A Shell Structure Account of Pseudogapping in Standard Arabic and Moroccan Amazigh Construct States

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Abstract

This paper presents a shell structure account of pseudogapping in Standard Arabic (SA) and Moroccan Amazigh (MAmaz) Construct States (CSs). The main objective is to adopt a minimal account to analyse the Arabic CS (ACS) as well as the MAmaz CS DPs involving pseudogapping. The proposed account posits a functional projection DP headed by D which serves as a Probe that attracts genitive nominal Goal complements. Valuing genitive Case on the complement and of α-features on the D Probe will also be accounted for according to an Agree-shell structure dichotomy that would consider an alternative dP analysis of CSs in SA and MAmaz as well. Findings show how pseudogapping operates in different types of CSs like coordinate, quantification and passive structures according to some constraints on the shell structure.

Key words: Shell structures, Minimalism, Construct states, Pseudogapping, Standard Arabic, Moroccan Amazigh

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1. Introduction

Within earlier versions of MP (Hale and Keyser 1994, Chomsky 1995), the main proposal was the split of the VP structure into two projections: the inner core VP headed by the lexical verb and an outer vP headed by a functional verb v. The functional light v takes the VP as its complement, an analysis referred to as the vP Shell structure as one VP is embedded directly under a higher vP node. In this paper, the shell structure will be shown to account also for pseudogapping in CSs/DPs.

Following Larson (2014:409), determiners are parallel to verbs with respect to their possession of argument structure and valence. The parallelism is displayed between V and D in their thematic roles and hierarchy. Verbs describe events, with concepts like agent, theme, goal, which represent the functional roles that verbal arguments play. Similar to verbs, determiners express quantification, with concepts like restriction and scope which stand for the functional roles arguments play in quantification.

The Arabic DP might be simple or occurs as a Construct State. These Construct States operate syntactically like NPs/DPs consisting of a nominal head and a genitive component where the head does not accept determiners but inherits the definiteness of the complement. In this juncture, Shlonsky (2003) argues that the smallest lexical displaced XP or phrasal movement is characteristic of the nominal domain but not the clausal or verbal one in that the Arabic DP is similar to the clausal DP with regard to the lexical domain which is embedded within a functional one. According to Shlonsky (ibid), the DP differs from CP for instance in the sense that the heads of most of the internal projections within DP are subject to fundamental constraints such as they do not move independently as heads (e.g. there is no N-to-D movement) and they ‘freeze’ their complement or the specifier of their complement in its position.

In the same regard, Larson (1991, 2014) considers the DP shells for ditransitive determiners to be equivalent to VP shells for ditransitive verbs, and that the thematic hierarchy requires the oblique arguments to be projected lowermost. Moreover, the analysis of parallelism leads to the postulation of a Pro subject in all DPs that has strong implications for the analysis of prenominal genitive constructions like: John’s briefcase; or John’s completion of the plan.

This paper is organized as follows: section two is a review of the literature on pseudogapping; section three will consider how pseudogapping operates in ACS based on
Conjoined/coordinate, quantifier and passive structures; section four illustrates the shell structure account of pseudogapping in Arabic and Mamaz CSs; then section five concludes.

2. Pseudogapping: A Review of the Literature


While pseudogapping is considered to involve movement of the remnant (Move-R), Gengel (2013) claims that it involves two movement operations. One is the movement of the subject to TopP and the other is the movement of the complement of the verb to FocP. In addition, the ellipsis site must be the complement of a functional head which agrees with its specifier; thus Merchant (2008) claims that while VP ellipsis targets VPs, pseudogapping targets vP as in (1) represented in (2).

(1) \[TPMary_i \text{ will } [FocPJane_k[vP}_b v [VP \text{ give } tk\text{ her book}]]\]

(2)

According to Lobeck (2005), this type of pseudogapping includes a movement operation out of the VP. The indirect object \textit{Jane} undergoes Move-R(remat) to the edge of FocP. This functional
category projects in the left periphery of vP, and can create only one Spec position, hosting polarity particles such as negation not and emphatic too and so. Essentially, Tanaka (2017) suggests that raising in a structure like (2) should apply successive-cyclically, with respect to shortest move, and must stop at its edge (spec vP).

In Arabic however, Pseudogapping is restricted. For instance, according to Al khawalda (2002), deletion of the verb alone is allowed only if the verb is intransitive as in:

(3) xaraja ʕullaab-u wa-kaðaalika/-yakaadu/ ʕ xaraja lʔustaað-u Went out the-students- Nom and also/- almost/ the teacher ‘The students left and so did the teacher.’

So important, in Chomsky’s (1995, 300) terms, is the representation of a chain in (3). Chomsky considers a CH - (α; α) should be seen as a notational abbreviation of CH = ((α; K); (α; L)), where K and L are each the sister of one occurrence of α. Therefore, a chain can be conceived of as multiple occurrences of the same constituent occupying different structural positions and having their local structural configuration (see Nunes, 2004). Accordingly, the chain [TP1xaraja] , [TP2xaraja] have identical sisters namely the correlate ʕullaab-u ‘students’ and the remnant lʔustaað-u ‘the teacher’ respectively.

To this end, we assume that some of these claims on pseudogapping are not limited to VPs/vPs but might be extended to account for various ellipsis phenomena in DPs/dPs. For purposes of the current paper, we will focus on pseudogapping in the Arabic CS (ACS) first then attest it in MAmaz CS DP, and finally account for their shell structure analysis.

3. On Pseudogapping in Arabic CSs

Apart from a few papers on pseudogapping in Arabic VPs (Al-bukhari 2016; Alkhawalda 2002, and Aoun and Benmamoun 1999), the literature does not provide studies on pseudogapping in Arabic or in MAmaz Construct states. Still however, ACSs have been widely studied in terms of movement, definiteness and phased-based analyses (Al-Qurashi, 2015, Mohammad 1988, Fassi Fehri 1999, Hoyt 2008, Ouhalla 2009, and Shormani 2017 among others). The ACS has in fact been investigated with regard to the scope of syntactic and semantic relationships of the members of the CS structure. Composed of a head Noun and a Complement Genitive Phrase (CGP), the ACS displays some salient properties that we might briefly summarize in the following (see Fassi Fehri 1999, Shormani 2017):
(i) a CS mainly consists of two members, α and β, the former is the head and the latter is its Genitive complement.
(ii) β always bears a Gen Case while α can be assigned any of the three Cases: Nom, Acc or Gen depending on the assigning head. (see eg. 10)
(iii) α can be α1, α2 …αn, and in this case βn= αn
(iv) α1 can coordinate with α2 …αn, and β1 can coordinate with β2… βn. (see eg. 7)

Considering these properties of SA CSs, we will suggest that ACSs display a shell structure when handled in structures involving pseudogapping. Our analysis will be primarily based on two claims made by Matushansky (2005). First, he claims that CSs “seem to have more PF-independence than vPs or CPs” (p. 164). Second, he assumes that a feature might flag a constituent for not spelling out as an E(dge)-F(eature) (EF) which marks ellipsis sites. The first claim presupposes that the PF realization is not structurally constrained. The second claim however is substantial in the sense that pseudogapping is licensed by the functional categories whose specifier positions are filled, the fact which entails that every head of an ellipsis domain must have its Spec filled.

In fact, the grammar of Arabic two types of CSs are displayed: the first category is an LF realization of the construct state while the second one is a PF realization displayed as active or passive participles as represented in (5) and (6) respectively:

(5) a. madrasat-u l-ʕuluum-i
    school-nom the-sciences-gen
    ‘the school of sciences’

   b. kull-u kaatib-in
    every-nom writer-gen
    ‘every writer’

(6) a. faaʕil-u l-xajri
    doer-u the-good
    ‘the doer of good things (the philanthropist)’

   b. mahdūum-u l-haqq-i
    taken (passive)-nom the-right-gen
    ‘the one/he whose rights have been taken’
While the LF representation displays definiteness (5a) and specification (5b), the PF representation in (6) is assumed to display a subject-like head of an active structure (6a) or a passive structure as in (6b). The CS in (5a) is a type of specification while the quantifier *kull* ‘all’ in (5b) is a D-element which takes a DP complement, and therefore projects a DP (CS). In this connection, we assume that the complement of *kull* ‘all’ (equivalent to *jamii* ‘all’) is raised out of the hosting DP or the ellipsis site. To attest this assumption, let us consider it in connection to coordinate structure in ACSs as in (7):

(7) Kull-u rasaa?il-i Zayd-in wa *maqaali-hi /maqaalaati-hi
All-Nom letters-gen Zayd-GEN and article-sg-Gen-him/articles-pl-Gen-him
‘All Zayd’s letters and articles’

In (7), *kull-u* ‘all’ is not definite because when it functions as a quantifier, it does not take the definite article. However, this quantifier displays an Agree feature in terms of Number with the second genitive complement *maqaalaat* ‘articles’ but not with *maqaal* ‘article’. In addition, while the quantifier would internally merge under D, the EF requires the merger of pro in higher [spec DP]. In terms of his analysis of the parallel structures and transitive nature of DPs and VPs, Larson (2014:413) proposes an access to light d, fully analogous to little v, with the following properties:

(8) Light d:
Bears a strong D feature. Bears an EPP feature. Bears one valued occurrence of a φ-feature unvalued on a D with which it was co-selected.

Following Larson, the probe has an EF which requires merger at the edge of the probe to check that EF. Therefore, the goal would move from a position within the complement of the probe to its specifier position. In addition, light *d* is an active Probe by virtue of carrying one uninterpretable φ-feature which is number; thus, an Agree based relation is maintained by both conjoined complements in terms of genitive case and indefiniteness as demonstrated in (9):
What can be observed in the shell structure in (9) is that the complement (possessor) of the first conjunct (CS) binds the second complement in the second conjunct (CS), because the possessor of the first conjunct in the gapping construction has scope over the clitic-pronoun of the second conjunct (DP2), a fact entailing that the pronoun is in the scope domain of the first possessor Zayd in DP1. In line with Larson (1991), *kull* ‘all’ in (9) is not an intransitive determiner taking only a restriction but also has a scope argument; that is, the θ-set of *kull* includes [scp]. In Larson’s (1991) terms, the scope argument of a determiner is realized by an anaphoric element Pro, a value given by the sister of the quantified DP at LF, after DP has undergone Quantifier Raising.

In this regard, we might agree with Tanaka (2017) that many kinds of NPs can be regarded as quantifiers. That is, if Move-R is Quantifier raising as in (9), it follows that it can potentially apply to any kinds of NPs, including indefinites, definite descriptions, and determiner phrases. To attest these suggestions, we claim that ACSs as well as MAmaz CS offer a substantial background for a shell structure of pseudogapping in both languages.

4. Proposal: The CS Shell Structure account

4.1 Arabic CSs:

Following an earlier assumption made by Larson (1991), there are some semantic parallels between V and D that can be extended to notions of thematic roles hierarchy. These roles can be represented in that agents can be realized as subjects while determiners canonically
express scope and quantifications. An extension of this was the approach in Larson (2014: 433) who suggests two basic roles ΘScope and ΘRestrict, ordered roughly in a way similar to ΘAgent and ΘTheme for V in VP. Thus, with respect to parallelism, the scope argument is projected into Spec DP and the restriction argument is projected lower down, inside D’. For illustration, consider example (10) represented as (11):

(10) qaraaru kull-i l-ʔasatiðat-i wa qaraaru jull-i
decision all-Gen the-teachers-Gen and most-GEN
t'i-t'ullaab-i ʔan yadrusuu ʕan buʕd
the-students that study-3mp from far

‘the decision of all the teachers and most of the students to study online.’

Following Zhang (2010), we might suggest that the shell structure of the ACS in (11) relies on three main issues. First, gapping involves both the light d and CP; second, coordinators have no intrinsic categorial features; three, the gapping argument explains how the two conjoined DPs have parallel structures and identical heads, thus the head of DP2 may undergo gapping. This claim is compatible with Lasnik’s (1995) condition that the remnant t-tullaab-i ‘students’ must be contrasted with its correlate l-ʔasatiðat-i ‘the teachers’, in the sense that their denotations should be identical. A relevant issue is that (11) might be considered, in Larson’s (2014) terms, as a case of outer DP conjunction, with right node raising of Complementizer Phrase (CP) to the right edge of DP. The CP is interpreted as a complement of DP1 and DP2.
Additionally, the DP/CS structure might be accounted for its shell structure in terms of an agree relation. Following Chomsky’s (2000), an Agree relationship between a probe and a goal is triggered with the probe c-commanding the goal. The unvalued feature of the probe [+def] needs to be valued and checked by being in an Agree relation with a matching valued feature. Pseudogapping in the structure (11) explains this Agree relation and is compatible with Ritter’s (1991) argument that “N inherits the definiteness value of the genitive DP and, by moving to D, assigns the same value to D and consequently to the whole Construct State”. Accordingly, the head qaraaru ‘decision’ inherits the (+def) feature and by moving to light d assigns the same value to d then to the whole CS. Considering Ritter’s proposal of (in) definiteness spread from the genitive DP in a Spec-head configuration with D, then an agreement relationship might motivate the PF shell structure of the CS. This PF structure of ACSs might also be accounted for in a passive structure as in (12):

(12) ?uʕtiʔiya kullu faaʔiz-in kitaab-an
  given past-passive(3m) every winner-gen book-acc
  ‘Every winner was given a book.’

(13) ?uʕtiʔiya kitaab-an kullu faaʔiz-in kitaab-an
  given past-passive (3m) book-nunation every winner-gen
  ‘Every winner was given a book.’

(14) *?uʕtiʔiya faaʔiz-in kullu faaʔiz-in kitaab-an
   Given-past-passive (3m) winner-gen every winner-Gen book-acc

(15) *?uʕtiʔiya kullu kitaab-an faaʔiz-in kitaab-an
   Given-past-passive (3m) every book-Acc winner-Gen

The passive verb in (12) was externally merged under the lexical VP, then has undergone internal merge cyclically through vP, Pass(ive), then TNS which serves as a probe to derive a VSO order (see Fakih’s (2017) influential work for an alternative approach). The CS DP kullu faaʔiz-in ‘every winner’ serves as a goal and is therefore probed down to satisfy the EF and value the uninterpretable Phi-features on T. Following this reasoning, we might argue that in (13), however, the direct object kitaab-an ‘book’ moves across the CS kullu faaʔiz-in ‘every winner’, in accordance with shortest move and the shell structure of the CS headed by the quantifier kullu ‘every’ in d position. In this regard, Soltan (2007:96ff) states that there is no movement of the
internal argument in a passive construction, instead the internal argument appears with a nominative case and shows gender agreement as is the case with post verbal subjects.

For the impossible derivation in (14), two possible claims might be advanced. First, the impossible movement and extraction of the genitive complement across the CS headed by the quantifier in (14) is motivated by its status as a phase in that the genitive phrase is inaccessible to syntactic operations outside the construct state. In other words, faaʔiz-in ‘winner’ is neither an edge nor a head; therefore it is not accessible for movement as understood in the Phase Impenetrability Condition (PIC): “The domain of a head X of a phase XP is not accessible to operations outside XP; only X and its edge are accessible to such operations” (see Chomsky 2000-2001). Second, this movement will be subject, following Tanaka (2017) and Muller (2014), to bleeding (blocking) effects because of the shell structure of the construct state. As to the illegitimate derivation in (15), the movement of the direct object would, under Chomsky’s (2000, 2001) system, wrongly result in a Defective Intervention Constraint (DIC) as in (16):

(16) Defective Intervention Constraint (cf. Chomsky 2000:123)

*α > β > γ

(*AGREE (α, γ), α is a probe and β is a matching goal, and β is inactive due to a prior Agree with some other probe.)

In accordance with DIC, the derivation (15) is ruled out because once α ʔuʕt ʔiya ‘was given’ enters into an Agree relation with the closest goal β (i.e. the CS kullu faaʔiz-in ‘every winner’), this makes the latter inactive, blocking any further Agree relation with a lower goal γ (kitaab-an ‘book’ c-commanded by β. In other words, the probe cannot ‘see’ the lower goal and multiple Agree without Move is predicted to be impossible under Chomsky’s (2001) mechanism of Agree and the DIC.

4.1. MAmaz CSs

In MAmaz, the CS refers to a form of the noun used in some specific syntactic contexts. In this paper, the discussion will be restricted to the type which parallels the Arabic CS, namely the CS DP exemplified bellow:
(17) tiyrii   wmhdar
    3sf-reading   CS-student
    ‘the reading of the boy’

We assume, following Ennaji (2001), that the structure in (17) is derived through raising N to D in order to satisfy D’s edge feature and to discharge the genitive case on the NP complement in concert with the DP hypothesis as represented below:

(18)

The MAmaz CS DP is thus headed by a functional head D Gen containing an abstract AGR responsible for the genitive case assignment to the complement on its right (Ennaji, 2001: 57). Furthermore, the MAmaz CS DP, like the ACS, might syntactically operate as a shell structure headed by light d kra ‘some’ in kra wmhdar ‘some student’:

(19)  a. tkfa   lktaab  i-kra   wmhdar.
    3sf-gave   book  to-some   CS-student
    ‘She gave a book to some student.’

    b. tkfa   i-kra   wmhdar   lktaab  i-krawmhdar.
    3sf-gave   to-some   student   book
    ‘She gave some student a book.’

    c. *tkfa  wmhdar   i-kra  wmhdar  lktaab.
    3sf-gave   CS-student   to-some   book

    d. *tkfa   i-kra  lktaab  wmhdar  lktaab.
    3sf-gave   to-some   book   CS-student

The ditransitive MAmaz verb tkfa ‘gave’ in (19a) is externally merged under the lexical VP before undergoing internal merge cyclically through vP. The CS DP kra wmhdar ‘some student’ serves as a goal and is thus probed down to satisfy the EF and value the uninterpretable Phi-
features on T. in terms of movement, it might be argued then that in (19b) the direct object *lktaab* ‘book’ moves across the CS DP *kra wnhdar* ‘some student’ headed by the quantifier *kra* ‘some’ in *d* position. Nevertheless, the ungrammaticality of (19c) might be accounted for either in terms of PIC or the blocking effect of shell structures as explained above in relation to (15).

With regard to the shell structure proposal, the syntax of CS nominals in MAmaz gains some support in coordinate structures. So important, Coordination with *d* ‘and’ and its variants in Amazigh is limited to nominal clauses and is never used to join verbal clauses, the fact which provides substantial argument for a shell analysis of dPs. Consider the examples bellow from Tarifit, Tamazight and Tashlhit respectively.

\[(20)\]

a. θ-amɣarθ θ-uqzin ins
   f-woman and-CS-dog 3sg-poss
   ‘the woman and her dog’ (Alhankari, 2010: 58)
b. idda ḥmad ʿd ʿFatima.
   he-is-gone Ahmed and Fatima
   ‘Ahmed and Fatima went out.’ (Sadiqi and Ennaji, 2004: 150)
c. irdən ʿd ʿtamzin.
   wheat and CS-barley
   ‘wheat and barley’

The dP shell structure in MAmaz is particularly related to the syntactic derivation where the coordinator has selectional features. According to Alhankari (2010), the conjunct always selects the second NP in the clause as its complement and marks it for CS (Alhankari 2010: 58). Indeed, the conjunction *d* ‘and’ is usually listed with the MAmaz prepositions triggering the CS form of the noun (see for example Elmoujahid (1997) for Tashlhit, and Sadiqi and Ennaji (2004) for Tamazight). Additionally, any movement operation of the conjoined DP is blocked. Consider the contrast in (21a-b) in relation to the dP shell structure of MAmaz quantified conjoined nominal CSs where extraction and dislocation out of the shell structure are disallowed.

\[(21)\]

a. imgər ufəllah kra(n) irdən ʿd ʿtamzin.
   3sm-harvest CS-farmer some CS-wheat and CS-barley
   ‘the farmer harvested some wheat and barley.’
The ungrammaticality of (21b-c) reflects the impossibility to left dislocate the lower DP with or without the conjunction d ‘and’, the fact which strongly supports the opacity of the dP shell. Moreover, the quantifier kra(n) ‘some’ in (21a) has scope over both nouns suggesting either movement of kra(n) form the domain of the lower conjoined nominal or the existence of an elided quantifier in spec DP2 position coindexed with the quantifier in spec DP1. The following representation illustrates the dP shell structure in (22):

(22) [dP kra(n) [DP1 irdən [d [DP2 kra(n) [təmzin]]]]].

The structure in (22) reflects indeed the only possible interpretation of (19) supporting thus the claim that the quantifier though deleted in DP2 is interpreted at LF. Additionally, Pseudogapping in MAmaaz in not restricted to quantifiers as it may affect heads of CSs and adjectives in more complex CSs:

(23) uzum jifrxaan mzinin d uzum təfrxiin mzinin.
    ‘fasting of little boys and girls’

The two conjoined DPs in (23) have parallel structures and identical heads, thus the head of DP2 may undergo gapping like the post-nominal adjective. The remnant təfrxiin ‘girls’ is contrasted with its correlate jifrxaan ‘boys’ while their denotations are indeed identical. Also, the Agree relationship between a probe and a goal is triggered with the probe c-commanding the goal. The unvalued feature of the probe [+def] needs to be valued through an Agree relation with a matching valued feature. Thus, pseudogapping in (23) manifests the way Agree operates: the head usum ‘fasting’ inherits the (+def) feature and by moving to light d assigns the same value to d then to the whole CS.
Conclusion

In this paper, an account of the shell structure of Standard Arabic and Moroccan Amazigh Construct States is proposed. The minimalist derivational operations have been considered to provide a substantial area of analysis that could license the operation of pseudogapping in CSs projecting a determiner phrase (dP). With regard to SA and MAmaz CSs, findings have shown that an alternative dP shell analysis provides a substantial background for the analysis of pseudogapping with regard to coordinate, quantifier and passive structures. The Probe-Goal relations, Agree conditions and some constraints on movement have been considered to derive eligible structures that account for the shell structure proposal of Arabic and Moroccan Amazigh as well.

References


