

CASE SYNCRETISM IN SOLID STEMS: A NANOSYNTACTIC ANALYSIS OF AN EXCEPTIONAL SYNCRETISM PATTERN OCCURRING ACROSS A SPECIAL CLASS OF NOUNS IN ARABIC

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Abstract

In Arabic, accusative syncretizes with genitive in dual nouns (1) and affixal plural nouns (2) and (3), but not in singular nouns (4).

- (1)
- a. saaʕad-tu al-muʕalim-**ay**-ni
helped-1sg the-teacher. masc-acc-dual
'I helped the two (male) teachers.'
- b. kitaab-u al-muʕalim-**ay**-ni
book-nom the-teacher. masc-gen-dual
- (2)
- a. saaʕad-tu al-muʕalim-**ii**-na
helped-1sg the-teacher. masc-acc-pl
'I helped the male teachers.'
- b. kitaab-u al-muʕalim-**ii**-na
book-nom the-teacher. masc-gen-pl
'The male teachers' book.'
- (3)
- a. saaʕad-tu al-muʕalim-aat-**i**
helped-1sg the-teacher. masc-pl. fem-acc
'I helped the female teachers.'
- b. kitaab-u al-muʕalim-aat-**i**
book-nom the-teacher. masc-pl. fem-gen
'The female teachers' book.'
- (4)
- a. saaʕad-tu al-muʕalim-**a**
helped-1sg the-teacher. masc-acc
'I helped the teacher.'
- b. kitaab-u al-muʕalim-**i**
book-nom the-teacher. masc-gen
'The (male) teacher's book.'

This syncretism pattern is restricted to particular morphosyntactic contexts and occurs in particular nominal classes. At any rate, the morphemes that reflect this pattern of syncretism are either the

distinct genitive *-i* or the morpheme that is derived by lengthening the distinct genitive, *-ii*. However, an exceptional syncretic pattern is seen in solid stems, where accusative syncretizes with genitive in singular nouns, see (5).

(5)

- a. saaʔad-tu ibraheem-**a**
 belped-1sg Abraham-acc

‘I helped Abraham.’

- b. ana fi bayruut-**a**
 I am in Beirut-gen

‘I am in Beirut.’

Here, the morpheme *-a*, the distinct accusative Case marker on non-solid stems as seen in (4), marks both accusative and genitive. This pattern of syncretism cannot be accommodated with Caha's (2009) proposed hierarchy of Case as it involves placing accusative above genitive. Caha (2009) proposes that non-accidental Case syncretism targets adjacent Cases in a Case Hierarchy where accusative is lower than genitive. His proposal applies successfully to the Arabic dual and affixal plural nouns represented in (1), (2) and (3), but not to the noun class of solid stems represented in (5). This paper will show that Case syncretism in solid stems can be accommodated with Caha's framework but will need to be phonologically motivated. Therefore, in explaining Case syncretism, in Arabic, one needs to look at syntax-phonology dependency.

Keywords: Arabic, Case Syncretism, Solid Stems, Morphosyntactic Contexts, Case Hierarchy.

1. Case in Arabic

Arabic has three morphological Cases which surface as suffixes on nouns, each Case has three markers whose distribution is based on number variation, which will be illustrated as we go. In singular nouns, in (1) below, Case is expressed by short vowels suffixed to the noun: the nominative *-u*, the accusative *-a* and the genitive *-i*¹.

¹ Abbreviations used in this paper are: 1: 1st person; 2: 2nd person; 3: 3rd person; acc: accusative; fem: feminine; gen: genitive; nom: nominative; masc: masculine; pl: plural; dl: dual; sg: singular; indef: indefinite; NP: noun phrase.

(1)

a. jaaʔ-a al-muʔalim-**u**
came-3 sg the-teacher-nom

‘The (male) teacher came.’

b. saaʔad-tu al-muʔalim-**a**
helped-1sg the-teacher-acc

‘I helped the (male) teacher.’

c. naʔdar-tu ila al-muʔalim-**i** /al-kitaab-**i**
looked-1sg. at the-teacher-gen /the-book-gen

‘I looked at the (male) teacher/ the book.’

The examples in (1) above show Case marking on a singular masculine noun. A singular feminine noun will receive the same Case marking as well. As is observed in the example in (1c) above, the adposition ‘*at*’ takes a genitive object.

2. Case in dual and plural nouns

This section looks at Case in dual and plural nouns, indicating the syncretism of accusative and genitive in these nouns². Dual and plural nouns show systematic Case syncretism between accusative and genitive, which occurs across dual and affixal plural nouns. This syncretism is neither the result of a phonological rule, nor a matter of accidental homophony.

² The morphemes *-aani* and *-ayni*; *-uuna* and *-iina* are analyzed in the literature as portmanteaux expressions of both Case and Number. However, the present paper presents them as analytic expressions of Case and Number.

- (3) naḍar-tu ila al-muḥalim-ay-ni
 looked-1sg. at the-teacher. masc-gen-dual

‘I looked at the two teachers.’

The affixally marked plural nouns, on the other hand, show syncretism between accusative and genitive. Accusative and genitive Cases are lexicalized by the morpheme *-ii*. In the examples below, the nominative Case is marked by *-uu* while the accusative and genitive Cases are marked by *-ii*³.

- (4) a. jaaʔ-a al-muḥalim-uu-na
 came-3 sg the-teacher. masc-nom-pl

‘The male teachers came.’

- b. saaḥad-tu al-muḥalim-ii-na
 helped-1sg the-teacher. masc-acc-pl

‘I helped the male teachers.’

- c. kitaab-u al-muḥalim-ii-na
 book-nom the-teacher. masc-gen-pl

‘The male teachers' book.’

The noun in the above examples is a representative of masculine affixally plural nouns which mark Number by suffixation unlike non-affixal plural nouns which mark Number via internal vocalic changes. It is a representative of nouns with a human referent. Usually, nouns with human referents show gender distinctions, compare the examples in (4) above with those in (6)

³There is no correspondence, however, between the sound and the spelling of the plural Case morphemes. The morpheme *-uu-na* is the transliteration of the bi-labio alveolar semi vowel /w/ and the nasal /n/ with a short vowel ending /-a/, while the morpheme *-ii-na* is the transliteration of the alveopalatal semi vowel /j/ and the nasal /n/ with a short vowel ending /a/.

below⁴. As we can see, the morpheme *-ii* clubs both accusative and genitive. This morpheme seems to be a lengthening of the genitive Case morpheme *-i*, which marks genitive Case in singular nouns. Consider the example in (5) below, repeating the one in (1c).

- (5) naʔdar-tu ila al-muʔalim-i /al-kitaab-i
 looked-1sg. at the-teacher-gen /the-book-gen

 ‘I looked at the (male) teacher/ the book.’

With this in mind, the genitive Case appears to be the one extending to include the accusative Case. Hence, it needs to be projected higher in the Case Hierarchy than the accusative, so the downwards effects of Case syncretism take place. Projecting genitive on top of the accusative meets Caha’s (2009) claim that the Case higher in the hierarchy is the one extending downwards. Now, let us see how Case is marked on feminine plural nouns.

- (6) a. jaaʔ-at al-muʔalim-aat-**u**
 came-3 sg the-teacher. masc-pl. fem-nom
 ‘The female teachers came.’

 b. saaʔad-tu al-muʔalim-aat-**i**
 helped-1sg the-teacher. masc-pl. fem-acc
 ‘I helped the female teachers.’

⁴ The gender of nouns with non-human referents is lexically specified; they can be either inherently masculine which cannot be feminized or inherently feminine.

c. *kitaab-u al-muʕalim-aat-i*

book-nom the-teacher. masc-pl. fem-gen

‘The female teachers’ book.’

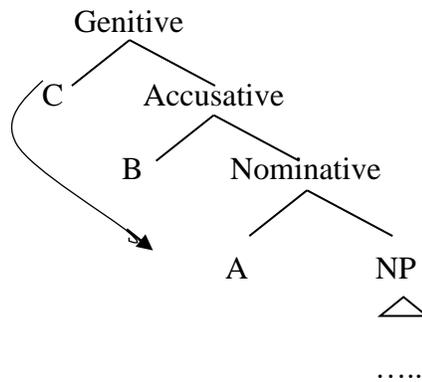
The examples in (6) above show Case marking on a noun representative of feminine affixally plural nouns. As shown, the nominative Case is marked by *-u* while the accusative and genitive are marked by *-i*. It is the genitive morpheme *-i* that clearly appears in the accusative. Thus, the direction in which Case syncretism is happening meets Caha’s proposed derivations, whereby Case syncretism spreads in a top-down fashion.

Up to this point, we have been introduced to the Case marking system on both masculine and feminine affixal plural nouns. The Case syncretism occurring in these plural nouns is both systematic and context-dependent since it only takes place across masculine and feminine affixal plural nouns⁵.

The Case morphemes in dual and masculine affixal plural nouns are traditionally seen as long vowels compared to the short vowels marking Case on singular nouns. At any rate, the paper proposes that it is the genitive Case morpheme in dual and affixal, masculine and feminine, plural nouns, which appears in the accusative. The accusative Case is part of the substructure of the genitive in the Case Hierarchy, but not vice versa.

⁵ Non-affixal plural nouns do not show any Case syncretism at all. Cases are marked distinctly.

(7) Syncretism effects spreading downwards



If syncretism is likely to happen, it happens in a top-bottom fashion, as indicated in the tree above. The derivation in (7) is line with Caha's claims regarding the direction in which the syncretism is happening.

3. Case Syncretism in Singular Nouns

There is a class of singular nouns traditionally known as solid stems which differ from non-solid stems in terms of their unanalyzability into a root-and-pattern morphology. Interestingly, solid stems differ from other noun classes with respect to the context in which Case syncretism takes place. More specifically, these stems exceptionally show syncretism between accusative and genitive in singular nouns. Surprisingly, the morpheme that reflects Case syncretism in this noun class is the morpheme *-a*, the distinct accusative on non-solid stems, see (1). Hence, three characteristics distinguish the class of solid stems from other nominal classes: (i) the

unanalyzability of these stems; (ii) the context where Case Syncretism takes place; and (iii) that the morpheme which reflects Case syncretism is the accusative *-a*.

The morpheme *-a*, which only marks accusative Case on non-solid stems seen above, marks both accusative and genitive on solid stems.

- (8) a. *jaaʔ-a* *ibraheem-u*⁶
 came-3 sg Abraham-nom
 ‘Abraham came.’
- a. *saaʔad-tu* *ibraheem-a*
 helped-1sg Abraham-acc
 ‘I helped Abraham.’
- b. *ana* *fi* *bayruut-a*
 I am in Beirut-gen
 ‘I am in Beirut.’

The pattern of Case syncretism in this class of nouns cannot be accommodated with Caha's (2009) proposed Hierarchy of Case. In Caha's proposal, the genitive is listed to the left of the accusative, hence projecting higher than the accusative in the Case Hierarchy, see (9) and (10).

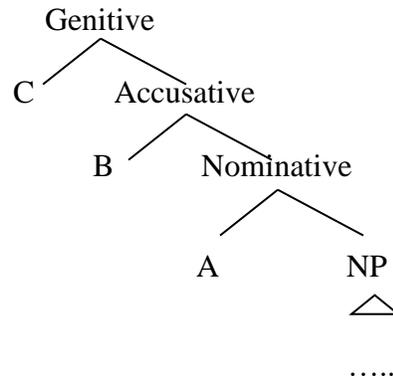
(9) Universal Case Contiguity:

- a. Non-accidental case syncretism targets contiguous regions in a sequence invariant across languages.

⁶ *ibraheem* ‘Abraham’ is not Arabic. It undergoes the same Case marking in the accusative and in the genitive. This is traditionally seen as the result of being a non-Arab name. Similarly, *bayruut* ‘Beirut’ is a non-Arab solid stem which undergoes the same Case marking in the accusative and the genitive Case.

- b. The Case sequence:
nominative – accusative – genitive – dative – instrumental – comitative
(Caha, 2009, p. 10)

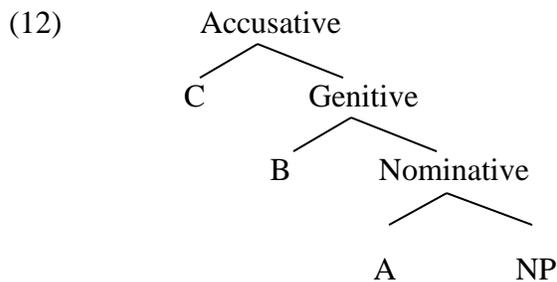
(10) Case Hierarchy



However, the Case Hierarchy required for solid stems does not meet Caha's proposal as it involves placing genitive to the left of the accusative, hence projecting lower in the hierarchy.

(11) Nominative – Genitive – Accusative

Casting the pattern of Case syncretism occurring in solid stems under Caha's proposed derivations, we will, instead, get the following hierarchy:



Caha (2009) proposes that non-accidental Case syncretism targets adjacent Cases on a Case Hierarchy where accusative is lower than genitive. Thus, Caha's proposal would render the Case

syncretism of accusative and genitive in solid stems in (8), which violates the Universal Case Contiguity principle in (9), as irregular, if not accidental.

Solid stems are traditionally presented as a class of nouns, usually borrowings, which are phonologically characterized with their unanalyzability into roots and patterns i.e. they cannot be analyzed into a consonantal root and vowel templates, see Ryding (2005) for more. For example, a word like *muusiiqa* ‘music’ cannot be analyzed the same way as a word like *kitaab* ‘book’ does⁷. Words like *kitaab* ‘book’ can be analyzed into a consonantal root /*ktb*/ and a vowel template of the pattern /*CiCaaC*/.

The class of solid stems includes non-native proper names, names of places⁸ (e.g., *bayruut* ‘Beirut’), two syllabic nouns which include certain adjectival stems (e.g., *aswad* ‘black’), some non-affixal plural nouns (e.g., *aflaam* ‘movies’), and some Arabic personal names (e.g., *Ahmed*). This class receives identical marking for accusative and genitive Case in the context of singular number. It shows an exceptional syncretism pattern, as it is not usually pervasive in other singular nouns, see (1) above. Below, a solid-stem noun exhibiting how the three Cases are marked in this class of nouns:

- (13) a. *jaaʔ-a* *ibraheem-u*
 came-3 sg Abraham-nom
 ‘Abraham came.’
- b. *saaʔad-tu* *ibraheem-a*
 helped-1sg Abraham-acc
 ‘I helped Abraham.’

⁷ Examples of solid stems are taken from Ryding (2005).

⁸ Not all names of places are non-analyzable into a root-and-pattern, e.g., *maktabat* ‘library’.

c. nadar-tu ila ibraheem-a

look-1sg. at Abraham-gen

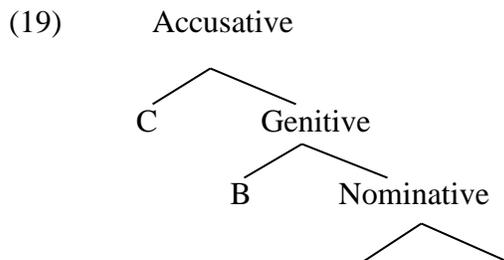
‘I looked at Abraham.’

The Case markings on this example will be summarized in the following table, where shading indicates syncretism

(19)

	<i>Abraham (proper name)</i>
<i>NOM</i>	Ibraheem- u
<i>ACC</i>	Ibraheem- a
<i>GEN</i>	Ibraheem- a

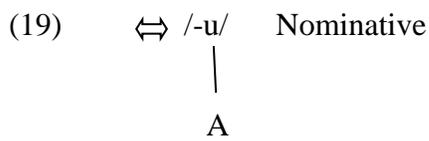
The syntactic structure underlying Case in this class will consequently be partitioned into two “portions”⁹, each of which is spelled out by a separate morpheme; see (15) repeating the one in (12).



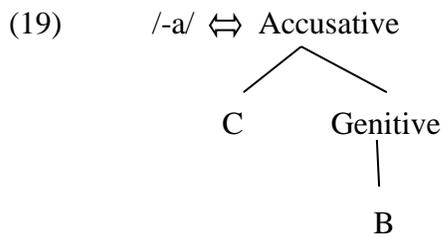
⁹ Using Pantcheva (2009) terminology in her analysis of directional expressions

A NP*

There are three morphemes to lexicalize the syntactic structure underlying Case in non-solid singulars, but only two morphemes available for the syntactic structure underlying Case in solid stems: one more “dedicated”¹⁰ to lexicalize the nominative and another one left to lexicalize both the accusative and the genitive Case.



The lexical tree in (16) lexicalizes the syntactic structure underlying the nominative Case only ignoring the trace of the NP, and leaving the lexicalization of the other part of the syntactic tree for the lexical entry of the morpheme *-a*.



But this violates the Universal Contiguity Principle in (9) if it is to be approached within Caha's (2009) framework; that is because of the place of the accusative which brings out the match between the lexical tree of the accusative in (17) and the upper part of the syntactic tree in (15).

Thus, the syncretism between accusative and genitive in this class of nouns appears to occur in contiguous regions on a Case Hierarchy which is slightly different from Caha's (2009). More

¹⁰ To use a term of Caha (2011).

accurately, the hierarchical structure in (15) differs from Caha's in terms of projecting accusative above genitive, but not vice versa. This contrasts Caha's claim of a restrictive order of Cases common across languages. For Caha (2009, p. 10), there is only one “actual” sequence of Cases with the accusative ordered to the left of the genitive in the linear sequence. The Case sequence for solid stems must be of the form:

(19) Nominative – Genitive - Accusative

The difference between Caha's proposed Case sequence and the one proposed for solid stems will be minimal, as it only involves changing the positions of two adjacent Cases.

Although the syncretism between accusative and genitive in solid stems is systematic in the sense of occurring across a class of nouns, it is still phonologically driven on some of these stems. More specifically, syncretism can be the outcome of the phonological process of deletion whereby distinct forms appear to be syncretic. Such a pattern can be found in some solid stems like *muusiiqa* ‘music’ that has invariant forms for all Cases across the board.

(19)

	<i>Music (mass)</i>
<i>NOM</i>	muusiiqa
<i>ACC</i>	muusiiqa
<i>GEN</i>	muusiiqa

The word *muusiiqa* ‘music’ inflects just like any other solid stem by bearing the nominative *-u* and the accusative/genitive *-a*, but these Case morphemes fail to appear or rather deleted in roots ending with certain vowels.

(20) Deletion: /u/ and /a/ + V [+central] Ø/→-

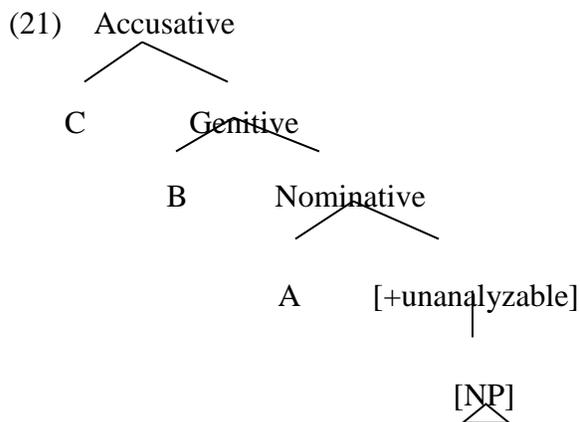
This deletion over phonological reasons is not unique to this word, however. It occurs also in other words with the same ending. For example, *mustashfa* ‘hospital’ and *komeedia* ‘comedy’ will have the same ending in the nominative, accusative and/or the genitive Case. These are examples of solid stems. Phonological truncation resulting in Case syncretism is quite common in singular nouns ending with vowels, namely high and centralized vowels.

However, the majority of solid stems show a different syncretism pattern. They rather show a phonologically-motivated syncretism represented in the phonological shapes of these stems, which cannot be analyzed with the usual consonantal root and vowel pattern template, unique to Arabic. The unanalyzability of these noun stems is the phonological context for the application of Case syncretism, which must be considered in the syntactic representation of Case in these stems. Here, Case syncretism does not involve any phonological deletion process but rather requires a certain phonological context, as is shown below.

It seems that we have to differentiate between two phonologically dependent syncretisms in solid stems: (i) a phonologically-driven pattern (usually the result of a phonological process that targets either the stem or the Case suffixes themselves) shown in (19) and (20) above; and (ii) a phonologically-motivated pattern.

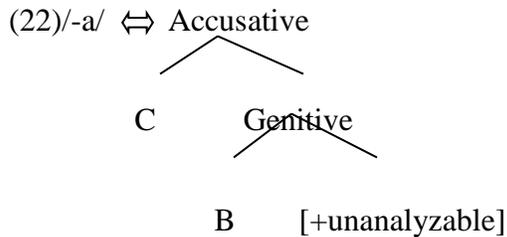
In the phonology-motivated pattern, no phonological deletion or truncation is taking place. It is merely induced by a phonological environment. Perhaps this is an answer to the question that why only solid stems show Case syncretism in the singular, but not other nominal classes. There is a traditional insight that the syncretism between accusative and genitive in solid stems occurs over phonological aspects. These phonological aspects have been looked at in terms of the unanalyzability of these stems into roots and patterns (cf. Ryding, 2005 for more on solid stems).

Thus, the unanalyzability of solid stems is a phonological context that serves as a conditioning environment for Case syncretism in this class of nouns. Therefore, I suggest that this conditioning environment, which also distinguishes solid stems from other nominal classes, be incorporated into the syntactic as well as the lexical representation for these stems.



The syntactic tree in (21) is the underlying structure of Case in solid stems with the phonological property [+unanalyzable] that serves as a triggering environment for Case syncretism in this class of nouns. This syntactic tree will consequently require a morpheme whose lexical entry is

specified for the same phonological property. As is shown below, the lexical tree of the Case morphemes in the noun class of solid stems is specified for the property [+unanalyzable] as well.



Incorporating such a phonological property into the syntactic as well as the lexical representation of Case in solid stems makes it clear that the morpheme *-a* in these stems is not the same *-a* in other noun stems, the latter is not phonologically motivated. Moreover, it tells us how the syncretism pattern where no phonological deletion taking place is triggered differently from the phonologically-driven pattern that results from a phonological deletion targeting Case morphemes in this class of noun stems.

Thus, we have two syncretism patterns in solid stems. The first pattern is phonologically driven and is seen in words like *muusiiqa* ‘music’, *komeedia* ‘comedy’ and *mustashfa* ‘hospital’, which will have identical endings in all Cases. In these words, Case markers are deleted due to phonological reasons, e.g. high and central vowels. The second pattern, on the other hand, is phonologically motivated and is seen in words like *ghazat* ‘Gaza’, *bayruut* ‘Beirut’, *aswad* ‘black’, *Ahmed* and *Ibraheem* (proper nouns), and *aflaam* ‘movies’, where no phonological deletion is happening. In these words, nominative is marked by *-u*, whereas accusative and genitive receive the same marking, *-a*. Although these words are all solid stems characterized with their unanalyzability, they differ in terms of the Case syncretism patterns they show.

The question one needs to ask is whether the syncretism pattern in solid stems in general is a non-accidental one as proposed by Caha (2009). Obviously, it is not a non-accidental pattern; that is because it does not meet Caha's (2009) proposed Case Hierarchy. It is not caused by phonological truncation either. It is true that Case morphemes get deleted from some examples of solid stems due phonological reasons, but this is not true for all solid stems. As is discussed above, Case syncretism in the majority of solid stems is driven by a certain phonological property characteristic of these stems.

Thus, Case syncretism in most solid stems is neither non-accidental nor an accidental one under Caha's claims. Since it is triggered by a phonological property, the extent the phonology of the language is taken to be responsible for accidental syncretism must be reconsidered. The question whether accidental syncretism includes only the phonological processes that either target stems or Case affixes or goes further to include the conditioning phonological properties needs further explanation within Caha's theory.

At any rate, I will take the pattern of Case syncretism that holds in solid stems as an exceptional and an accidental one. That is, it is the product of phonology, be it the result of a phonological process that deletes Case suffixes or a phonologically motivated one triggered by the unanalyzability of these stems into a root-and-pattern morphology.

4. Conclusion

This paper has reported on a Case syncretism pattern that targets a special class of nominal stems in Arabic. Unlike other noun classes, solid stems are the only class that shows a syncretism between accusative and genitive in the context of singular number. Therefore, it has been taken as an exceptional syncretism pattern. Moreover, solid stems differ from other noun classes in

terms of the morpheme that reflects Case syncretism, requiring a distinct Case Hierarchy. This pattern does not fall in line with Caha's (2009) claims of a Universal Case Contiguity principle and a Case Hierarchy universal to all languages, as it involves placing accusative above genitive.

The paper has pointed out that Case syncretism in most solid stems is neither non-accidental nor an accidental one, if it is to apply Caha's principles. It targets contiguous Cases in a sequence different from Caha's (2009). Moreover, it is bound to target certain noun stems with a certain property, namely the non-native root and pattern morphology inherent in these noun stems. They cannot be analyzed into a root-and-pattern morphology.

The paper has found that there are two syncretism patterns in solid stems: a phonologically-driven pattern and a phonologically-motivated one. They both differ in terms of the mechanisms used to derive them. In either case, the paper takes Case syncretism in solid stems as a product of phonology, hence an accidental one.

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