj's unvalued Case features. As for *pro*'s θ-role, it could be argued that since *pro* is merged in Spec-*v*P, *v* assigns it the external θ-role at *Merge*.

6. Movement of the Syn-Subj

So far, we have postulated that the promoted object has to raise from its base-generating position to Spec-PassP. In this section, we outline this claim. We present empirical evidence from the language in support of the Syn-subj's movement.[42] The first piece of evidence comes from clitic Syn-subjs as in (47).

(47) a. ʔinna-hunna   yu-ħtaram-**na**   kaθiir-an
         that-they.**F**   pass-respected-they.**F**   much-ACC
         'Indeed, they (f) are respected very much.'

      b. yu-ħtaram-**na**   kaθiir-an
         pass-respected-they.**F**   much-ACC
         'They (f) are respected very much.'

Note that the pronoun subject clitic *–na* in (47b) functions as the Syn-subj, and therefore; has to move from its canonical position, i.e. V-compl(ement) to Spec-PassP. Given the fact that clitics must be cliticized to their host (here the verb), then, *-na* has to cliticize to the verb *y-u-ħtaram*. This is shown in (48). [43]

(48)
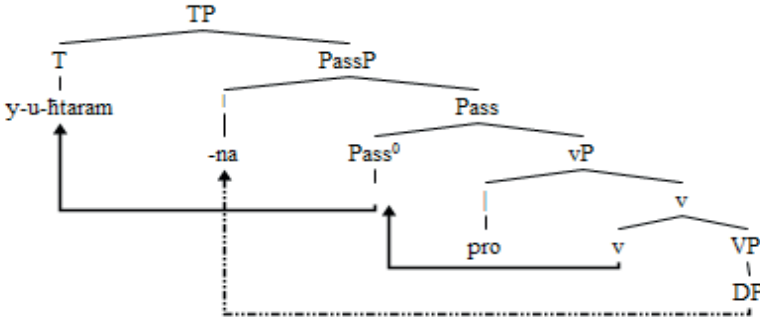
Second evidence comes from the use of adverbs as in (49), where the adverb *jayyid-an* is present.

(49) a. biiʕat   l-kutub-u   jayyid-an
       pass.sold   the-books-NOM well-ACC
      'The books were sold well.'

   b. $[_{TP} [_T [biiʕat]_i [_{PassP} [_{DP} l\text{-kutub-u}]_j \ldots [_{VP} [_{AdvP} [jayyid\text{-an}] [_{v}^{0} t_i]]]]]$

   c. *biiʕat   jayyid-an   l-kutub-u
       pass.sold   well-ACC   the-books-NOM

The ungrammaticality of (49c) can be accounted for in the fact that the Syn-subj DP *l-kutub-u* remains in situ while the adverb *jayyid-an* is in Spec-VP.

Third evidence comes from the use of floating quantifiers as is illustrated in (50), where the floating quantifier *kull-u-haa* is present.

(50) a. biiʕat   l-kutub-u   kull-u-haa
         pass.sold   the-books-NOM   all-NOM-it
         'All the books were sold.'

    b. *biiʕat   kull-u-haa   l-kutub-u
        pass.sold   all-NOM-it   the-books-NOM

The ungrammaticality of (50b) lies in the fact that the Syn-subj DP *l-kutub-u* remains in situ, while the quantifier *kull-u-haa* moves to Spec-*v*P.[44]

Fourth, for the adverb to be merged in Spec-VP (and not possibly in Spec-*v*P) and remains in situ, there is good evidence which stems from structures, where both floating quantifiers and adverbs are present in the sentence as (51) shows.

(51) a. biiʕat   l-kutub-u   kull-u-haa   jayyid-an
         pass.sold   the-books-NOM   all-NOM-it   well-ACC
         'Ali sold all the books well.'

b. *biiʕat   jayyid-an l-kutub-u   kull-u-haa
   pass.sold well-ACC   the-books-NOM all-NOM-it

If, for instance, the adverb *jayyid-an* were merged in Spec-*v*P, and supposing that the DP *l-kutub-u* undergoes a movement to Spec-PassP, leaving the quantifier *kull-u-haa* stranded in Q, (51b) is expected which is ungrammatical, causing the derivation to diverge at LF and PF. Thus, applying our analysis, (51a) will have the derivation in (52).

(52)
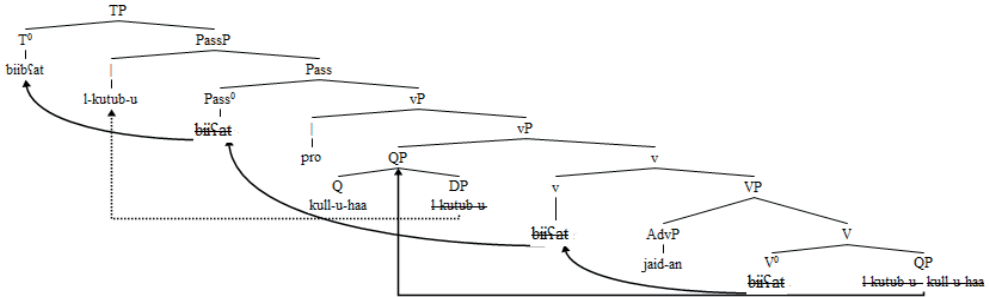
In (52), we have also another support for the necessity of *v*P projection in passives. The adverb *jayyid-an* merges in Spec-VP and stays there. The QP is merged in head-complement relation with V. From there, it raises as a whole to Spec-*v*P. From Spec-*v*P, only the DP *l-kutub-u* raises to Spec-PassP, leaving the floating quantifier *kull-u-haa* stranded in Spec-*v*P.

However, there arises a question here, i.e. what values the Nom Case feature of the quantifier *kull-u-haa*? Put differently, in structures like (52), if Pass values the Nom Case feature of the Syn-subj, how and what values the Nom Case of the quantifier is still unclear?

To address this question, we assume, following Shlonsky's (1991: 163-166) proposal of deriving QPs, and according to (44), the Nom Case of the quantifier *kull-u-haa* takes place as follows. Since *kull-u-haa* is merged in Q, and before raising of the Syn-subj DP to Spec-PassP, when Pass probes its c-command, its *Case bundle* values the Nom Case of the QP as a whole, in which case the Q's Nom Case feature then percolates to the Syn-subj DP (see Matushansky 2010).

6.1. A- or A`-movement

That the Syn-subj moves from its base-generating position, which is an A-position (by virtue of being a theta-position) to Spec-PassP position, is borne out. However, what is still unclear is whether Spec-PassP is an A-position. Let us first examine the status of the Spec-TP in SA, i.e. an A`-position or A-position.[45] There is good evidence that Spec-TP is an A`-position. We will consider only

two which we will use as evidence that Spec-PassP is an A-position. The first evidence comes from wh-constructions like (53) (cf. e.g. Shormani 2015).

(53) a. maaðaa$_i$ ʔuʕtia   muħammad-un   [t$_i$]?
       what   pass.gave Mohammed-NOM

   b *maaðaa$_i$ muħammad-un   ʔuʕtia   [t$_i$]?
      what   Mohammed-Nom   pass.gave

The movement of the wh-word *maaðaa* to Spec-TP in (53a) indicates that the latter is an A-position. Given this, a mere explanation to the ungrammaticality of (53b) is that extracting the wh-word *maaðaa* across a preverbal DP is not allowed, which means that the preverbal DP 'sits' in Spec-TP. This in turn indicates that Spec-TP in Arabic is an A`-position.

The second evidence comes from *ʔinna*-constructions as illustrated in (54).

(54) a. r-rajul-u   yu-ɖrabu
        the-man-NOM   pass-beat
        'The man is beaten.'

   b. ʔinna r-rajul-a   yu-ɖrabu
      that   the-man-ACC   pass-beat
      'Indeed, the man is beaten.'

   c. *ʔan yu-ɖraba   r-rajul-a
       that pass-beat the-man-ACC

The fact that the preverbal DP *r-rajul-a* can be assigned a Case other than Nom, i.e. an Acc by an external head like C *ʔinna*, for instance, as in (54b), suggests that Spec-TP is an A`-position. If, however, Spec-TP in SA were an A-position (as in the case of English, for instance), no external Case assigner would assign any Case to the DP there. Given this, it could be argued that the preverbal DP in (54a) has a default Nom Case.

We return now to the status of Spec-PassP; we argue that it is an A-position. Looking again at (53), the fact that wh-movement is blocked across a preverbal DP as in (53b), but not across a post-verbal DP as in (53a), indicates that Spec-PassP is an A-position. Considering (54) again, that the DP *r-rajul* cannot surface in the Acc form in (54c), i.e. in the post-verbal position, indicates that it has to have a Nom Case assigned by Pass, as proposed so far, which means that Spec-PassP is a Nom Case position. Since the Syn-subj undergoes a movement to a Case position, and since an A-movement is one that is undergone to a Case position, it is expected that such a movement is an A-movement. Along these lines, Borer (1995: 582) argues that "A-movement is movement to an (actually)

Case position" concluding that Spec-TP in Hebrew and Arabic is an A`-position.

To conclude this section, the movement of Syn-subj DP to Spec-PassP can be argued to have not been triggered by feature checking as a last resort mechanism, as was assumed in Chomsky (1995a) (and considered imperfection). In the approach proposed here, the movement, i.e. an internal merge of Syn-subj from its base-generating position, should be understood as a 'free' operation in UG, but its absence is imperfection (Chomsky 2000).

6.2. Strength of Prsn and LF A-movement

The fact that Pass has a strong [Prsn] feature that is satisfied only by remerging the Syn-subj in its Spec stems from the *Adjacency Constraint* (AC) in (55) SA is characterized with.

(55) Adjacency Constraint

In VSO, the verb and the subject must be adjacent

(55) holds between the subject and the verb, be it active or passivized.[46] Let us first test (55) in relation to active structures. Consider (56).

(56) *kataba   ɣaalibanmaa   ʕaliyy-un   d-dars-a
        wrote   often-that   Ali-NOM   the-lesson-ACC

Given (55), the ungrammaticality of (56) is straightforwardly accounted for. In other words, the adjacency constraint between the verb *kataba* and its subject *ʕaliyy-un* is violated by the intervention of the adverb *ɣaalibanmaa*. This adjacency violation results in ill-formedness of passive structures as well, as the ungrammaticality of the structures in (57) shows.

(57) a.*kutiba   ɣaalibanmaa   d-dars-u
          pass.wrote   often-that   the-lesson-NOM

       b.*ʔu-ðiiʕa   ʕmd-an   l-xabar-u
          pass-broadcasted   deliberately-ACC the-news-NOM

Nevertheless, there are some contexts, where the Syn-subj remains in situ, hence violating (55). One such context is where verbs of denotic modality are passivized as in (58).

(58) furiđa/t   ʕala l-muslim-iina   z-zakaat-u
        3pass.must-MSG/F   on   the-Muslim-PL.GEN   the-charity.F-NOM
        'The charity must be given by all Muslims.'

That the Syn-subj remains in situ is just an optional property the denotic modality structures exhibit. This is clear from (59), where the Syn-subj undergoes a movement to Spec-PassP.

(59) furiđa*(t)   z-zakaat-u   ʕala   l-muslim-iina
     3pass.must-M(F)   the-charity.F-NOM   on   the-Muslim-PL.GEN
     'The charity must be donated by all Muslims.'

Note, however, that if this optionality is a characteristic of denotic modality in *active* constructions as (60) shows, the problem disappears. Put differently, if the optionality of separating the subject form its verb is also a characteristic of active denotic modality constructions, it follows that (34) and (55) are not violated by (58). Consider the active denotic modality construction in (60)[47] .

(60) a. y/tufrađu   ʕala   l-muslim-iina   z-zakaat-u
        3M/FSG.act.must on   the-Muslim-PL.GEN   the-charity.F-NOM
        'The Muslims must donate charity.'

      b. (*y)/tufrađu   z-zakaat-u   ʕala l-muslim-iina
        3M/F.SG.act.must the-charity.F-NOM on   the-Muslim-PL.GEN
        'The Muslims must donate the charity.'

Bearing in mind the above examples, it is clear that not *any* Syn-subj can remain in situ, and we can conclude that (34) and (55) are true of passive in the same way they are of active (see also Aoun et al. 2010, Majdi 1990).[48]

Still, however, the optionality such constructions exhibit casts some doubts on the adequacy of (34), given our assumption that Pass's Prsn feature is strong (having the feature content of EPP). Put differently, given (34), and given also our assumption that valuing EPP takes another mechanism different from feature-valuation assumed by *Agree,* Pass's Prsn feature will reach LF unchecked/ unvalued. If this is true, then it will result in violating *LF Crash Theory* in (61) proposed by Chomsky (1995b) and elaborated by several authors (see e.g. Lasnik 2003: 84).

(61) A strong feature that is not checked (and eliminated) in overt syntax causes a derivation to crash at LF

Therefore, there should be some sort of mechanism which saves (61) so that no feature (here Pers) remains unvalued at LF, and the derivation converges at this interface. To account for Pass's Prsn satisfaction in examples like (58), we assume that the Syn-subj raises at LF (cf. Bošković 1998, Lasnik 2003). This LF movement is able to value and delete Pass's Prsn feature. If this is on the right track, the optionality of denotic modality structures is accounted for, hence resulting in the convergence of the derivation at LF interface.

7. Conclusion

In this article, we have proposed an approach to personal passives in SA,

based mainly on person feature. We have argued that passive is person association with the PM, and that the implicit (thematic) subject is a silent pronoun, i.e. *pro*. Since the PM is associated with Prsn feature, we have proposed that it is projected as PassP, whereby Pass has an unvalued Prsn feature. This Prsn feature is assumed to be a variant of EPP which is valued only via remerging a DP in its Spec. Since *pro* in personal passives is referentially non-specified, it has deficient [Prsn], hence cannot value Pass's Prsn feature, then, there is a room for Pass to probe downward and trigger the Syn-subj to raise and remerge in Spec-PassP. The approach we have developed accounts for almost all personal passive facts in SA, which were not accounted for in Case-Absorption theory, in both monotransitive and ditransitive passives.[49] That the Syn-subj has to raise and be remerged in Spec-PassP ensues from a core property of SA, i.e. AC holding between the subject and the verb in VS. It also stems from a structural requirement, i.e. the placement of adverbs and floating quantifiers.

There are some implications that could be drawn from the proposal pursued here. One such implication concerns the extension of this proposal to the analysis of personal passives in NSLs, specifically those of VSO word order such as Irish, Hebrew, etc.

Another promising implication is the extension of the proposed approach to the analysis of impersonal passive, taking into account the differences between both types of passives. For one thing, given the assumption that in transitive impersonal passives the internal argument is not promoted (see our example in (43)), it could be argued that *pro* is 'referentially strong,' in impersonal passives, which enables it to value Pass's Prsn feature by (re)merging in Spec-PassP (see also Shormani to appear).[50] As a matter of fact, there are several differences between both types of passive, including, for instance, agreement, interpretation of *pro*, feature-specification of *pro,* T, *v* and Pass, etc. and we leave this for future research.

A final implication has to do with postulating that PassP exists in UG, thus, dealing with cross-linguistic facts with less terminology and less machinery apparatus (though partly on passive) as a substantial assumption of minimalism (cf. Bruening 2012, 2014).

Notes

1- Note that vP is a functional projection dominating the lexical VP. This vP projection was first proposed to solve the problem imposed by the double object construction (and binarity of branching) in what is known as VP-shell (Larson 1988, see also Chomsky 1995a, Ouhalla 1999, Radford 1997). It has then been generalized as a theta-oriented projection, i.e. a projection where theta roles are assigned/checked.

2- There are also some other types of passive common to most languages including adjectival passives, passives of unergatives, unaccusatives, etc.

3- The vP is a functional projection dominating the lexical VP. This vP projection was first proposed by Larson (1988) to solve the problems imposed by the double object construction (and binarity of branching) in what is known as VP-shell. It has then been generalized as a theta-oriented projection (see e.g. Chomsky 1995a, Radford 1997).

4- In the original, it is NP, but we use DP to fit the context of the present discussion.

5- Goodall (1993: 31) summarizes the whole process in (i) (cf. also Chomsky 1981: 124).

(i)   a. No θ-role is assigned to [NP, S]

       b. No Case is assigned to [NP, VP]

P&P studies of passive took into account Burzio's (1986) generalization, which states that if a verb does not have a thematic subject, it will not be able to assign Case.

6- Here, the symbol # stands for the thematic subject that is deleted from the syntax.

7- Based on subject verb agreement asymmetries SA exhibits, there are different (and sometimes contradictory) views regarding the SA clause structure. There are those who consider SA to have only one unmarked word order, i.e. VS (see e.g. Plunkett 1993, Olarrea 1996, Yateem 1997, Shormani 2015), and those who consider it to have SV as the unmarked one (Mohammad 1990, 2000, Aoun et al. 1994). In addition, there are those who claim that SA has both VS and SV, the former being the unmarked word order, and the latter is derived from the former via the movement the subject undergoes from Spec-VP to Spec-IP as in (iib). All these views are based on subject-verb agreement. In SV, the verb shows full agreement in φ-features with the subject. However, in VS, the verb partially agrees with the verb, specifically the

number feature does not appear on the verb as illustrated in (i) and (ii), representing VS and SV, respectively (cf. Shormani 2015, Shormani in press).

(i) a. qaraʔ-a   t- tullab-u   l-kutub-a
       read-3MSG the-students-NOM.3MPL the-books-ACC
       'The students read the books.'
     b. [IP [e] [I [qaraʔ-a]i [VP [DP t-tullab-u] [V [ti] [DP l-kutub-a]]]]]]
(ii) a. t-tullab-u   qaraʔ-uu   l-kutub-a
       The-students-NOM. 3PL   read-3MPL the-books-ACC
       'The students read the books.'
     b. [IP [DP t-tullab-u] [I [qaraʔ-uu] [VP [ti] [V [DP l-kutub-a]]]]]]

Aoun et al. (1994), on the other hand, claim that while the SV is the unmarked order, VS is derived via V-raising to a head F of a functional projection (FP) higher than IP, and that number agreement loss is a result of this movement, in what is known as Agreement Loss Analysis. This is illustrated in (iii).

(iii) a. qaraʔ-a   t-tullab-u   l-kutub-a
        read-3MSG the-students-NOM.3MPL the-books-ACC
        'The students read the books.'
      b. [FP [F^0 [qaraʔ-a] [IP [DP t-tullab-u] [I [ti] [VP [t] [V^0 [ti] [DP l-kutub-a]]]]]]]

However, those who consider that SA is mainly a VS language provide empirical facts from the language in support of their analyses. They argue that the SV order is a topic-comment or Clitic Left Dislocation (CLLD) structure, basing their argument on several properties SV order has in common with CLLD. The empirical evidence that SV structures are topic-comments/CLLDs include (but not only) wh-extraction, (in) definiteness, resumption and the default Nom Case of the preverbal DP.

8- The Modern Greek example has been taken from Tsimpli (1989: 235).

9- Note, however, that parameterization between both languages exists. For one thing, while by-phrase is possible in Modern Greek, it is not in Arabic.

10- See also (Baker et al. 1989, Jaeggli 1986, Haegeman 1994, Frajzyngier 1982, Ackema and Neeleman 1998, among others).

11- Even in P&P, θ-role transmission violates the Uniformity of Theta-Assignment Hypothesis which is formulated in (i) from (Baker 1988: 46, 1997: 74).

(i) Identical thematic relationships between items are represented by identical structural relationships between those items at D-Structure.

12- In addition, Lappin and Shlonsky (1993) identify another problem with this analysis. They argue that if I is considered an A-position by virtue of being a theta-position, full DPs can occur in I, based on the fact that INFL assigns Case. They add that if a full DP is positioned in I, then, it will receive a Nom Case under government, hence

I is both an A-position and a functional head (of IP), which cannot be maintained.

13- Among these facts and salient properties of passives accounted for by their proposals are the following:

(i) a. The fact that the logical-subject argument is not realized on an NP in passives.

b. The phenomenon of "implicit arguments" in passives.

c. The fact that the subject position is nonthematic in passives, permitting NP Movement into this position (Baker et al. 1989: 220).

14- The same conclusions have been reached by several authors (e.g. Reinhart and Siloni 2005), holding that passivization involves some sort of saturation, where the external θ-role is saturated by existential closure in the semantics. Some others (e.g. Laks 2009) argue that the agent θ-role is still accessible at the level of interpretation.

15- Collins's theory seems to take into consideration only the behavior of the object, which is promoted in passive. It completely ignores the 'demotion' of the subject, however. Still, if Collins's theory of passivization is to be applied to languages like English, French, German, etc. which allow by-agent phrases, it seems difficult to be applied to languages like Finnish, Latvian or Arabic, where (by-) agent phrases are not possible (see also Kiparsky 2013). That Collins's theory cannot be applied to these languages stems from the fact that if such languages lack by-phrase, the projection Voice[by]P would not be possible. Another problem Collins's theory suffers from is that it does not account for a very stable fact of passive in English and "English-like" languages, which is the optionality of by-phrase. In other words, it fails to account for short passive structures (those having no by-phrase) as in The book was written. So, the Voice[by]P (hence by-phrase) seems to be 'compulsory' in Collins's theory, which is not the case. It may be the case that 'Collins does not solve the distribution of required vs. optional arguments; however, it must be said that 'nobody really has a solution for that.' Jaeggli (1986), reports some cases, where a by-phrase seems to be obligatory. Consider (i-v) from Jaeggli (1986: 602f, fn. 13, see also Mihailovic 1966: 123f cited therein):

(i) a. His first insult was followed by an even worse one.

b. *His first insult was followed.

(ii) a. He was brought up by his parents.

b. *He was brought up.

(iii) a. The part of the mother was played by Miss Perkinson.

b. *The part of the mother was played.

However, there seems to be something against this line of argumentation. As for the verb 'follow,' the by-phrase can also be dropped when it is passivized and if its subject is animate as in (iv):

(iv) The Russian spy was surely followed.

The grammaticality of (iv) indicates that it is not the by-phrase which is obligatory, but rather the type of the subject.

As for (iib) and (iiib), they each become acceptable if an adverbial is added as in (v):

(v) a. He was brought up in Cambridge.

 b. The part of the mother was played well.

This actually indicates that the by-phrase here is not obligatory, but rather it is any sort of adverbial, be it an adverb or a PP.

16- This is also a common feature in languages like Greek, Italian, Irish, etc. (see e.g. Tsimpli 1989, Merchant 2015, McCloskey 2007).

17- (17) and (18b) also apply to verbs whose root starts with, or ends in, a vowel (or hamza ('ʔ')) like s-ʕ-a (to run), d-ħ-a, (to sacrifice). However, those verbs wh**ose root contains vowels in the middle has a passive template illustrated in (i).**

(i) C_1—V—C_2
   a. aa ➔ impf
   b. ii ➔ prf

(i) applies to verbs like q-a-l (to say), s-a-r (to walk), s-a-q (to take/drive), etc. whose imperfective passive stems are yu-qaal, yu-saar and yu-saaq, respectively, perfective passive stems are qiil, siir and siiq, respectively. Note also that the templates formed also reflect morphological operations like causativization, reflexivization, passivization, etc.

18- Note, however, that there are some verbs whose stems do not show such alternations, particularly the second vowel of the melody as (i) shows.

(i) a. yaðhab-u

  b. yuðhab-u

The second vowel, namely a is the same in both active and passive melodies (see also Benmamoun 1999, 2000).

19- Chomsky (1995a:106-109) distinguishes pro from PRO, arguing that pro "typically

occurs as the subject of a finite clause" but PRO cannot occur in such a position. He attributes this to the fact that pro has Case, though he also assumes that "PRO, like other arguments, has Case, but a Case different from the familiar ones: nominative, accusative, and so on." However, PRO is again distinguished from pro, in that while the latter can move from a Case-marked position (to another Case-marked position), "PRO is permitted to move from a non-Case position to a position where its Case can be assigned or checked, and is not permitted to move from a Case position." Chomsky also argues that PRO is "a "minimal" NP argument, lacking independent phonetic, referential, or other properties." In addition, Kratzer (2009:189, fn.2) adds another difference between both constituents, arguing that PRO differs from pro, in that the former can be a "minimal pronoun", the latter "does not have to be. Like its overt counterparts, pro can be born with all its features in place, in which case it is referential." Given this, and as far as we can tell, PRO may not exist in Arabic. This stems from the fact that clauses in Arabic are always finite, even control clauses. Consider (i) from standard Arabic.

(i) a. Ɂaraada   Ɂan   yaktuba   *PRO/*pro* d-dars-s
       wanted.PAST.he C   write.PRES.he.   the-lesson-ACC
       'He wanted to write the lesson.'
    b. Ɂan qad   jaaɁa   *PRO/*pro*   mina   r-riħlat-i
       C   may   came-PAST   from   the-trip-GEN
       'He may have come from the trip.'

As can be seen in (i), the verb in Arabic is always finite, though used in control structures. In (ia), for example, the verb yaktuba is in present tense and in (ib), the verb jaaɁa is in past tense. As can be observed, not only are Arabic verbs inflected for tense, but also for φ-features (see also Olarrea 1996, for a discussion, and Landau, 2010, for other types of null categories and control)

20- Note that we will not tackle impersonal passives in this article (see Shormani to appear, for a discussion).

21- In the P&P theory, it was assumed that pro is 'featureless' in the sense that it is not specified for φ-features (Rizzi 1982, 1986). However, Holmberg (2005) argues that in minimalism, the notion 'featureless' as a characterization of pro cannot be maintained, specifically if Agr/T is uninterpretable. In minimalism, the notion of interpretability vs. uninterpretability is basically based on φ-features which serve as the 'bits and pieces' of the Agree/violation operation. Thus, assuming that φ-features are uninterpretable on T, it is difficult to assume that such uninterpretable features are able to license a 'featureless' null subject like pro. Given this, Holmberg (2005: 538) proposes the so-called Hypothesis B stated in (i):

(i) The null subject is specified for interpretable φ-features, values the uninterpretable features of Agr, and moves to Spec,IP, just like any other subject. This implies that the nullness is a phonological matter: the null subject is a pronoun that is simply not pronounced. The assumption that pro is the subject of personal passive constructions in Arabic (presumably derives from Chomsky's Avoid Pronoun Principle (Chomsky 1981: 65), which states that an overt pronoun should be avoided wherever it can.

22- For a further descriptive analysis on which inflection represents which of the φ-features, see among others (Bahloul 2008).

23- Based on the behavior of empty categories in, for instance, Comrie (1977), Perlmutter (1978) and Huang (1984), Maling and Sigurjónsdóttir (2002) propose that pro is the null subject of impersonal passives. But their proposal seems untenable, because they claim that active and passive impersonals behave similarly (for more on this issue, see Blevins 2003, Sigurðsson and Egerland 2009, Sigurðsson 2011, Kiparsky 2013, just to name a few). Building on these proposals, Fassi Fehri (2012) outlines an analysis in which he claims that pro is a topic in passive in Arabic. However, his analysis suffers from a number of problems, theoretical and empirical. One such problem is that it is not at all clear in his analysis how and in what category passive morphology is projected. He rather depends on the traditional assumption that VoiceP hosts both active and passive voices, but VoiceP is not an untenable projection (for more on this, see Harley 2013, Kiparsky 2013, Bruening 2012, 2014, just to name a few). Another defect in Fassi Fehri's analysis is that he takes pro to be a topic, focusing on left periphery materials, which cannot be maintained, simply because subjects are different from topics in several and various aspects. One such difference is that while topics (and left periphery materials in general) are C-domain constituents, subjects are T-domain ones (for more on this issue, see e.g. Demirdache 1988, 1991, Cardinaletti 1990, 1995, Olarrea 1996, Shormani in press). One more problem in Fassi Fehri's analysis is that he addresses only personal passives of monotransitive verbs, leaving ditransitive or DOC structures unresolved. The analysis proposed here, however, argues and defends the assumption that pro is the subject in personal passives (and impersonal passive, see Shormani to appear). It provides a unified and principled analysis of both monotransitive and ditransitive personal passive structures in Arabic.

24- This contrasts pro in personal passive with pro in impersonal passives. pro in the latter is said to be referentially stronger which is manifested by binding facts. In (i), pro binds the reciprocal as in (ia), internal anaphora as in (ib), and secondary predicate as in (ic) (cf. Shormani to appear).

(i) a. yuḍrabu furaadaa   wa-jamaaʕaat-in ḍidda z-zulm-i   muʔaaziriin   baʕḍun   baʕḍa

   3pass.strike individual.ACC and-groups-ACC against the-injustice-GEN helping-Pl.ACC each.NOM each.ACC

     'People strike individuals and groups against injustice, supporting each other.'

  b. yu-t-ṭṭ-aharu   ʕinda   l-kaʕbat-i

    3pass-reflex-wash beside the-Kabba-GEN

    'One purifies oneself beside the Kabba.'

  c. yu-ntaqalu   maši-an   fawqa   l-jisr-i

    3pass-move walking.PL-ACC on   the-bridge-GEN

    'People move walking on the bridge.'

It also contrasts with *pro* in active, where it complies with the binding test as shown in (ii).

(ii) a. ya-xdimu nafs-a-hu   layl-an

   3.act-serve self-ACC-him   night-ACC

    'He serves himself at night.'

  b. ya-nṣarifu   maši-an   ʔilaa l-bayt-i

    3.act-depart walking.SG-ACC to   the-house-GEN

    'He leaves walking to the house.'

Given this, the assumption that pro in personal passive is referentially 'non-specified' is borne out.

25- (Cf. also Maling and Sigurjónsdóttir 2002, Fassi Fehri 2012, Shormani to appear).

26- Unlike in personal passives, in impersonal passives, pro requires in its interpretation only a [+human] agent even if the understood agent is [-Human] (see also Blevins 2003, Sigurðsson 2011, Shormani to appear, among others). However, in some languages the subject of the personal passive is always interpreted as [+ human]. For example, Halldór Sigurðsson (personal communication) noted that in Icelandic the subject of personal passive cannot be interpreted as [-human], as illustrated in (i).

(i) Skipinu var sökkt (*af storminum)

   The ship was sunk (by the storm)

Halldór Sigurðsson notes that (i) cannot have the by-phrase af storminum 'by the storm' as reflecting the subject. He adds that "by creating a specific non-human context you can coerce or at least almost coerce a non-human animate interpretation, but you nevertheless get the feeling that you are personifying the animals. (see also Maling & Sigurjònsdòttir 2002: 132).

27- Note that base-generating pro in Spec-vP, and remaining there, gives a room for the Syn-subj to be promoted and remerged in Spec-PassP.

28- However, it has recently been proposed by Bruening (2011) that Pass is a phase head. Bruening argues that Pass is a phase head which has an Edge Feature (EF). This EF necessitates the Syn-subj to remerge in its Spec. He assumes that PassP is minimally a phase, providing a diagnostic in support of that (see also Bruening 2012, 2014). The test he makes use of is ellipsis. Assuming Bruening's ellipsis diagnostic,

which he applies to English, PassP in SA is a phase which is targeted by ellipsis as in (ii).

(i) biiʕat   haaðihi l-kutubu   wa biiʕat   tilka l-kutubu   ʔaiđđan
    pass-sold these   the-books and pass-sold those the-books   too
'These books were sold, and those books too.'

(ii) biiʕat   haaʑihi l-kutubu   wa ***biiʕat***   tilka ʔaiđđan
     pass.sold these   the-books and pass-sold those too
  'These books were sold, and those too.'

As is clear from (i), the ellipsis targets the PassP, i.e. l-kutub-u as is clear from its absence in (ii). Although ellipsis has nothing to do with the definition of phasehood (see e.g. Chomsky 2000, et seq, Legate 2003, Matushansky 2005, Citko 2014), that PassP undergoes an ellipsis operation in (ii) indicates that PassP is propositional. It follows that Pass (qua a phase head) is a Case-licensing head, which values the Nom Case of the Syn-subj. Note, however, that if PassP is a phase, then T would not probe downward and agree with the in-situ object, due to violating the PIC (= Phase Impenetrability Condition, see Chomsky 2000: 108, 2001: 13). But if phase-analysis would be adopted, it could be argued along the lines put forth by (Chomsky 2008: 143) that PIC "holds only for the mappings to the interface, with the effects for narrow syntax automatic." In Icelandic experiencer constructions, for example, Agree takes place into a lower phase without intervention, whereby "the subject is raised (voiding the intervention effect) and agreement holds with the nominative object of the lower phase" (see Chomsky 2008: 159, fn. 25, see also Bošković 2005, Boeckx 2003, Rouveret 2008, for evidence cross-linguistically, see also Shormani in press, for evidence from Arabic).

29- We also assume that Pass has default Gend and Num features like pro.

30- Since the word order adopted in this article is VS, we will not discuss these possibilities in relation to SV.

31- We set aside some proposals (see e.g. Mohammad 2000) which consider examples like (39) pronominal subjects, as evidence of SVO structures.

32- Alexiadou and Anagnostopoulou (1998) propose that in VSO languages like Arabic, EPP of T can be checked/valued by V-raising to Agr. However, since the latter has been eliminated from the grammar and that agreement features are encoded on functional heads like T/v (see e.g. Chomsky 1995a), we assume that T's EPP feature is valued by (re)emerging the V in T.

33- Platzack (2004), in addition, argues that in richly inflected NSLs like Italian, Spanish, Arabic, etc., agreement inflection has the status of "pronominal affix aligned to V in T" and is also a 'theta-role bearer'.

34- This gives rise to two predictions: i) preverbal subjects are not in an A-position, and (ii) VSO orders never involve a covert expletive (cf. Alexiadou and Anagnostopoulou 1998, Platzack 2004, but see Mohammad 2000, for different views).

35- For a criticism of Case assignment in P&P, see (e.g. Bobaljik and Wurmbrand 2007), and for further criticism of Case-Absorption theory, see (e.g. Goodall 1993, Kiparsky 2013).

36- We shall not tackle Kiparsky's proposal because it is irrelevant to the proposal advanced here.

37- Matushansky (2010: 117) formulates Case Criterion in (i)

(i) Every NP receives one and only one Case, each Case is assigned to one and only one NP.

38- Surat AlJathia (verse (14)). In traditional Arabic grammar, examples like (43) have been taken as evidence by Kufians for this type of passive (based on ʔabi Jaʕfar's reading).

39- For excellent discussions on impersonal passive, we would refer the reader to works by (e.g. Abraham and Leiss 2006, Lappin and Shlonsky 1993, Sigurðsson and Egerland 2000, Sigurðsson 2011, and specifically Shormani to appear, for impersonal passive in Arabic).

40- In fact, Bruening even admits this in his paper stating that "this must be more complicated: v must still be able to case-license an NP in passive ditransitives." Thus, he left it open as it will complicate the model of grammar being proposed to accommodate them (Bruening 2011: fn. 4).

41- Traditional grammarians (e.g. Siibawaih d. 793 CE) claim that agent by-phrases are not possible in Arabic. This assumption has been adopted even by modern linguists, arguing that passive structures are not derived via transformation (see e.g. Frajzyngier 1982: 279). However, there is good evidence that by-phrases are possible in Arabic, be it Classical Arabic (CA) or SA. As far as the former is concerned, the example in (i) from CA, i.e. Qur'an is illustrative.

(i) kitaab-un	ʔu-ħkimat	ʕaayyaatu-hu	θuma	**fuṣilat**	**min**	**ladun**	**ħakiimin**	xabiirin
book-Nom	pass-concize	verses-him	then	pass.detail	from	side	wise	knowing

'A book whose verses have been concized then detailed by Allah who is very sage and well-knowing.'

The agent in (i) is stated clearly because it is **ħakiim-in** (Allah) Who detailed the ʔayyaat (verses).

For SA, there is also a class of verbs like ʔaħaaṭ (surrounded), where an exact equivalent of English by-phrase occurs in personal passives. Consider (ii) and (iii), where the agent occurs after bi- which is an exact equivalent to the English agentive by.

(ii) a. ʔaħaaṭ   ʕaliyy-an   **rijaal-un**   kaθiir-uun
        surround   Ali-ACC   men-NOM   many-NOM
        'Many men surrounded Ali.'
    b. ʔu-ħiita   ʕaliyy-un **bi-rijaal-in** kaθiir-iin
        pass-surround Ali-NOM   by-men-GEN   many-GEN
        'Ali was surrounded by many men.'
(iii) a. ʔṣaabat   ʕaliyy-an   ʕubuat-un   naasifat-un
        injured   Ali-ACC   blasting-NOM   charge-NOM
        'A blasting charge injured Ali.'
    b. ʔu-ṣiiba   ʕaliyy-un bi-ʕubuat-in   naasifat-in
        pass-injured Ali-NOM   by blasting-GEN charge-GEN
        'Ali was injured by a blasting charge.'

However, whether such examples can be taken as evidence for the possibility of by-phrases in SA is not well-researched, and since the standard assumption adopted in this paper is the impossibility of such phrases in SA, we leave this issue open here.

42- For the purpose of presentation, we ignore incorporation approach to clitics, where it is assumed that the clitic is base-generated attached to the host (see e.g. Baker 1988, Shlonsky 1997, Siloni 1997), and for criticism of incorporation (see e.g. Shormani 2014, Aoun at al. 2010).

43- Quantificational structures in Semitic have indeed been thoroughly investigated (see e.g. Benmamoun 1998, Shlonsky 1991, Kremers 2003) coming up with different views. In SA, quantifiers can occur prenominal as well as postnominal. When a quantifier occurs prenominally, the quantifier and the noun it modifies are considered a construct state (CS) (Shlonsky 1991). However, when it occurs postnominally, the quantifier is considered a floating quantifier (Benmamoun 1998). As for the former position, Shlonsky (1991) argues that both reflect one structure, assuming that "Q-initial and Q-final QP's are both expressions of the same category ... since they can both appear in all argument positions" (p. 164, see also Shormani 2016a & b, for very recent conceptions). Thus, we adopt this view and that when the quantifier occurs postnominally, the DP + Q is derived from the prenominal one via movement. For the clitic attached to the quantifier, it could be considered an agreement element, the function of which is to signal agreement with the noun it postmodifies.

44- That Spec-TP is an A`-position is evidenced cross-linguistically (see Borer 1995, for Hebrew and Arabic, Mahajan 2003, for Hindi, McCloskey 2000, for Irish, and Plunkett 1993, Olarrea 1996, Yateem 1997, Shormani 2015, in press, for Arabic, among other authors and languages).

45- Arab traditional grammarians as well as modem linguists (e.g. Majdi 1990) maintain that the passivized object, i.e. the syntactic subject of the passive in our analysis, takes all the features of the active subject. One of these features is the adjacency condition holding between the subject and the verb.

46- The facts demonstrated in this analysis indicate that analyses (see e.g. Soltan 2007), assuming that the passivized object does not move, are completely untenable. Soltan claims that the Syn-subj does not raise, but rather remains in situ. If Soltan's analysis were correct, then it would be difficult (and perhaps impossible) to account for the ungrammaticality, for example, of (49b & 50b).

47- Most importantly, notice that when the Syn-subj remains in situ, gender agreement is optional, but this agreement optionality disappears when the Syn-subj is remerged in Spec-PassP. A mere explanation to the optionality of gender agreement is that adjacency plays a role in such optionality. Further, this optionality is only when the Syn-subj is feminine. When it is masculine, however, gender agreement is obligatory as the ungrammaticality of (ib) shows, even if the Syn-subj is in situ.

(i) a. furiḍa-a ʕala l-muslim-iina   l-qitaal-u
       3must-M on   the-muslim-Pl.GEN the-fighting-M.NOM
       'The Muslims must fight.'
    b. * furiḍ-at ʕala l-muslim-iina   l-qitaal-u
         3must-F   on   the-Muslim-PL.GEN the-fighting-M.NOM

It is clear that examples like (58) only apparently violate the strict adjacency constraint between the Syn-subj and the verb. This is due to the fact that verbs of denotic modality select two internal arguments as complements, namely an experiencer (usually a PP) and a theme (usually a DP). We assume that the optionality the denotic modality structures exhibit stems from the fact that the presence of the experiencer: the DP l-muslim-iina does not give rise to intervention effect because it does not c-command the theme argument DP z-zakaat -u, but the PP does, and hence Agree takes place.

48- However, there are some passive structures like (i) and (ii), where the compatibility of the proposed approach might apparently be challenged. (a) examples are active and (b) ones are their passive counterparts.

(i) a. yaʕtamidu ʕaliyy-un ʕala l-muratab-i

     depends   Ali-NOM   on   the-salary-GEN
     'Ali depends on the salary.'
   b. yu-ʕtamad-u ʕala l-muratab-i
       pass-depend on   the-salary-GEN
     'The salary is depended on.'
(ii) a. ʕaliyy-un tawqaʕa ʔanna   r-rajul-a   jaa ʔa
        Ali-NOM   expected that   the-man-ACC   came
       'Ali expected that the man has come.'

    b. twiqiʕa   Ɂanna   r-rajul-a   jaaɁa
        pass-expected   that   the-man-ACC came
        'The man was expected to have come.'

The problem with these passive structures is that the Syn-subjs l-muratab-i and r-rajul-a occur as parts of the PP and CP, viz. ʕala l-muratab-i and Ɂanna r-rajul-a jaaɁa, respectively. However, there are two points to be noted here: 1) the verb yaʕtamid-u (depends) in (i) is intransitive, and it becomes transitive only by the preposition ʕala (on). In (ii) the verb tawaqaʕa has a CP complement. Note that under the analysis developed here, pro could be argued to be the null subject in (ib) and (iib). However, the internal argument is not prompted, which means that Pass's Prsn feature will remain unvalued, hence violating (51), and 2) the fact that the (apparent) internal argument is not promoted gives these structures the characteristic of the impersonal passive (see Abraham and Leisio 2006, Maling and Sigurjónsdóttir 2002, Sigurðsson and Egerland 2009, Sigurðsson 2011, Schäfer 2012, for data from Icelandic among other languages, and Shormani to appear for Arabic). We also assume that passive structures like (iib) could also be included under impersonal passives, by analogy of the 'buried' nature of the internal argument (see also Mohammad 1990, 2000, for a different account).

49- For more on binding phenomenon in impersonal passives, see (e.g. Maling 2006, Abraham and Leisio 2006, Schäfer 2012, Sigurðsson and Egerland 2009, Sigurðsson 2011, for data from across languages, and Shormani to appear, for data from Arabic).

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