Defective representations explain a seemingly allomorphic pattern in Palestinian Arabic

Abstract: This short paper argues that the allomorphy in the 3MSG object marker in Palestinian Arabic is epiphenomenal. Indeed, if one allows for defective autosegmental representations, all four realizations of the suffix can be shown to follow from one underlying form, followed by the application of regular phonology. The point is illustrated in both Strict CV phonology (Lowenstamm 1996) and moraic theory. It is further suggested in the conclusion that the erosion of grammatical markers can be formalized with defective representations.

Keywords: Allomorphy, Defective autosegmental representations, Morpheme erosion, Palestinian

1 Introduction

This paper analyzes a case of apparent allomorphy in the 3MSG object marker in Palestinian Arabic. As shown in (1), this morphological information is conveyed in one of four phonological shapes, depending on the phonological form of the stem it attaches to. After a consonant (1a), it is unstressed [o] at the right edge of the phrase and stressed [óː-] if it is not at the right edge. After a vowel-final base (1b), if no other marker follows, the same meaning is expressed by additional length to the final vowel of the base, which is also stressed; but if another marker follows, one finds a fourth realization, stressed [hóː-].

(1) V+3MSG.OBJ in Palestinian Arabic

\[
\begin{array}{ccc}
V & V+3MSG.OBJ \\
\text{a.} & \text{kátab} & \text{‘he wrote’} & \text{kátab-o} & \text{‘he wrote it’} & \text{katab-óː-ʃ} & \text{‘he didn’t write it’} \\
\text{b.} & \text{ráma} & \text{‘he threw’} & \text{ramaː} & \text{‘he threw it’} & \text{rama-hóː-ʃ} & \text{‘he didn’t throw it’}
\end{array}
\]

The case in (1) is an instance of what many view as phonologically-conditioned allomorphy: two or more lexical representations which are selected by the grammar according to phonological criteria. Once such a view is adopted, the analyst then seeks the logic behind the selection. If the logic that was found paints the selected allomorph as preferable on phonological grounds (e.g. avoiding the creation of marked syllabic structures), then the case is not only one of phonologically-conditioned allomorphy, but also of phonologically-optimizing allomorphy.

According to most phonologists, the role of phonology is to process underlying representations into surface ones. The view laid out in the preceding paragraph allows the phonology to perform an additional and quite distinct task, namely to select between two lexical representations. This view, which was formalized within Optimality Theory by Mascaró (1996), is arguably undesirable, since it complicates the tasks accomplished by the phonological module. It also paves the way to numerous morpheme-specific surface phonologies within the same grammar: morpheme-specific solutions for general problems can always be explained by assuming that that specific morpheme has an allomorph allowing that solution. Thus, for instance, a language is predicted to have final devoicing only in one suffix, etc. Such analyses are at the very least inelegant.

\[1\] By “Palestinian” I refer here to the group of dialects spoken in Israel, the Gaza strip and the West Bank by traditionally sedentary populations, to the exclusion of the Bedouin dialects of the same regions. The generalizations about stress in Palestinian can be found, for instance, in Abu-Salim (1986) or Watson (2011) and references therein. For the present paper, I also worked with the excellent dictionary by Elihai from 2017.
A competing view avoids these complications by assuming a single underlying representation. Consider the case of the alternation in the plural agreement marker in [kâtab-u] ‘they wrote’ [katab-u:-ha] ‘they wrote it(f)’. This marker, too, exhibits what might be regarded as allomorphy: it is short at the right edge and long once a suffix is added. Yet as will be discussed in this paper, there is a rule shortening final long vowels in Palestinian Arabic (see McCarthy 2005; Author & Colleague, 0000): as a result, both realizations are actually underlyingly identical, and there is no real allomorphy to speak of.

The case under study is specifically relevant to the discussion, since two of the exponents – [o] and stress shift – are so radically different. Indeed, the Moroccan Arabic parallel was mentioned in a recent survey of phonologically-conditioned allomorphy (Nevins 2011) as a classic case of selection between two competing lexical representations in the phonology. In this paper, I will argue that given fairly standard assumptions of existing autosegmental theories, the claim regarding the plural morpheme can also be made for the 3MSG.OBJ: there is no allomorphy, because there is only one underlying representation.

This short paper is structured as follows. In the next section, I will briefly present the theory adopted, namely Strict CV (Lowenstamm 1996, Scheer 2004) as well as the stress facts of Palestinian Arabic. In the analytic section 3 I will first discuss the representation of final length, and then show how all the realizations of the morpheme under question can be derived from a single underlying representation which is autosegmentally defective. Section 4 will discuss a possible mora-based alternative. In the conclusion, I will mention a possible consequence for the formalization of language change.

2. Background: theory and data

2.1 Autosegmental phonology and Strict CV

It has long been accepted among phonologists that lexical representations do not involve only the segmental level. Even for languages with few suprasegmental features, representations with timing slots such as in (2) have been proposed. These representations were used, for instance, to express length, as in the Biblical Hebrew [piːl] ‘elephant’ in (2a). Once two levels were admitted, some representations could be defective, for instance in having a timing-slot with no associated segment. Such an analysis could be proposed, for instance, for the definite article of the same language in (2b), because it causes the gemination of the consonant following it: [happiːl] ‘the elephant’. This word is represented in (2c), with the first consonant of the noun spreading to occupy the unassociated slot of the article.²

(2) Timing slots in lexical representations

```
  a. p i l  b. h a  c. h a p i l  
     x x x x  x x  x x x - x x x x
```

Clements and Keyser (1983) proposed a less underspecified skeletal level, in which timing slots were labeled as C(onsonantal) or V(ocalic). Groundbreaking work by McCarthy (1981) used this approach to describe Semitic templates. Thus, verbal forms such as Palestinian [jiftah]-[jiftahu] ‘that he open’ occupy a template of the form CVCCVC.

² Zimmermann (2017) is a recent book devoted to defective representations.
One problem with the original proposal by McCarthy was its inherent inelegance in describing the interplay between vowels and consonants in Semitic templates. To illustrate, consider another pair of imperfective forms from Palestinian Arabic, [jimsik]-[jimisku] ‘that he/they hold’. The position of the second vowel of the stem changes upon suffixation. In templatic terms, this verb seems to use two different templates: CVCCVC in the singular (like [jiiftaħ]), but CVCVCC in the plural. Yet another group of verbs, namely those based on biradical roots, exhibit this latter template in both singular and plural template, e.g. [jiḥiss]-[jiḥissu] ‘that he/they feel’. Do we really want to say that there are two templates at play?

There are ways to modify the basic proposal so as to avoid this conclusion and still define the templates in terms of C and V positions. However, in the years after his initial proposal, McCarthy led many phonologists away from skeletal considerations to syllable and mora-based templates. We will return to such accounts in section 4. Here we will consider an alternative approach to CV Phonology: CVCV Phonology, or “Strict CV”.

This approach to the skeletal level was proposed by Jean Lowenstamm in 1996, as a development on Government Phonology (Kaye et al. 1990). It argues that the skeletal level is established with only one constituent, the CV unit. At the skeletal level, if so, two Cs or two Vs are never adjacent. The representations in (3) illustrate how all six forms discussed in fact share the same four CV template. In (3a,b), we observe that V2 is empty whereas V1 is full in both singular and plural. In (3c) V1 is occupied by a short vowel /i/ in the singular. Once the plural suffix is added (3d), this /i/ comes to stand in an unstressed, open syllable. A general rule deletes /i/ in this position in Palestinian. The deletion leaves behind a triconsonantal cluster, itself an illicit configuration, which is rectified by the insertion of an epenthetic vowel /i/ in V2. Finally, the two copies of the second radical in (3e,f) cannot be separated by a vowel in either the unsuffixed or the suffixed forms because of geminate integrity (Schein & Steriade, 1986). The representations in (3e,f) also illustrate how long segments – vowels or consonants – are conceived of in Strict CV.

(3) One template for all six forms of Palestinian Arabic

a. ‘that he open’

j i f t a h
C V C V3 C V

b. ‘that they open’

j i f t a h - u
C V C V2 C V3 C V

c. ‘that he hold’

j i z s i k
C V C V2 C V3 C V

d. ‘that they hold’

j i m i s i k - u
C V C V2 C V3 C V

e. ‘that he feel’

j i h i s
C V C V2 C V3 C V

f. ‘that they feel’

j i h i s - u
C V C V2 C V3 C V
Why and under what conditions Cs and non-final V positions may remain empty is tangential to the purpose of the present paper. More central is the theory’s treatment of final V-slots. As can be seen in (3a,c,e), because the only skeletal constituent in CV, phonetically consonant-final words are skeletally nucleus-final. These final empty nuclei (or FENs) are assumed to be parametrically licensed to remain unassociated, on a language-specific basic.

Finally, reconsider the compensatory lengthening of Biblical Hebrew in (2) above. In strict CV, the defectiveness of the definite marker will be represented as in (4a), with two CV units, of which only the first is associated. Upon concatenation with a noun, the onset of the second CV unit of the article is engaged by the first consonant of the nouns (4b).

(4) Compensatory lengthening in Strict CV

\[
\begin{array}{c|c|c}
 a & h & a \\
 C & V & C \\
 b & h & a & p & i & l \\
 C & V & C & V & C & V & C & V \\
\end{array}
\]

Until now, we have seen only one type of representational defectiveness, involving empty skeletal slots. Strict CV, like CV Phonology, predicts at least two other types representational defectiveness: i. a segment with no position, and ii. a segment which is not lexically associated to its position. The latter configuration will be advanced for the case of apparent allomorphy from Palestinian Arabic discussed in the introduction. To anticipate the proposal, here is the representation of the 3MSG.OBJ marker:

(5) Defective representations of 3MSG.OBJ marker

\[
\begin{array}{c}
 h & o \\
 C & V \\
\end{array}
\]

In the analytic section I will show how, just like in (3) and (4), the defectiveness of this representation is dealt with in principled manner in the grammar and results in the four different surface realizations attested. But before we can move to that endeavor, a word must be said about stress in Palestinian Arabic.

2.2 Stress in Palestinian Arabic

The data in this paper involve stress shifts upon suffixation. This shift is not a property of specific suffixes, but rather an expression of the regularities of stress in this language. It is therefore important to establish these regularities before embarking on an analysis. In Palestinian Arabic (PA), the first of two or three short, open syllables is stressed (6a; such syllables are referred to as L(ight)). Final consonants are extrametrical, and so a form like /katab/ belongs in (6a), too. But if the final syllable either bears a long vowel or is closed even after the omission of the final consonant, then that syllable will be stressed: this is the case of CVːC or CVCC in (6b). Such syllables attract stress also when they are not final (6c); they are

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3 Lexically-empty V-slots may remain unrealized if the following V-slot is associated to segmental material. In this configuration, it is said that the contentful nucleus “governs” the empty one. Thus, in (3d), the final nucleus governs V3, and /i/ is syncopated. This leaves V2 ungoverned and leads to epenthesis.

therefore referred to as H(heavy). The rightmost of two heavy syllables is stressed, e.g. [tārjām-ti] ‘you(ṛ) translated’. By comparing the last word in each group, one can see how, with the addition of a C-initial suffix, the final C can no longer be extrametrical, and accordingly its syllable is considered heavy and stress is shifted to it.

(6) Basic stress facts of Palestinian Arabic

<table>
<thead>
<tr>
<th>Type</th>
<th>Example</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. antepenultimate</td>
<td>nīsi</td>
<td>‘he forgot’</td>
</tr>
<tr>
<td></td>
<td>kātab-u</td>
<td>‘they wrote’</td>
</tr>
<tr>
<td></td>
<td>kātab</td>
<td>‘he wrote’</td>
</tr>
<tr>
<td>b. stress to weight I</td>
<td>biḥībb</td>
<td>‘he loves’</td>
</tr>
<tr>
<td></td>
<td>bis'īr:r</td>
<td>‘he becomes’</td>
</tr>
<tr>
<td></td>
<td>katāb-t</td>
<td>‘I wrote’</td>
</tr>
<tr>
<td>c. stress to weight II</td>
<td>yītārjīm</td>
<td>‘he translates’</td>
</tr>
<tr>
<td></td>
<td>yīsā:fir</td>
<td>‘he travels’</td>
</tr>
<tr>
<td></td>
<td>katāb-ti</td>
<td>‘you(ṛ) wrote’</td>
</tr>
</tbody>
</table>

Final vowels are never stressed, and unstressed final vowels are never long (but it is not the case that all unstressed vowels are short, e.g. [Sa:lām-ë:n] ‘two worlds’). However, stress is also shifted to an originally final vowel when, as a result of suffixation, it is no longer final (7). When this shift occurs, the vowel will always surface as long. These generalizations hold whether the original final vowel is suffixal (7a) or part of the stem (7b).

(7) Stress shift to formerly final vowel

<table>
<thead>
<tr>
<th>Type</th>
<th>Example</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>fāhas'ū</td>
<td>‘they examined’</td>
</tr>
<tr>
<td></td>
<td>fāhas'-ū:-ha</td>
<td>‘they examined her’</td>
</tr>
<tr>
<td></td>
<td>fāhas'-ū:-k</td>
<td>‘they examined you(M)’</td>
</tr>
<tr>
<td>b.</td>
<td>rāma</td>
<td>‘he threw’</td>
</tr>
<tr>
<td></td>
<td>rāma:-ha</td>
<td>‘he threw her’</td>
</tr>
<tr>
<td></td>
<td>rāma:-k</td>
<td>‘he threw you(M)’</td>
</tr>
</tbody>
</table>

The alternation in (7) is not specific to the Palestinian vernacular. It has been at the center of a theoretical debate among scholars of Arabic in general (see McCarthy 2005 for details). What is specific to Palestinian, along with some other adjacent dialects, is a systematic exception to the generalization according to which final vowels are never stressed: as we saw in the introduction, the 3MSG.OBJ is expressed on vowel-final bases by stressing that vowel, which also becomes long, e.g. [ramā:] ‘he threw it’.

In the next section, we embark on the analysis of the data from the introduction.

3 Analysis

In this section, I will present an analysis of the apparent allomorphy in the introduction. I will show that neither case qualifies as allomorphy, because both involve a single underlying representation. The case to be discussed is reminded in (8):
(8) V+3MSG.OBJ in Palestinian Arabic

\[
\begin{array}{ll}
V & V+3MSG.OBJ \\
\hline
a. kátab & ‘he wrote’
\rightarrow katab-ôː-ʃ ‘he didn’t write it’

b. rámá & ‘he threw’
\rightarrow rama-hóː-ʃ ‘he didn’t throw it’
\end{array}
\]

In (8a) one sees the alternation that concluded the last section: a final, unstressed short vowel is lengthened and attracts stress once it is no longer final. In the next subsection, I will briefly discuss this phenomenon and an interpretation of it in Strict CV.

3.1 Final long vowels

McCarthy (2005) discusses the length alternation in final vowel in Arabic dialects within the popular framework of Optimality Theory. On the basis of cross-linguistic markedness patterns, he concludes that final vowels are always underlyingly long, but become short on the surface.

Three constraints are responsible for this state-of-affairs in McCarthy’s analysis: i. NON-FINALITY, a constraint that ultimately rules out final long vowels for metrical reasons. ii. MAX(Vː), a constraint against the complete deletion of long vowels, and iii. FINAL-C, a constraint against vowel-final words. NON-FINALITY disallows final long vowels, whereas MAX(Vː) disallows their complete deletion. The solution is to shorten them. Final short vowels, in contrast, if they were to appear in an input, would delete due to FINAL-C, and will not be protected by MAX(Vː). The fact that the (underlyingly long) short vowel does not attract stress can be made to follow from its surface length.

I will adopt from McCarthy the conclusion that final short vowel are not legitimate. Only final long vowels are possible underlyingly, and they are all shortened in the phonology. In the terms of Strict CV, one may say that the representation in (9a) is not a possible lexical representation, whereas the one in (9b) is. Through the application of phonology, the latter is transformed into (9c).

(9) Illicit and licit representations of final vowels

\[
\begin{array}{ccc}
a. * h a & b. h a & c. h a \\
C V & C V C V & C V C V
\end{array}
\]

The differences between this view and McCarthy’s do not concern us here.\(^5\) For the present purpose the illicit nature of (9a) is a first step towards the understanding of the different realizations of the exponent of 3MSG.OBJ.

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\(^5\) This view differs from McCarthy’s in that there are two phonological mechanisms: the phonology of lexical representations, where there can be morpheme structure constraints, and the phonology of production. For a recent argument in favor of Morpheme structure constraints, see Rasin (2016).
3.2 The four realizations of the 3MSG.OBJ

As already foreshadowed, I submit that the 3MSG.OBJ is associated with a single defective representation, defective because even though it involves two segments and the positions that may in principle receive these segments, the association between segments and positions is not lexically determined: it is subject to phonological considerations.

(10) The lexical representation of 3MSG.OBJ

\[
\begin{array}{c}
\text{C} \\
\text{V}
\end{array}
\quad h \quad o
\]

The floating status is especially crucial for the understanding of the distribution of the /h/ of this marker. In Palestinian, the sound [h] is found in every possible syllabic position, including the unstressed post-consonantal position [juf-ha] ‘look at her’, internal codas [lahge] ‘vernacular’ and final codas [kirih] ‘he hated’. I will assume that the association of a floating /h/, unlike that of lexically-associated /h/, is subject to the following condition:

(11) Condition on the association of /h/

A floating /h/ can be associated to its position iff i) the position is followed by a vowel, and ii) that vowel is stressed.

Given the cross-linguistic weakness of /h/ and the special status of onsets of stressed syllables – both reflected in the almost identical distribution of /h/ in English, for instance – the conditions in (11) can be regarded as a case of emergence of the unmarked (for reasons of brevity, I leave out further formalization of these conditions). Unlike in English, however, it is by hypothesis the floating status of /h/ that triggers the sensitivity to these phonological considerations, which seem to be irrelevant for other, non-floating /o/’s in the language. Having established this, we may examine the representation of the suffix in each of the environments attested.

First let us consider now the post-consonantal realization of the suffix at the right edge, namely unstressed [o] as in [katab-o] ‘he wrote it’. (12a) shows the initial concatenation of base and suffix. The two possible association patterns of the vowel are presented in (12b,c). The pattern in (12b) is illicit because it associates a final vowel to a single position at the right edge. Only (12c) is licit. As for the /h/, it cannot be associated because neither scenario involves it preceding a stressed vowel (as we saw, truly final long vowels are never stressed, and moreover, the /h/ does not precede the /o/ in 12c). The representation in (12c) will be realized as a final unstressed short vowel [katab-o].

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6 Only the right edge of the base is represented autosegmentally; also, I placed the consonant and vowel of the suffix on different tiers for elegance of representation.
When another suffix, such as the negative [-ʃ], is added to this concatenation, the 3MSG.OBJ is no longer at the right edge. The vowel can in principle now be associated only to V₄, as shown in (13b). But that would leave an empty VC sequence, which cannot be occupied by the floating /h/ because the following vowel is not stressed. Therefore, the only solution is again to associate the vowel to both V₃ and V₄ (13c). Since the vowel is now both long and non-final, it will attract stress. Again, in this configuration, /h/ has no position to associate to.

We have thus successfully covered both post-consonantal cases. Moving on to post-vocalic cases, first we must clarify the representation of a base like [rama] ‘he threw’. Consistent with the above discussion, I assume that the initial representation of the final vowel involves two positions. The final vowel will be realized short and unstressed.

Let us now consider the realization [hóː] of the 3MSG.OBJ, which appears in this configuration when the marker is not at the rightmost edge of its concatenation, e.g. [rama- hoː-ʃ] ‘he didn’t throw it’. The initial concatenation is given in (15a). The association pattern in (15b) is illicit because it gives rise to hiatus. This hiatus cannot be resolved by associating /h/ because the
vowel in V₄ is not stressed. The only possibility is to rearrange the association pattern as in (15c): the vowel of the suffix is associated to V₃, which was originally occupied by the long vowel of the base. The former is now long and non-final, so it will be stressed. This makes the realization of the /h/ possible, because unlike in (13c) above, an onset position is available before the stressed vowel.⁷

(15) 3MSG.OBJ after V, **not** at the right edge - [rama-hóː-∫] ‘he didn’t throw it’

a)  
\[
\begin{array}{cccccc}
\text{C} & \text{V₂} & \text{C} & \text{V₃} & + & \text{C} & \text{V₄} & \text{C} & \text{V₅} \\
\end{array}
\]

b)  
\[
\begin{array}{cccccc}
\text{C} & \text{V₂} & \text{C} & \text{V₃} & + & \text{C} & \text{V₄} & \text{C} & \text{V₅} \\
\end{array}
\]

c)  
\[
\begin{array}{cccccc}
\text{C} & \text{V₂} & \text{C} & \text{V₃} & + & \text{C} & \text{V₄} & \text{C} & \text{V₄} \\
\end{array}
\]

The three similar realizations – [o], [óː], [hóː] – are all the result of phonology applying to the same underlying representation.

The realization that stands out is the fourth one: it consists of a mere stress shift to a (seemingly) final vowel. Consider now the concatenation of the 3MSG.OBJ exponent to the base at the right edge in (16a). The association of either /h/ or /o/ in (16b) is illicit for reasons already discussed: associating only /o/ will give rise to hiatus, and moreover establish an illicit short vowel at the right edge; and associating only /h/, or both /h/ and /o/, will place /h/ before an unstressed nucleus. For the same reason, the rearrangement solution that applied in (15c) is no good in the present configuration: as shown in (16c), the final long vowel would not be stressable, and hiatus will be created. As a result, neither /h/ nor /o/ are associated (16d, identical in fact to 16a). Their skeletal support is nevertheless clearly taken into consideration by the phonology, since the final vowel of the stem, no longer final, is allowed to remain long. Being non-final, it also attracts stress.

(16) 3MSG.OBJ after V, at the right edge - [ramáː] ‘he threw it’

a)  
\[
\begin{array}{cccccc}
\text{C} & \text{V₂} & \text{C} & \text{V₃} & + & \text{C} & \text{V₄} & \text{C} & \text{V₅} \\
\end{array}
\]

b)  
\[
\begin{array}{cccccc}
\text{C} & \text{V₂} & \text{C} & \text{V₃} & + & \text{C} & \text{V₄} & \text{C} & \text{V₅} \\
\end{array}
\]

---

⁷ Note that the final vowel of the base is *not* shortened before other CV suffixes, e.g. [ramáː-hom] ‘he threw them’.
To summarize, it has been shown that a single defective representation can underlie all four realizations of the 3MSG.OBJ morpheme in Palestinian Arabic. The assumptions of the analysis are mostly standard ones, whether regarding the representations (FEN) or the conditions on the realization of segments. Indeed, the same conditions that hold for the /h/ of English throughout that language, apply in Palestinian to the floating /h/.

Before I conclude the paper, I wish to compare the approach taken here to the more popular mora-based approach.

4 A moraic alternative

In section 2, I mentioned that mainstream phonology abandoned the C/V-based skeleton already in the 1980s and early 1990s in favor of formalizations based on moras and syllables. Moras encode syllable weight: a heavy syllable projects two moras in its rhyme CV$_\mu$V$_\mu$, or CV$_\mu$C$_\mu$. Onsets do not project moras.

The concepts of moras and syllables are out of work in Strict CV accounts, just like the CV skeleton should not feature in a moraic account: the entire point of introducing moras is to do away with skeletal support. In the present context, rather than compare the two approaches, I would like to show that a mora-based account of the data is also possible, but crucially involves defective representations, too. In the process I will indicate the difference between the two accounts.

The moraic approach must assume that the length of the vowel of the suffix is part of its underlying representation: it is always accompanied by two moras. To explain why these moras are not always associated to the vowel of the suffix, like any other final two moras, the moraic account must assume some defectiveness, too. This is represented in (17), where an association between the moras and the vowel is not part of the underlying representation. Rather, it is left to be determined by the grammar:

\[(17) \quad \text{UR of 3MSG.OBJ in a moraic approach} \]

\[
\begin{array}{c}
\sigma \\
\mu \\
\mu \\
\hbar \quad o
\end{array}
\]

If so, both approaches require some defectiveness. I will further assume that the same conditions for the realization of /h/ hold under this analysis.

The representations in (18) and (19) show how the analysis would proceed with a UR such as (17). Final consonants, as mentioned in section 2, are extrametrical (this is represented by the angle brackets <x>). When the 3MSG.OBJ suffix is attached to stems ending in a consonant (18a), the originally final consonant can no longer be extrametrical. This final consonant, and not the /h/ of the suffix, becomes the onset of the syllable whose nucleus is the
/o/: recall that /h/ will not be realized when the following vowel cannot be stressed.\(^8\) A similar logic holds after a V-final base (18b): the /h/ cannot be realized, and if the /o/ alone were realized, a hiatus would arise. No part of the suffix will be realized, but stress will be shifted to the no-longer-final vowel of the base.

(18) Mora-based analysis: at the right edge

\[
\begin{align*}
\text{a.} & \quad \sigma & \quad \mu & \quad \mu & \quad \{b\} - h & \quad o \\
\text{b.} & \quad \sigma & \quad \sigma & \quad \mu & \quad \mu & \quad a & \quad h & \quad o
\end{align*}
\]

If so, the mora-based account and the Strict-CV account fare equally well for the realizations at the right edge. However, all other things being equal, the mora-based account makes a wrong prediction for the configuration before the negative [-ʃ], i.e. not at the right edge. Recall that in this configuration, the vowel of the suffix can be stressed, because it is not final. As a result, the /h/ should be realizable independently of the context to its left. The correct prediction is made for post-vocalic cases (19b),\(^9\) but not for the post-consonantal cases in (19a), where one would expect *[kataboːʃ]*. This is nevertheless not a big problem: a markedness constraint against the creation of “new” codas could be evoked in order to rule out this bad prediction. While this would be an additional factor, and one which is not reflected elsewhere in the language, it may also be regarded as a case of emergence of the unmarked.

(19) Mora-based analysis: not at the right edge

\[
\begin{align*}
\text{a.} & \quad * & \quad \sigma & \quad \mu & \quad \mu & \quad \{b\} - h & \quad o & \quad <ʃ> \\
\text{b.} & \quad \sigma & \quad \sigma & \quad \mu & \quad \mu & \quad a & \quad h & \quad o & \quad <ʃ>
\end{align*}
\]

The Strict CV account of *[kataboːʃ]* is repeated in (20). It relies crucially on the FEN and its support for the realization of the vowel of the suffix. This association leaves no position for the /h/.

(20) Reminder of the parallel Strict CV take on *[kataboːʃ]* ‘he didn’t write it’

\[
\text{katab} \quad h \quadʃ\\nC \quad V_3 \quad + \quad C \quad V_4 \quad C \quad V_4 \quad o
\]

\(^8\) Note also that the moraic approach, too, needs to assume that final vowels are underlying long and subsequently shortened.

\(^9\) The representation in (19b) yields *[rama:hóːʃ]*, with two adjacent long vowels, which is in fact not the attested form. However, there is an independently-necessary, general rule in Palestinian that shortens the first of two adjacent long vowels in open syllables (Abu-Salim 1986, Author, Year), so (19) is in fact correctly expected to be realized as *[ramahóːʃ]*.
Indeed, the main difference between the two approaches is the FEN. In the strict CV account, the FEN was a reason for the non-realization of /h/ after the final C, and the onset of the original FEN was the reason that the /h/ was realized in [ramahː] (15c above). Without the FEN, for the realization of the 3MSG.OBJ to attract stress and be realized as long before [-ʃ], the moraic approach must assume that the full length of the vowel of the suffix is underlying. As a result, in the realization [ramː] 'he threw it' (17b) more material is left unengaged in the moraic account than in the Strict CV account.

Different types of material are allowed to be left unassociated in the two accounts: moras and syllables in the moraic account, CVs in the Strict CV account. Importantly, however, both accounts require both a defective lexical representation and the possibility of leaving some of the non-segmental material unassociated. Once that is admitted, on either approach it is unnecessary to assume allomorphy in this case.

5. Conclusion

This paper showed how, by assuming autosegmentally defective lexical representations, a case of apparent allomorphy is in fact not allomorphic at all. The case illustrating this point was the 3MSG.OBJ marker of Palestinian Arabic, often mentioned as allomorphy par excellence. We saw that autosegmental accounts can support a claim that all four realizations are in fact determined by the phonology applying to a single underlying representation; and the alternations are not more allomorphic than those between, say, English [t,tʰ,ɾ,ˈt], which do not reasonably involve allomorphy.

I would like to conclude with the following remark regarding linguistic change. It seems to me that defective representations can be useful in the description and formalization of exponent erosion. It is well-known that exponents, and especially frequent ones like the 3MSG.OBJ of the present paper, tend to become phonologically-reduced over time, then alternate with zero, and then eventually disappear (e.g. Heine & Kuteva 2007: 42). A famous example is the English indefinite marker, which most probably started out as identical to one in its pronunciation, then reduced to an, and then came to be realized as [ə] or [ən] depending on the phonological context. This last step in the erosion can be regarded as the defectivization of the representation of the marker: a reanalysis from an ideal or default one-to-one segment-to-position match (21a) to some defectiveness, in this case the /n/ losing its skeletal support (21b):

(21)  Defectivization of the representation of the marker

\[
\begin{align*}
\text{a)} & \quad \text{a} & \text{n} & \text{b)} & \quad \text{a} & \text{n} \\
& \text{C} & \text{V} & \text{C} & \text{V} & \text{C} & \text{V}
\end{align*}
\]

Presumably, representations such as (21b) are more costly to encode, because of their deviation from the one-to-one ideal. It therefore makes sense for defective representations to be especially available for frequent items - it is easier to maintain non-default representations in the grammar if they are frequently evoked.
References

Fathi, R. 2013. Vowel length in Egyptian Arabic: a different view. PhD dissertation, Université Paris VII.