

High Vowel Syncope Failure in Urban Jordanian Arabic: A Positional Faithfulness Treatment

<https://doi.org/10.33806/ijaes2000.22.2.17>

Aziz Jaber and Osama Omari
Yarmouk University, Jordan

Received on 1.8.2021

Accepted on 13. 2.2022

Published on 10.6.2022

Abstract: *Although several studies have provided insightful accounts and analyses of places and environments where high vowel syncope is at play in different Arabic dialects (e.g., Abu-Salim 1987; Abu-Mansour 1995; Kiparsky 2003; McCarthy 2007), they have not identified or accounted for circumstances in which high vowel syncope fails to apply. This paper, thus, fills in this gap in the literature. Adopting positional faithfulness theory, the study explains the uncharacteristic resisting behavior of certain prominent positions. It is shown that the high vowel syncope process causes any weak high vowel to be deleted except when occurring in one of the prominent positions of the 1) stressed syllable, 2) final syllable, or 3) proper name subcategory. However, weak positions like unstressed syllable and non-final syllable submit to high vowel neutralizing syncope in Urban Jordanian Arabic. This shows that syncope targets only weak structures in weak positions.*

Keywords: high vowel, positional faithfulness, prominence, syncope, Urban Jordanian Arabic

1. Introduction

Due to their phonetics, high vowels are treated as weak segments almost cross-linguistically (Gordon 1998; Howe & Pulleyblank 2004; McCarthy 2007, among others). They most often get neutralized by deletion, shortening, devoicing, among other neutralization processes (for more details, see section 2 below).

In positional faithfulness theory, several strong positions have been identified as opposed to weak positions (Selkirk 1994; Casali 1996; Beckman 1999, 2004; among others). The former set behaves asymmetrically pertaining to contrasts and neutralizations. Strong positions manage to maintain marked structures, resist, and sometimes trigger neutralization. Weak positions, however, fail to protect their marked structures and submit to neutralization deemed necessary by the grammar of a given language. Strong positions derive such power from the perceptual and psycholinguistic privilege that they enjoy over the less privileged weak positions (Smith 2011; Jaber and Omari 2018).

The current paper will investigate high vowel syncope in Urban Jordanian Arabic (UJA)¹ from a positional faithfulness perspective. The main goal of the paper is to show the interaction between strong/weak vowels, on one hand, and prominent/less prominent positions, on the other, and their effect on high vowel syncope in UJA. In particular, the paper will examine the syncope of short high vowels as opposed to long high vowels, and of short high vowels in contrast with short low vowels. Moreover, the paper will investigate syncope of short high vowels

in strong positions as opposed to weak positions.

High vowel syncope has been thoroughly investigated in different Arabic dialects (Abu-Salim 1987; Abu-Mansour 1995; Zawaydeh 1997; Boudlal 2001; Jaber 2001; Kiparsky 2003; McCarthy 2005; 2007; Btoosh 2006, among others). These studies unravel insightful accounts and analyses of places and environments where high vowel syncope is at play in the dialect or dialects being probed. In contrast, this study identifies, analyzes, and accounts for circumstances in which high vowel syncope fails to apply. We show that positional faithfulness can fully account for the context-bound circumstances where neutralizing syncope is completely blocked; simultaneously, positional faithfulness treatment of high vowel syncope explains why weak high vowels occurring in strong positions are saved while the same vowels occurring in weak positions are neutralized. This is attained through presenting the constraint ranking most favored in positional faithfulness theory: strong-position faithfulness constraint dominates markedness constraint, which in turn outranks general faithfulness constraint.

It is worth noting that the primary informant of the data is the first author, who is a native speaker of UJA. The data are further verified by two more native speakers of the dialect. Based on the tenets of Richness of the Base and Lexicon Optimization in OT which assert that there are no language-specific limitations on the structure of input representations (Prince and Smolensky 2004), this paper only focuses on the permissible surface forms in UJA, regardless of the source of the underlying forms.

The organization of this study is as follows. Section 2 discusses the phonetic status of high vowels and its ramifications in phonology to present a kind of typology of the high vowel in the wide spectrum of world languages. Section 3 presents the facts of high vowel syncope in UJA. In section 4 positional faithfulness theory is summarized paving the way for an account of high vowel syncope failure in the strong stressed syllable, final syllable, and proper name subcategory, respectively. Finally, a brief conclusion is presented in section 5.

2. The phonetics of high vowels and its ramification in phonology

A high vowel is produced with the dorsum of the tongue being arched or bunched back toward the roof of the mouth. This localization property peculiar to high vowels manifests itself in a high degree of narrowing constriction that has a strong bearing on another highly discriminating quality of vowels, as well as other sounds, known in phonology literature as sonority. According to Trubetzkoy (1939: 96) “the more the lower jaw is lowered, that is the wider the mouth is opened, the higher the degree of saturation [sonority]” [clarification added]. This indicates that high vowels are the least sonorous among all vowel phonemes. Sonority, among other vowel properties like duration and pitch, is recognized as a pivotal characteristic of prominence. The more sonorous the vowel is, the more prominent it will be (Beckman 1999). So, being a less sonorous vowel is a significant sign of phonetic weakness. The question that might arise, however, is why it is that less sonorous vowels are weaker than more sonorous ones. In the literature, two complementary approaches lend themselves to account for this equation. The first approach (cf.

McCarthy 2007) correlates sonority with duration. A vowel of shorter duration is less sonorous than a vowel of longer duration. The other approach (cf. Howe & Pulleyblank 2004), which shares with the former the idea that less sonorous vowels are weaker than more sonorous counterparts, associates sonority with perceptibility. According to this approach, the least sonorous vowel is the least audible, and hence the weakest. Both approaches, however, share one prediction: less prominent vowels are more susceptible to neutralization processes, such as deletion or devoicing than the more prominent ones, whether prominence is decided on duration or audibility grounds. For the first approach, the high vowel is more ready to neutralize, delete, devoice, etc. because it is shorter on the duration scale of vowels (1). The latter, however, deems the high vowel more susceptible to such neutralization because it is the least sonorous, hence least harmonic or audible, on vowels' sonority scale (2):

(1) Vowel Duration Scale (taken from Kirchner 1996, cited in McCarthy 2003):

a > i > Ø.

(2) Relative Sonority of Vowels (adopted from Howe & Pulleyblank 2004: 4):

LOW > MID > HIGH

A robust phonological ramification of the phonetic property of the high vowel being the least prominent or the weakest is an across-language preference to syncopate it in languages that exhibit vowel syncope. Howe & Pulleyblank (2004:7-11) cite a good number of languages where less sonorous high vowels syncopate; K'ichee', Canadian French, Bulgarian developed from Proto-Slavic, native (Yamato) vocabulary of Kagoshima Japanese, Gilbertese, and Yoruba, among other languages².

Colloquial Arabic is another set of languages, or more accurately dialects, where high vowel syncope is favored (Abu-Mansour 1995; Jaber 2001; Watson 2002; Gouskova 2003; Howe & McCarthy 2003; 2007; Kiparsky 2003; Pulleyblank 2004; Btoosh 2006, among others). All these studies share the idea that a high vowel, being weak, is not preferred to surface in the different dialects studied, with parametric variation in the environment and scope of application.

In his rather typological study of Modern Greek dialects, Trudgill (2003) utilizes high vowel syncope as a classificatory tool to subgroup northern dialects. According to him, northern Greek dialects can be classified into three subgroups, according to how extreme they react to high vowel syncope. Extreme Northern dialects delete all unstressed high vowels /i,u/, and raise unstressed /e,o/ into /i,u/. Northern dialects, however, syncopate unstressed high vowels word-finally only and raise /e,o/. The third group, semi-northern dialects, delete unstressed word-final high vowels but do not raise /e,o/. This indicates that all Northern Greek dialects exhibit a tendency to truncate unstressed high vowels, but with a minor variation in scope and locus of application.

Other languages entertain syncope to get rid of the weakness of high vowels. In Tulu (Bhatt 1971, cited in Kiparsky 1994) high vowels delete optionally in medial open syllables. Dresher and Lahiri (1991) explain the well-known high vowel deletion in Old English on the basis of the metrical foot of Early Germanic,

which was trochaic, i.e., left-headed that requires a strong branch with two moras. The heavy syllable, already containing two moras, qualifies to form the strong branch. When only two light syllables exist, however, they combine to form a strong branch with two moras. The syllable that follows, the open one with a high vowel, forms the weak branch of the foot. The grammar of the language deletes the high vowel when occurring in the weak branch of the foot. This suggests a preference to delete a ‘vowel which is metrically weak’ (Dresher and Lahiri 1991: 255). In Romanian (Schanes 1971) a final short high vowel is deleted unless preceded by another vowel or a liquid.

Vowel devoicing, a neutralization process targeting weak or less prominent vowels, manifests itself as another phonological ramification of the phonetic properties of high vowels. In surveying thirty four languages for vowel truncation and devoicing, Gordon (1998:98) concludes his study emphasizing that high vowel deletion is pervasive in most of the languages surveyed. He reiterated a reputable hypothesis in phonology that “vowel devoicing is sensitive to vowel height; in many languages, high voiceless vowels but not mid or low voiceless vowels occur...” He even observed a phonological typology of world languages on the ground of vowel devoicing. In his words “I know of no language which devoices non-high vowels but not high vowels.” (P.98)

Overall, the abovementioned examples, non-exhaustive though, give an illustrative picture of the role played by the phonetics of the high vowel in tailoring its phonological realizations. High vowel syncope in UJA explicates the interaction between weak segments and strong positions.

3. High vowel deletion in UJA: A positional faithfulness treatment

In UJA, like many other Arabic dialects, a short high vowel in an open syllable is obligatorily deleted regardless of the word category, morphology, sonority hierarchy, or syllable position, when occurring word-initially or word-medially³. This is a process employed as a means to neutralize the weak mono-moraic syllables and, eventually, maximize bimoraicity as much as possible, a strong preference that UJA shares with other Arabic dialects (e.g., Broselow 1992; Abu-Mansour 1995; Jaber 2001; Watson 2002; Btoosh 2006; Jaber and Omari 2018). It should be noticed that only short high vowels in open syllables undergo syncope. This reflects two important things: 1) the optimality of bimoraic syllables, in that a closed syllable is bi-moraic if non-final, and 2) the preference of the grammar to get rid of the most vulnerable vowel, which is, in this case, the short high vowel in the weakest syllable, the light open syllable. That is, high vowel syncope targets ‘...the weakest of the weak’ (McCarthy 2007:168). The data in (3) illustrate this claim. An investigation of the data in (3) clearly reveals that a short high vowel in an open syllable obligatorily gets truncated regardless of the: 1) word class, noun (3.a & d), adjective (3.b) or verb (the first 2 examples in 3.c); 2), word morphology, concatenative or nonconcatenative (3.b&c); 3) sonority hierarchy principle, rising (3.a), or falling (3.d); or 4) position of the syllable exhibiting the vulnerable high vowel, word-initially or medially⁴. An account for this phenomenon must incorporate a top-ranked constraint (given in 4) entertained by the grammar of the dialect that

penalizes a short high vowel in an open syllable and is enforced by deleting this vowel. It is worth noting that the underlying forms of the UJA words are given on the left of the arrow and the actual pronunciations in transcription are given on the right of the arrow.

(3)

a./si'la:h/ →'sla:h	'weapon'	b./mu+'khalkhal/→'mkhal.khal	'not steady, loose'
/ki'la:b/ →'kla:b	'dogs'	/shi'la:ti/ →'shla:ti	'bad guy'
/ju'lu:d/ →'jlu:d	'skins'	/su'bajj/ →'sbajj	'immature'
/ku'nu:z/ →'knu:z	'treasures'	/ku'wayyis/ →'kway.yis	'awesome'
/du'ru:s/ →'dru:s	'lessons'	/khu'ru:q ⁵ / →'khru:g	'undependable person'
c./'nizil+at/ →'niz.lat	'(f.sg)went.down'	/li'ba:s/ →'lba:s	'clothing'
/fi'rih+na/ →'frih.na	'we rejoiced'	/ru'ku:c/ →'rku:c	'bending'
/ba:rija/ →'ba:r.je	'battleship'	/ru'mu:z/ →'rmu:z	'symbols'
/ba:dira/ →'ba:d.re	'initiative'	/ri'ma:l/ →'rma:l	'sands'
/kutub+u/ →'kut.bu	'his books'	/lu'su:s/ →'lsu:s/	'thieves'

(4) *Wk-HV: No short high vowels in open syllables. (Jaber and Omari 2018)

This constraint appeared in slightly different formalizations in other studies that dealt with this phenomenon in other Arabic dialects *CV [high]σ in (Abu-Mansour 1995), *WN in (Btoosh 2006), WK<i in (McCarthy 2007), among other studies. Satisfying this markedness constraint, however, yields in a breach of a low-ranked faithfulness constraint (5), which penalizes deletion and seeks a faithful input-output mapping.

(5) MAX I.O: Every segment in the input has a correspondent in the output (prohibits deletion). (McCarthy and Prince 1995)

When a short high vowel occurs in an open syllable word-initially, high vowel syncope immediately applies violating another universal markedness constraint (6), and hence creating a derived branching onset, not originally part of the input.

(6) *COMPLEX ONS: Onsets are simple. (Kager 1999)

It is worth mentioning that there is a way to save the short high vowel from being deleted, and simultaneously observe *COMPLEX ONS. This can be attested if we close the open syllable that the short high vowel occurs in, simply by taking the onset of the following syllable and place it in the coda position of that syllable. So /sil'a:h/ will syllabify as [sil.'a:h] rather than [si.'la:h]. This does not work in UJA, as well as Arabic in general, because the onset is obligatory in all Arabic dialects. This is enforced by the undominated ONSET (in 7 below).

(7) ONSET: Every syllable has an onset. (Prince and Smolensky 2004)

The interaction between the four constraints is given in (8) below:

(8) ONSET, *Wk-HV >> MAX I.O, *COMPLEX ONS

/ si'la:h /	ONSET	*Wk-HV	MAX I.O	*COMPLEX ONS
a. [☞] s'la:h			*	*
b. si.'la:h		*!W	L	L
c. sil.'a:h	*!W		L	L

It is clear that *Wk-HV dominates both MAX-IO and *COMPLEX ONS. Incurring successive violations to these two constraints notwithstanding, candidate (a) wins out as it satisfies the top-ranked *Wk-HV. MAX I.O and *COMPLEX ONS cannot be ranked because both disfavor the winner. Candidate (c) loses for violating the undominated ONSET which requires every syllable to have an onset.

However, *COMPLEX ONS seems to be active in militating against any cluster in onset position when *Wk-HV is irrelevant. This means that given a word of the type CVCCVC, only (a), but not (b) is possible:

(9) /tarjam/ '(m.sg.) translated'

a. tar.jam

*b. ta.rjam

It is obvious that the syllabification in (a) is favored by the grammar of the dialect over that in (b). This optimality is expressed by ranking *COMPLEX ONS over the universally unmarked constraint –COD (10)

(10) –COD: Syllables are open. (Kager 1999)

The interaction of the three constraints is given in tableau (11):

(11) *Wk-HV >> *COMPLEX ONS >> -COD

/tarjam/	*Wk-HV	*COMPLEX ONS	–COD
a. [☞] tar.jam			**
b. 'ta.rjam		*!W	*L

The contest between (a) and (b) is in favor of (a), the candidate that observes the top-ranked constraint *COMPLEX ONS, though this winner received two stars from the low ranked –COD. Candidate (b) received only one star from –COD, but it loses since it incurs a fatal violation of the high ranked *COMPLEX ONS. It is noteworthy that *Wk-HV is irrelevant in this environment.

One important ramification of the ability of the neutralizing high vowel syncope to apply to initial syllables, giving permission to a derived complex onset, is that UJA does not seem to acknowledge the well-established prominent root-initial syllable⁶. This case and other cases where strong positions fail to manifest themselves as licensors and behave like other less privileged position in submitting to neutralization give the impression that phonological positional licensors are not high-ranked in all world languages, but rather pervasive enough to play a role in typological phonology, though not effective in the grammar of every single language in the wide spectrum of world languages. Moreton, Smith, Pertsova, Broad, and Prickett (2017:249) emphasize this stating “[a]s with all constraints in classic OT (Prince & Smolensky 2004), particular positional constraints might or might not be ranked high enough in any given language to have observable effects on surface phonological patterns, but on this view, all positional constraints are part

of the phonological grammar of all speakers.”

It is noteworthy that both long high vowels and non-high vowels are saved from neutralizing syncope even when occurring in an open, weak syllable. The data in (12&13) explicate this claim.

- (12) Long high vowels in open syllables
- | | |
|-----------------|-----------------|
| si:. 'ba:t | 'ladders' |
| si:. 'ra:t | 'biographies' |
| su:. 'reen | 'two walls' |
| mash.hu:. 'ri:n | '(m.pl) famous' |
| su:. riy. 'ya:t | '(f.pl) syrian' |

- (13) Non-high vowels in open syllables
- | | |
|----------------|-------------|
| ba. 'ya:. na:t | 'data' |
| ba:. 'been | 'two doors' |
| ba. la:t | 'tiles' |
| 'ma. raTH | 'sickness' |
| ma. wa:. 'si:r | 'pipes' |

As is clear from the data in (12&13) long high vowels and long vs. short non-high vowels are not susceptible to syncope though these segments fall in the same weak environment. In (12), for example, long high vowels are protected from deletion even though they fall in open syllables. The long and short non-high vowels in (13) are also protected in the same environment. This gives support to the claim that neutralizing syncope in UJA can only target weak structures in weak positions.

The impression that one might get so far suggests that *Wk-HV is an undominated constraint ready to truncate any short high vowel in an open syllable regardless of any other phonological considerations. This conclusion is countered by the following examples, where syncope is blocked. (14)

- | | | | |
|----------|--------------------|------------|--------------------|
| 'ni.zil | '(m.sg) went down' | 'mu.thul | 'morals' |
| 'bu.khul | 'stinginess' | 'ghu.raf | 'chambers' |
| 'ku.tub | 'books' | 'THu.ra.fa | '(pl.) cute' |
| 'su.hub | 'clouds' | 'fi.rih | '(m.sg.) rejoiced' |
| 'ru.kab | 'knees' | 'khu.zug | 'hole' |

(15)

- | | | | | |
|-----------|-------------|----------------|------------------|-------------------------|
| a. 'ji.lu | 'ice-cream' | b. /marat+u/ | → 'ma.ra.tu | 'his wife' |
| 'boo.si | 'a kiss' | /burdga:n+i/ | → burd.'ga:.ni | 'orange (color)' |
| 'raz.zi | 'latch' | /muhramt+i/ | → muh.'ram.ti | 'my tissue' |
| 'su.ru | 'cypress' | /kalb+u/ | → 'kal.bu | 'his dog' |
| 'sa.tu | 'robbery' | /tarjam+at+lu/ | → tar.ja.'mat.lu | 'she translated to him' |

(16)

- | | | | |
|------------------------|---|-----------------------|------------------------|
| /mu ^c a:dh/ | → | mu. ^c a:dh | 'male personal name' |
| /riha:b/ | → | ri.ha:b | 'female personal name' |
| /ruqayya/ | → | ru.'qay.ya | 'female personal name' |
| /fida:ʔ/ | → | fi.'da:ʔ | 'female personal name' |
| /khita:m/ | → | khi.'ta:m | 'female personal name' |
| /mura:d/ | → | mu.'ra:d | 'male personal name' |

/arriya:d/ → ar.ri.'ya:d 'Riyadh, place name'
 /ruma:nya/ → ru.'ma:n.ya 'Romania, place name'

These sets of data exhibit high vowels that should be deleted but manage to survive due to the strong protective positions they occur in. The weak high vowels in Set (14) get their protection from the strong stressed syllable position, see section 4.1. Those in set (15) get their protection from the neutralization-resistant final syllable position, see section 4.2. While those in the last set get immune to deletion from being housed in the proper name subcategory⁷, see section 7. These sections present our positional faithfulness account of why the pervasive high vowel syncope fails to apply in certain contexts in UJA.

Before analyzing high vowel syncope opacity in UJA from a positional faithfulness perspective, a brief summary of the approach is given first. The summary, non-exhaustive though, paves the way for the positional faithfulness account of syncope in the dialect.

4. Positional neutralization

Neutralization can be roughly defined as a universally pervasive process that may take many shapes and utilize different phonological apparatus to settle, erase, or flatten a phonological opposition or contrast. However, it has been observed that some positions, characterized as weak, submit to neutralization and others, known as privileged or strong, refrain from getting neutralized. Trubetzkoy (1939:228) states 'neutralization takes place in certain positions' (ibid, 228). He distinguishes two types of neutralization: contextually-conditioned and structurally-conditioned; only the latter is relevant to the goal and scope of this paper since it focuses on the observation that 'a phonological opposition is neutralized ...in specific positions in the word only' (ibid, 229).

In Optimality Theory, two approaches have been devised to account for neutralization asymmetry: namely, Positional Markedness and Positional Faithfulness. The former refers to "a particular position, naming marked structure which either must or cannot occur in that position." (Zoll 2004:365). The latter, however, proposes prominent positions or categories that '... permit a wide range of marked segments, trigger directional phonological processes, and resist the application of otherwise regular alternations' (Beckman 2004:311). This paper adopts the second approach because all the positions where high vowel syncope fails to apply are presented as strong positions able to resist the neutralizing high vowel syncope process. This complies with the major suggestion made by the positional faithfulness approach that all faithfulness constraints exhibit sensitivity to the prominent positions (Beckman 1999).

In order to detect phonological asymmetries in strong positions, positional faithfulness theory proposed faithfulness constraints that take strong positions as their locus of effect, which are ranked over markedness constraints which in turn outrank general faithfulness constraints. Beckman (1999) suggested a universal ranking schema that ensures preserving contrast in prominent positions, while, simultaneously, neutralizing opposition in weak positions:

Ranking Schema, positional phonological asymmetries (adopted from Beckman,

1999:11)⁸

(17) IDENT-Position (F) >>M>> IDENT (F)

The different rankings of these three constraint families yield in a typology where contrast is attested in prominent positions, in all positions, or not attested at all (Smith 2001).

After this short summary of the positional faithfulness approach, I move to account for the patterning of high vowel syncope in the data in (14-16). The account is based on positional faithfulness.

4.1 Stressed syllables: prominent phonological positional licenser

Stressed syllables are considered prominent for exhibiting phonetic features that augment their perceptual prominence over their less privileged unaccented counterparts. They are longer, louder, higher in pitch than the unstressed syllables. According to Beckman (1999:4), privileged positions are those which exhibit one, two, or all of the following characteristics:

- 1) maintain contrasts that are neutralized elsewhere.
- 2) trigger phonological processes.
- 3) resist phonological processes that apply elsewhere.

Stressed syllables gain a high positional status amongst prominent positions for exhibiting all the above diagnostics. Many illustrative examples of prominent stressed syllables are attested in the phonological systems of world languages. I will cite one example for each diagnostic, for the sake of fleshing this skeletal claim out.

For the first characteristic, Beckman (1999) maintains that languages sensitive to stress-based positional neutralization exhibit segments in unstressed syllables which are a mere subset of the full segment range permitted in stressed syllables. English, Brazilian Portuguese, Nancowry, Copala Trique, Chamorro, and Guarani show such a typological preference and entertain full-segment inventory in a stressed syllable and a subset of that inventory in the unstressed syllables⁹.

As for the second diagnostic, Abu-Salim (1982) reported that a stressed syllable in Palestinian Arabic causes a long vowel in an immediately preceding syllable to shorten. This accounts for an input like /ba:been/ ‘two doors’ to surface as [ba.'been], instead of the faithful mapping *[ba:.'been].

The third diagnostic finds support in Trubetzkoy (1939:236). It is reported that reductive neutralization applies to all syllables of the word except for the stressed syllable. He even mentioned many cases where o-a, o-u, and e-i manage to remain distinctively faithful in stressed syllables in South Great Russian, Bulgarian, and Modern Greek, but they get neutralized in unaccented syllables¹⁰.

The positional phonological prominence of a stressed syllable seems to be operative in UJA. The strongly motivated high vowel syncope does not apply when a weak high vowel occurs in a stressed syllable. The data in (14) are repeated in (19) below:

- | | | | | |
|------|----------|---------------------|------------|--------------------|
| (19) | 'ni.zil | ‘(m.sg.) went down’ | 'mu.thul | ‘morals’ |
| | 'bu.khul | ‘stinginess’ | 'ghu.rafa | ‘chambers’ |
| | 'ku.tub | ‘books’ | 'THu.ra.fa | ‘(pl.) cute’ |
| | 'su.hub | ‘clouds’ | 'fi.riħ | ‘(m.sg.) rejoiced’ |

'ru.kab 'knees' 'khu.zug 'hole'

The high vowels in (19) meet the environment of high vowel syncope, short high vowels in open syllables, but resist deletion. A quick look at the data, however, clearly shows that all the resisting high vowels occur in stressed syllables. This supports the well-established status of stressed syllables being prominent and strong enough to resist neutralization that other less privileged syllables are submitted to. This recalls a positional faithfulness treatment to account for this asymmetry in high vowel syncope application. A positional faithfulness constraint (given in 20) with the proper ranking (given in 21) is needed to ensure protecting high vowels in open stressed syllables from syncope, and, at the same time, allowing this type of neutralization to freely apply to weak high vowels in unstressed syllables.

However, it is worth mentioning that positional faithfulness constraints of this sort cannot relate directly to the input. These constraints assume a syllabified and sometimes stress-assigned form, which cannot be attested if we insist on classic OT bistratal correspondence that 'recognizes two levels of representations, input and output, and nothing in between' (McCarthy 2007:21). This is because syllabification is not available in the input since it is, unlike stress in some languages, non-contrastive. Motivated by pervasive opacity, different proposals have been devised to remedy this deficiency in classic OT. Major among these proposals are Output-Output transderivational correspondence developed in (Benua 1997), Sympathy in (McCarthy 2003), Turbidity in (Goldrick 1999), and The Theory of Chains, OT-CC, devised by McCarthy in (McCarthy 2007). These proposals share one important premise: OT should include a new array of constraints that relate to an intermediate representation standing in between the input and the actual output.

Among the above proposals, OT-CC seems to satisfy positional faithfulness in proposing a way out to the major correspondence problem that classic OT creates. According to McCarthy (2007:74), the major difference between classic OT and OT-CC is that positional faithfulness constraints such as 'IDENTONS (voice) can refer to the syllabification of the chain-initial form.' In fact, 'the chain-initial form is what matters for positional faithfulness.' This indicates that positional faithfulness need not adopt the whole theory devised originally to provide an optimality-theoretic account for opacity. Instead, it can take advantage of the notion of the most faithful form to the input which is chosen according to all faithfulness constraints and some markedness constraints necessary to decide on the right initiator when more than one equally-faithful candidate is available.

Since our MAX-strong position constraints cannot relate directly to the input, and still want to remain as much faithful to the input as possible, I will adopt McCarthy's first chain as the form that MAX-strong position constraints relate to. This form, notated with the symbol #, which is the first form in McCarthy's chain 'is identical with the underlying representation, except for syllabification and the like' (McCarthy 2007:4). The major difference between this proposal and the other proposals, McCarthy's OT-CC taken as a whole is included, is that this very candidate, or form, could sometimes be the actual winner when faithfulness constraints outrank markedness constraints. The other proposals', however, is

utilized as a medium to favor the actual winner over another competing candidate that might perform the same or better on constraint ranking, as in McCarthy's sympathy, or be a base of a derived word that relates to it to keep its base part intact of any change not attested in the free base, as in Benua's theory¹¹. As for the latter, it falls short of establishing an output-output correspondence between a free input word and a free output word because it only requires faithfulness between a base in a derived word and its free form counterpart. So, for a word like /fihim/ '(he) understood' where the first high vowel is protected from deletion by occurring in a strong stressed syllable, this theory does not suggest an output-output faithful relation between the input and another surface faithful output. It only deals with trans-derived words. To give a concrete example of the difference between the initial form proposal and other proposals' intermediate form, the same word can be utilized: /'fihim/ → # 'fi.him → ['fi.him] both the actual winner and the syllabified mediator are the same, but for a word like /'fihimu/ → # 'fi.hi.mu → ['fi.hi.mu] they are different, (see below).

A question that might arise is why not apply OT-CC as a whole to positional faithfulness and adopt only the initial most faithful form. In fact, this theory which draws upon increasing harmony was devised originally to deal with opacity which requires multi-derivational phases. Positional faithfulness, however, needs only to relate its constraints to a syllabified form. So, adopting the whole theory will bring about superfluous complications to grammar. In OT-CC the candidate set is finite, and any candidate that does not exhibit a monotonic harmonic improvement is excluded. The set starts with the initial form which is the most faithful to the input, and the successive forms should gradually violate this faithfulness as long as they help increase harmony, less-markedness. This means that the chain of candidates will reach a point where no form is more harmonic than the actual output. Put differently, a candidate is allowed to be added if and only if it is more harmonic, according to the constraint hierarchy of the language, than its predecessor and less faithful to the input than its follower. Now, taking these requirements into consideration, input word /'fihim/ will have only one candidate, since the initiator is the actual output. No candidate might follow it because there could not be a more harmonic form than the actual output.

(20) MAX-'σ(HV): output high vowel in a stressed syllable in the most faithful form (#) must have an output correspondent in a stressed syllable. (No high vowel deletion in stressed syllables).

(21) Ranking required preserving high vowels in stressed syllables
MAX-'σ(HV) >> *Wk-HV >> MAX-I.O

Here, MAX-'σ(HV) represents the strong-position constraint that seeks an input-output faithful mapping in a prominent position, the stressed syllable. *Wk-HV is the markedness constraint responsible for high vowel syncope neutralization that targets all short high vowels in open syllables and truncates them. The general faithfulness constraint, MAX-I.O penalizes any deletion in output and tries to secure a faithful correspondence between input and output segments. The ranking in (21) does not secure high vowel maintenance in all positions; only stressed syllables manage to keep their deletable weak high vowels. Tableau (22) lays the interaction

between the involved constraints out:

(22) MAX-'σ(HV) >> *Wk-HV >> MAX-I.O, *COMPLEX ONS

/fihim/	MAX-'σ(HV)	*Wk-HV	MAX-I.O	*COMPLEX ONS
a. [☞] # 'fi.him		*		
b. 'fhim	*!W	L	*W	*W
/kita:b/				
a. [☞] 'kta:b			*	*
b.# ki.'ta:b		*!W	L	L

Robust evidence for the positional faithfulness prominence of stressed syllables comes from words exhibiting two high vowels, one in a stressed syllable and another in an unstressed syllable. As expected, high vowel syncope manages to truncate the one in the unstressed syllable and falls short from targeting the protected high vowel in a stressed syllable. In a word like /fihim+u/ ‘they understood’, the first high vowel occurs in a stressed syllable, whereas the second one occurs in an unstressed syllable. Only the second high vowel submits to high vowel syncope. Consider tableau (23) below:

(23)

/fihim+u/	MAX-'σ(HV)	*Wk-HV	MAX-I.O
a.# 'fi.hi.mu		***!W	L
b. [☞] 'fi.h.mu		*	*
c. 'fhi.mu	*!W	**W	*

Tableau (23) presents a scenario in which the correct ranking suggested in (21) successfully produces the optimal candidate entertained by the grammar of UJA. Candidate (b) wins over the other two for being the only one that satisfies the undominated strong-position constraint MAX-'σ(HV), though explicitly incurring two successive violations of both markedness and general faithfulness constraints. Candidate (c) loses for breaching the top-ranked MAX-'σ(HV), while candidate (a) incurs three violations to the second top-ranked *Wk-HV, and hence is excluded.

It is noteworthy that the winner in (23) exhibits a weak high vowel occurring in an unstressed open syllable ['fi.h.mu], and it manages to survive. In fact, this very high vowel gained protection from another strong position operative in UJA, the final syllable, (see section 4.2 below).

4.2. Final syllables: a strong position

Although it did not receive attention like other strong positions (Beckman 1993), the final syllable is among the positions where ‘structurally conditioned types of neutralization’ reported in Trubetzkoy (1939) are sensitive to. In fact, he mentioned many phonological circumstances in different languages where final syllables behave differently from other nonfinal, or more accurately, medial syllables. Trubetzkoy alludes to word-initial and word-final syllables as strong positions that may exhibit or resist neutralization. He refers to this type of neutralization as ‘centrifugal neutralization,’ because it takes the initial syllable, the final syllable, or both as its locus of application¹².

The psycholinguistic privilege that a final syllable enjoys comes from carrying a good portion of word semantics and morphology. Phonetically speaking, the final syllable is longer than the nonfinal syllables (McCarthy 2007), and, therefore, is deemed more prominent and perceptual.

In UJA, high vowel syncope failing to neutralize weak high vowels occurring in final syllables gives a concrete case for the neutralization-resisting power that final syllables share with other recognized strong positions. The data in (15), which show the unexpected maintenance of weak high vowels, are repeated in (24) below:

(24)

a. 'hi.lu	'sweet'	b. 'marat+u	→	'ma.ra.tu	'his wife'
'boo.si	'a kiss'	burd'ga:n+i	→	burd.'ga:.ni	'orange (color)'
'raz.zi	'latch'	muh'ramt+i	→	muh.'ram.ti	'my tissue'
'su.ru	'cypress'	'kalb+u	→	'kal.bu	'his dog'
'sa.tu	'robbery'	tarja'm+at+lu	→	tar.ja.'mat.lu	'she translated to him'

All the short unstressed high vowels in (24) are opaque to deletion because of their position in the word. In fact, they all occur in the final syllables. Two possible accounts can be developed to explain this asymmetry. The first one emerges from the morpheme-realization hypothesis (Rose 1997 and Gnanadesikan 1997, among others). According to this hypothesis, an affixed morpheme is preserved by an undominated constraint, MORPH REAL, which prohibits deletion in the morpheme body and requires each morpheme in the input to have a correspondent in the output or at least have one segment of the morpheme present in the output. This constraint is substantial since any full deletion will deem the morpheme unrealized, and eventually distort the structure and the semantic content of the whole word.

However, the data in (24.a) challenge this suggestion, in that none of the examples contains a suffixed morpheme. All the given words are nonconcatenative free words. So, MORPH REAL constraint falls short to account for the immunity of weak high vowels in these words. In fact, this constraint is inert, or irrelevant, in these circumstances, and another constraint must be posited to account for this contrast.

A more plausible account draws upon the well-established status the final syllable enjoys among strong licensors. The final syllable is adequately strong to incorporate marked structures and protect them from being neutralized. This positional faithfulness account is not implausible and takes into consideration the otherwise intriguing behavior that short unstressed high vowels in final open syllables refrain from participating in the high vowel syncope process. A prominent-final syllable constraint (25) with correct ranking (26) is needed to ensure high vowel realization in this position, and simultaneously allow high vowel syncope to truncate weak high vowels in other weak positions.

(25) MAX- σ -F(HV) output high vowel in final syllable in the most faithful form (#) must have an output correspondent in a final syllable. (No high vowel deletion in final syllables)

(26) MAX- σ -F(HV) >> *Wk-HV >> MAX-I.O

The interaction between these three constraints is given in (27).

(27)

/ʔsa <u>t</u> /	MAX-σ-F(HV)	*Wk-HV	MAX-I.O
a. [☞] # 'sa.tu		*	
b. 'sa.t	*!W	L	*W
/kita:b+u/			
c. [☞] 'kta:.bu		*	*
d.# ki.'ta:.bu		**!W	L
e.'kta:b	*!W	L	**W
f.ki.'ta:b	*!W	*	*

The contest in (27) is decided in favor of (a) and (c) in that both show full compliance to the undominated constraint MAX-σ-F(HV). Candidates (b, e, and f) are excluded for incurring fatal violations of the top-ranked MAX-σ-F(HV), though both (b and e) observe the second top-ranked *Wk-HV, while (f) shows partial observation of the general faithfulness constraint MAX-I.O. Candidate (d), however, is the most faithful to the input, but not the most optimal of the grammar though. It loses for doubly penalizing the second high-ranked constraint *Wk-HV.

Words like those given in (28) are interesting for exhibiting three weak high vowels that must be deleted in three syllable types. Those high vowels occurring in the stressed syllables, and final syllables manage to survive and surface, while those residing the medial less-privileged syllables submit to high vowel syncope.

(28)

- a. /kutub+i → ['kut.bi] ‘my books’ /luhuf+u/ → ['luh.fu] ‘his blankets’
 /silik+u/ → ['sil.ku] ‘his wire’ /lihig+u/ → ['lih.gu] ‘he/they followed’

The data in (28) allow us to present a subhierarchy of the constraints operative in high vowel syncope until this point.

(29) MAX-σ(HV), MAX-σ-F(HV) >> *Wk-HV >> MAX-I.O

The ranking in (29) suggests that all short unstressed high vowels in open nonfinal syllables are not allowed to surface. This preference is fulfilled by truncating these vulnerable high vowels. A summary tableau for /siliku/ is given in (30):

(30) Summary tableau: /siliku/ → ['sil.ku]

/siliku/	MAX-σ(HV)	MAX-σ-F(HV)	*Wk-HV	MAX-I.O
a.#'si.li.ku			***!W	L
b. [☞] 'sil.ku			*	*
c. 'si.lik		*!W	*	*
d.'sli.ku	*!W		**W	*

The competition among candidates to win is decided in favor of (b) for observing the two undominated positional faithfulness constraints MAX-σ(HV) and MAX-σ-F(HV), though it penalizes one low ranked markedness constraint, *Wk-HV, and another bottom-ranked faithfulness constraint, MAX-I.O. Candidates (c & d), however, are excluded for incurring fatal violations of the undominated

MAX- σ -F(HV) and MAX-' σ (HV), respectively. Candidate (a) could have won, hadn't it incurred three violations of the third top-ranked *Wk-HV, which is active and operative when it comes to a weak high vowel in a less-privileged weak syllable like the medial.

This tableau clearly shows the effect of strong positions like stressed syllable and final syllable in resisting neutralization deemed obligatory to non-prominent positions as nonfinal and unstressed syllables in this case. High vowel syncope in UJA, as well as in other Arabic dialects, gives another robust evidence for recognizing prominent positions, and the need for proposing positional faithfulness constraints to fully capture and account for the asymmetrical behavior of these positions.

4.3 Positional privilege for proper nouns

Jaber and Omari (2018) have introduced the proper name subcategory as a new strong position. Providing evidence collected from different linguistic and non-linguistic realms, they show the privilege of proper names over their common noun counterparts, acting in phonological context and other linguistic and nonlinguistic contexts, cognitive and psychological, as other established strong positions¹³.

In this section, we show how proper name subcategory resists high vowel neutralizing syncope from targeting weak high vowels occurring in this position. The data in (16) are repeated in (31).

(31)

/mu ^c a:dh/	→ mu. ^c a:dh	'male personal name'
/ri <u>h</u> a:b/	→ ri.'ha:b	'female personal name'
/ruqayya/	→ ru.'qay.ya	'female personal name'
/fida:ʔ/	→ fi.'da:ʔ	'female personal name'
/khita:m/	→ khi.'ta:m	'female personal name'
/mura:d/	→ mu.'ra:d	'male personal name'
/arriya: <u>d</u> /	→ ar.ri.'ya: <u>d</u>	'Riyadh, place name'
/ruma:nya/	→ ru.'ma:n.ya	'Romania, place name'

The data in (31) present another context where high vowel syncope opacity is attested. Short high vowels occurring in open, unstressed, non-final positions notwithstanding, these high vowels are not susceptible to neutralizing syncope¹⁴. This asymmetrical behavior can be explained if the category that houses them is a strong one. In fact, these high vowels are protected by the prominent position proper name subcategory which, as other faithful positions, resists neutralization that other less prominent positions like noun category submit to, see section three above.

To formally account for the positional faithfulness of proper name subcategory a constraint that takes the proper name as its locus of application with the necessary ranking is given in (32&33) to account for high vowel syncope opacity in this context.

(32) MAX-PN(HV): input high vowel must have an output correspondent in proper name subcategory. (No high vowel deletion in proper name subcategory) (Jaber and Omari 2018)

(33) Ranking for high vowel syncope in proper name subcategory

MAX-PN(HV)>> *Wk-HV >> MAX-I.O (Jaber and Omari 2018)

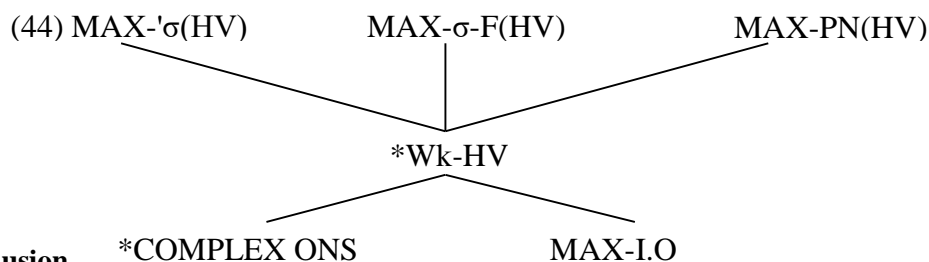
A summary tableau of the results of the ranking for the proper name 'riħa:b' is given in (34)

(34) Positional ranking tableau for proper name / ri'ħa:b / → [ri.'ħa:b]

/ riħa:b /	MAX-PN(HV)	*Wk-HV	MAX-I.O
a. [☞] # ri.'ħa:b		*	
b. 'rħa:b	*!	L	*

Incurring one violation of the second top-ranked constraint *Wk-HV notwithstanding, candidate (a) wins out for observing the top-ranked faithfulness MAX-PN(HV). Candidate (b), however, shows compliance to *Wk-HV but is excluded for penalizing the top-ranked MAX-PN(HV).

A final ranking combining all the relevant constraints is given in (35).



5. Conclusion

This paper has investigated high vowel syncope in UJA and its ramifications in phonology. It has provided a detailed positional faithfulness treatment for the circumstances where weak high vowels that should be deleted refrain from undergoing high vowel syncope entertained in UJA. It has been shown that prominent positions like stressed syllable, final syllable, and proper name subcategory protect their marked short high vowels in open syllables. The other weak positions like unstressed syllable, nonfinal syllable, and other word categories, including category noun, submit to high vowel neutralizing syncope. Weak positions, however, can only protect strong structures like non-high vowels. So weak structures like high vowels can only be protected in strong positions, and strong structures like non-high vowels are more likely to be protected everywhere. Put differently, for high vowel syncope to apply in UJA, two conditions must be met: (1) a weak vowel, and (2) a weak position. If either of these conditions is not satisfied, high vowel syncope in UJA is blocked. It is argued, therefore, that syncope targets only weak segments falling only in weak positions. It affects neither prominent segments nor prominent positions. This study explicates the interaction between phonetics and phonology and gives support to positional faithfulness theory in being able to account for the ramification of this interaction.

Aziz Jaber (PhD)

Department of English Language and Literature

Faculty of Arts, Yarmouk University, Irbid-Jordan

ORCID Number: 0000-0002-6540-2719

Email: aziz@yu.edu.jo

Osama Omari (PhD)

Department of English Language and Literature

Faculty of Arts, Yarmouk University, Irbid-Jordan

ORCID Number: 0000-0002-7140-3961

Email: osama.omari@yu.edu.jo

References

- Abu-Mansour, Mahasen.** (1995). 'Optimality and conspiracy in the syllable structure of Arabic'. In Jill Beckman, A. Beckman, N. Jill, Laura Walsh, and S. Urbanczyk (eds.), *University of Massachusetts Occasional Papers: Papers in Optimality Theory*, 1-20. University of Massachusetts Amherst.
- Abu-Salim, Issam.** (1982). 'Syllable structure and syllabification in Palestinian Arabic'. *Studies in the linguistic sciences*, 12: 1-28.
- Abu-Salim, Issam.** (1987). 'Vowel harmony in Palestinian Arabic: A metrical perspective'. *Journal of Linguistics*, 23: 1-24.
- Beckman, Jill.** (1999). *Positional Faithfulness*. New York: Garland.
- Beckman, Jill.** (2004). 'Positional faithfulness'. In John McCarthy (ed.), *Optimality Theory in Phonology: A Reader*, 310-342. Malden MA.: Blackwell.
- Benua, Laura.** (1997). *Transderivational identity: Phonological relations between words*. University of Massachusetts Amherst.
- Bhatt, Sooda.** (1971). *A grammar of Tulu (a Dravidian language)*. The University of Wisconsin-Madison.
- Boudlal, Abdelaziz.** (2001). *Constraint interaction in the phonology and morphology of Casablanca Moroccan Arabic*. Unpublished Ph.D. dissertation, University of Massachusetts Amherst.
- Broselow, Ellen.** (1992). 'Parametric variation in dialect phonology'. In Ellen Broselow, Mushira Eid, and John McCarthy (eds.), *Perspectives on Arabic Linguistics IV*, 7-47. Amsterdam: John Benjamins.
- Btoosh, Mousa A.** (2006). 'Constraint interactions in Jordanian Arabic phonotactics: An optimality-theoretic approach'. *Journal of Language and Linguistics*, 5 (2): 192 – 221.
- Casali, Rod.** (1996). *Resolving Hiatus*. Los Angeles: UCLA Press.
- Dresher, Elan B. and Aditi Lahiri.** (1991). 'The Germanic foot: Metrical coherence in old English'. *Linguistic Inquiry*, 22 (2): 252-86.
- Gnanadesikan, Amalia.** (1997). *Phonology with ternary scales*. University of Massachusetts.
- Goldrick, Matthew.** (1999). 'Turbid output representations and the unity of opacity'. *NELS* 30, 231-245. [Available at <http://roa.rutgers.edu/view.php3?roa=368>.]
- Gordon, Matthew.** (1998). 'The phonetics and phonology of non-modal vowels: A cross-linguistic perspective'. *BLS*, 24: 93-105.

- Gouskova, Maria.** (2003). Deriving economy: Syncope in optimality theory. University of Massachusetts
- Guba, Abu.** (2016). Phonological adaptation of English loanwords in Ammani Arabic. University of Salford (United Kingdom).
- Holes, Clive.** (2004). *Modern Arabic: Structures, Functions, and Varieties*. Georgetown: Georgetown University Press.
- Howe, Darin and Douglas Pulleyblank.** (2004). 'Scales as faithfulness'. *Canadian Journal of Linguistics*, 49: 1-49.
- Jaber, Aziz.** (2001). Syllable structure in Jordanian Arabic as spoken in Irbid. Unpublished MA thesis, Yarmouk University, Jordan.
- Jaber, Aziz and Osama Omari.** (2018). 'Proper name subcategory: A prominent position'. *Language Sciences*, 69: 113-124.
- Jaber, Aziz, Osama Omari, and Rasheed Al-Jarrah.** (2019). 'The domain of emphasis spread in Arabic: Evidence from urban Jordanian Arabic'. *Lingua*, 222: 10-25.
- Kager, René.** (1999). *Optimality Theory*. Cambridge: Cambridge University Press.
- Kiparsky, Paul.** (1994). 'Remarks on markedness'. Handout from the 2nd Annual Trilateral Phonology Weekend (TREND), Stanford University.
- Kiparsky, Paul.** (2003). 'Syllables and moras in Arabic'. In Caroline Fery and Rubin van de Vijver (eds.), *The syllable in Optimality Theory*, 147-182. Cambridge: Cambridge University Press.
- Kirchner, Robert.** (1996). 'Synchronic chain shifts in optimality theory'. *Linguistic Inquiry*, 27: 341-351.
- McCarthy, John.** (2007). *Hidden Generalizations: Phonological Opacity in Optimality Theory*. London: Equinox Publishing.
- McCarthy, John.** (2005). 'The length of stem-final vowels in Colloquial Arabic'. In Mohammad Alhawary and Elabbas Benmamoun (eds.), *Perspectives on Arabic Linguistics XVII–XVIII: Papers from the 17th and 18th Annual Symposia on Arabic Linguistics*, 1-26. Amsterdam & Philadelphia: Benjamins.
- McCarthy, John.** (2003). 'Sympathy, cumulativity, and the Duke-of-York gambit'. In Caroline Fery and Rubin van de Vijver (eds.), *The Syllable in Optimality Theory*, 23-76. Cambridge: Cambridge University Press
- McCarthy, John and Alan Prince.** (1995). 'Faithfulness and reduplicative identity'. In Jill Beckman, Laura Dickey, and Suzanne Urbanczyk (eds.), *University of Massachusetts Occasional Papers 18: Papers in Optimality Theory*, 249–384. Amherst, Mass.: Graduate Linguistic Student Association. [Rutgers Optimality Archive 60, <http://roa.rutgers.edu>].
- Moreton, Elliot, Jennifer Smith, Katya Pertsova, Rachel Broad, and Brandon Prickett.** (2017). 'Emergent positional privilege in novel English blends'. *Language*, 93 (2): 347-380.
- Prince, Alan and Paul Smolensky.** (2004). *Optimality Theory: Constraint Interaction in Generative Grammar*. Blackwell.
- Rose, Sharon.** (1997). Theoretical issues in comparative Ethio-Semitic phonology and morphology. Unpublished Ph.D. dissertation, McGill University, Montreal, Quebec.

- Schane, Anforda.** (1971). 'The phoneme revisited'. *Language*, 47: 503-21.
- Selkirk, Elisabeth.** (1994). Optimality Theory and featural phenomena. Lecture notes, Linguistics 730, University of Massachusetts, Amherst.
- Smith, Jennifer.** (2001). 'Lexical category and phonological contrast'. In R. Kirchner, J. Pater, and W. Wikely (eds.), *PETL 6: Proceedings of the Workshop on the Lexicon in Phonetics and Phonology*, 61-72. Edmonton, CA.: University of Alberta.
- Smith, Jennifer.** (2011). 'Category-specific effects'. In Marc van Oostendorp, Colin Ewen, Beth Hume, and Keren Rice (eds.), *The Blackwell Companion to Phonology*, 2439-2463. Malden, MA: Wiley-Blackwell.
- Trubetzkoy, Nikolai.** (1939). *Grundzüge der Phonology, Travaux du Cercle Linguistique de Prague*, 7 (English translation by C. Baltaxe), Berkeley, CA: University of California Press.
- Trudgill, Peter.** (2003). 'Modern Greek dialects: A preliminary classification'. *Journal of Greek Linguistics*, 4: 45-64.
- Watson, Janet.** (2002). *The Phonology and Morphology of Arabic*. Oxford: Oxford University Press.
- Zawaydeh, Bushra.** (1997). 'On an optimality-theoretic account of epenthesis and syncope in Arabic dialects'. In Mushira Eid and Robert Ratcliffe (eds.), *Perspectives on Arabic Linguistics*, 191–213. Amsterdam: John Benjamins.
- Zoll, Cheryl.** (2004). Positional asymmetries and licensing. In John McCarthy (ed.), *Optimality Theory in Phonology: A Reader*, 343-364. Malden, MA.: Blackwell.

¹ Jordanian Arabic is often divided into four dialects: Urban, Rural, Bedouin and Ghorani. This division is based on regional and socioeconomic variances. UJA is mainly spoken in big cities like Amman, Zarka and Irbid. For a phonological description of urban Arabic dialects, in general, and UJA, in particular, cf. Jaber (2001), Holes (2004), Guba, (2016), Jaber and Omari (2018), Jaber, Omari, and Al-Jarrah (2019).

² See Howe and Pulleyblank (2004) for high vowel deletion environments and concrete examples from the languages cited.

³ A problem pertaining to the level of representation that this process applies to arises here: Is it the underlying level, which is un-syllabified, or the output, where the targeted vowel is deleted, and hence no syllable is attested whatsoever? This issue is addressed and treated in section (5).

⁴ It is worth noting that in Rural Jordanian Arabic these forms optionally surface with a metathesized onset-high vowel where the high vowel is preceded with a glottal stop. For example, a word like /ki'la:b/ freely surfaces as 'kla:b' or /ʔik-la:b/. This variational phonological process of neutralizing the high vowel does not, however, apply in UJA.

⁵ In UJA both allophones [ʔ] and [g] of the phoneme /q/ are used. Some nonlinguistic variables like gender, age, and social background play a role in the variation. The glottal stop is mainly used by young female speakers. This variation, however, has no bearing on the analysis of high vowel syncope in the dialect.

⁶ See Beckman (1999, 2004), for both psychological and phonetic evidence for the prominence of initial syllables.

⁷ It is worth mentioning that weak high vowel occurring in syllable one is deleted in common nouns. This shows that immunity to deletion is provided by the proper noun category, rather than first syllable.

⁸ Instead of “C”, I use “M” to show this markedness constraint.

⁹ See Beckman (1999:125-182), for concrete examples and illustrations).

¹⁰ See Trubetzkoy (1939) for a detailed account of a wide range of languages that exhibit phonological neutralization in unaccented syllables and entertain their contrastive faithfulness force in accented ones).

¹¹ For compelling arguments against proposals that preceded OT-CC, see McCarthy (2007:27-55).

¹² See chapter five of Trubetzkoy (1939) for examples of phonological processes that take the final syllable as domain of application or fail to apply to final syllables while targeting other nonfinal syllables.

¹³ See Jaber and Omari (2018) for an array of arguments in favor of establishing proper name subcategory as a new strong position.

¹⁴ It is worth noticing that there are few exceptions where high vowels are neutralized in proper name subcategory. For instance, tira:d—> tra:d, huseen —> hseen. Most often, these are very frequently used proper names. So, in these cases frequency overrides prominence. This does not, however, distort the claim that proper name subcategory is a strong position that resists neutralization.