

Homophony Avoidance and Syncope in Turaif Arabic

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Abstract. The present paper, using Optimality Theory (McCarthy and Prince, 1993, 1994; Prince and Smolensky, 1993), provides an account for syncope process found in a dialect of Arabic spoken by people in the northern region of Saudi Arabia. In this dialect of Arabic, which I referred to as Turaif Arabic here, there is a tendency to minimize the number of syllables in a string by syncope vowels in light syllables even though this syllable minimization creates illegal structures. Using, among other constraints, the constraint Anti-Ident, proposed by Crosswhite (1999), I accounted for this blockage, through which we need to compare a candidate output with another input that occurs in the dialect and determine where there is homophony or not. If the output and another input are homophonous, there will be a violation of this constraint, which prevents the formation of homophonous strings in the dialect. Thus, the importance of this work lies in the fact that this paper adds to the work of Crosswhite (1999) and provides another support for the existence and the need for the constraint Anti-Ident.

Introduction

Traditionally, when multiple phonological processes work together to achieve the same phonotactic target, the phenomenon is referred to as *conspiracy* (see Kisseberth and Charles, 1979). For example, in Yawelmani, tri-consonantal clusters, *CCC, are not allowed in either Underlying Representation (UR) or Surface Representation (SR). To eliminate tri-consonantal clusters, this language resorts to one of the following phonological processes (Newman, 1944):

(1) (a) Deleting the second or the third consonant in a CCC cluster:

$C \rightarrow \emptyset / C_C$

$C \rightarrow \emptyset / CC_$

(b) Epenthesis of a vowel between the first and the second consonant:

$\emptyset \rightarrow V / C_CC$

Moreover, in the same language, vowels are only syncope in the environment VC__CV, so that no CCC would obtain as the result of syncope.

Tonkawa is another language that deletes the second short vowel in a string. If deletion would create a CCC cluster, deletion does not apply. See the

following Tonkawa examples taken from Sommerstein (1974):

- | | | |
|---------|-----------------------------|---------------|
| (2) (a) | netle-n-o | we-ntale-n-o? |
| | ‘he is licking it/them’ | |
| (b) | picena-n-o? | we-pcena-n-o? |
| | ‘he is cutting it/them’ | |
| (c) | salke | we-salk-o? |
| | ‘he pulls sinews from meat’ | |
| (d) | nepaxke | nepaxke-no-o? |
| | ‘he is smoking’ | |

We see that in [we-ntale-n-o] and [we-pcena-n-o?] ((2) (a) and (2) (b)) above, the second vowel is deleted. In both strings, the deletion of the vowel does not create any illegal CCC cluster. On the other hand, in [we-salk-o?] and [nepaxke-no-o?] ((2) (c) and (2) (d)), the second vowel is not deleted. Syncope is blocked here since the deletion of the vowel would create an illegal CCC cluster.

In this paper, using Optimality Theory (McCarthy and Prince, 1993, 1994; Prince and Smolensky, 1993), I provide an account for the syncope process found in a dialect of Arabic spoken by people in the northern region of Saudi Arabia, Bahraini people, Qataris, Jordanians, as well as Kuwaitis. In this dialect of Arabic, which will be

referred to as Turaif Arabic here, there is a tendency to minimize the number of syllables in a string by syncope vowels in light syllables even though this syllable minimization creates illegal structures, as the following examples show.

Table 1. Verbs where vowels in open syllables are deleted

The Input	The Output
'fihim-at understood-she "She understood."	'fha.mat ⁽¹⁾
'lasaʕ-at bit-she "She bit."	'lsa.ʕat
'kisar-at broke-she "She broke."	'ksa.rat

As the examples in Table 1 above show, deleting the vowel from an open syllable creates illegal onset clusters, a sequence that is known to be targeted for epenthesis in other languages. Something to notice also is that stress⁽²⁾ does not help in saving the vowel; if it does, the above deleted vowels would not be deleted. That is to say, stress is irrelevant in the data discussed here. Surprisingly, in the same dialect, the vowel in open syllables is not deleted in environments where the deletion does not create any illegal sequences, as the following example show.

Table 2. Verbs where vowels in open syllables are not deleted

The Input	The Output
'dʕaamiʔ-at-ih slept with-she-him She slept with him.	'dʕaa.mi.ʔi.tih
'haasib-at-ih punished-she-him She punished him.	'haa.si.bi.tih
'qaatiʕ-at-ih left forever-she-him She left him for ever.	'qaa.ti.ʕi.tih

We see from Table 2 that the vowel in the second syllable is not deleted although the deletion would not create any illegal cluster. The process is surprising if we take into consideration the deletion of the vowel in the first group where illegal consonant clusters are formed. For strings with an undeleted vowel, I will propose that the deletion of the vowel would result in outputs that are homophonous to strings that already exist in the

⁽¹⁾ Although it is irrelevant to the main motivation behind this paper, it is important to bear in mind that vowels in this dialect alternate.

⁽²⁾ Stress in this dialect works as follows: stress the final if it is super-heavy; otherwise, stress the penult if it is heavy; otherwise, stress the antepenult.

dialect. In other words, speakers of this dialect do not syncope a vowel in the second syllable to avoid creating homophones. Following Crosswhite (1999), I will account for this blockage by using, among other constraints, the constraint Anti-Ident, through which we need to compare a candidate output with another input that occurs in the dialect and determine where there is homophony or not. If the output and another input are homophonous, there will be a violation of this constraint, which prevents the formation of homophonous strings in the dialect.

This paper is organized as follows. Two main sections are provided: a data section and an analysis section. The data section presents the actual items under study, describes them and abstracts generalizations. In this section, it will be shown that the blocking of the phonological process—the deletion of vowels in light syllables—works differently from the wisdom of conspiracy. The analysis section analyzes the data and motivates the constraints for light vowel deletion and its blockage.

Data

What makes Turaif Arabic phonologically interesting compared to other Arabic dialects discussed in the literature (see Broselow, 1992) is that illegal onset clusters are actually created by syncope. Moreover, stressed vowels in open syllables are also deleted. This is different from Levantine Arabic where stress saves the vowel (see Brame, 1974). Through deleting vowels in light syllables, illegal onset clusters are created. And interestingly, speakers do not syncope in cases where there is no creation of illegal clusters. I propose that speakers of this dialect do not syncope the vowels in light syllables in these cases to avoid creating homophonous strings. In other words, if syncope a vowel creates a string that is exactly identical to an already existing string in the dialect, syncope is blocked. Tables 3 and 4 show the consonants and vowels found in this dialect of Arabic.

CVCVC verbs

In this dialect, all verbs that have the CVCVC structure lose their first vowel in the first light syllable when their coda of the second closed syllable is re-syllabified as an onset of an attached suffix starting with a vowel. Some examples of these verbs without suffixes are given below.

Table 3. Consonant inventory of Turaif Arabic

Manner ↓	Place→	Labial	Labio dental	Interdental	Dental		Post-alveolar	Palatal	Velar	Uvular	Pharyngeal	Glottal
					Plain	Emphatic						
Plosive		b			t d	T D			k g	q		ʔ
Fricative/affricate		f		θ ð	s z	S Z	ʃ dʒ		x ɣ		ħ ʕ	h
(Central) approximant		w					r	j				
(Lateral) approximant						l						
Nasal		m					n					

Table 4. Vowel inventory of Turaif Arabic

	Front	Central	Back
High	ii i		uu u
Mid			
Low		aa a	

Table 5. Some CVCVC verbs without suffixes

The Input	The Output
'rjaʕ come back/he came back.	'rjaʕ come back/he came back.
'fisar take off clothes/he takes off his clothes.	'fisar take off cloth/he takes off his cloth.
'fi Tam wean/he weaned.	'fi Tam wean/he weaned.
'saʔam get bored/he got bored.	'saʔam get bored/he got bored.
'lisaʕ bite/It bit.	'lisaʕ bite/It bit.
'kubir get older/he became older.	'kubir get older/he became older.

Here are some of the CVCVC verbs with suffixes attached to them:

Table 6. 'kisar break

The Input	The Output
'kisar-at broke-she	'ksa rat *'ksrat "She broke."
'kisar-at-ih broke-she-it	'ksa ri tih *'ksri tih "She broke it."
'kisar-ih broke he-it .	'ksi rih *'ksrih "He broke it."
'kisar-an-ih broke-they fem-it	'ksa ra nih *'ksra nih "They broke it."

Table 7. 'fihim understand

The Input	The Output
'fihim-at understood -she	'fhi mat *'fhmat "She understood."
'fihim-at-ih understood-she-it	'fhi mi tih *'fhmi tih "She understood it."
'fihim-ih understood he-it	'fhi mih *'fhmih "He understood it."
'fihim-an-ih understood-they fem-it	'fha ma nih. *'fhma nih. "They understood it."

Table 8. 'dʕalas sit

The Input	The Output
'dʕalas-at sat down-she	'dʕli sat *'dʕlsat "She sat down."
'dʕalas-aw broke-they masc.	'dʕli saw *'dʕlsaw "They sat down."
'dʕalas-an sat down-they fem	'dʕli san *'dʕlsan "They sat down."

Table 9. 'lasaʕ bite

The Input	The Output
'lasaʕ-at bit-she	'lsa ʕat *'lsʕat "She bit."
'lasaʕ-at-ih bit-she-it	'lsa ʕa tih *'lsʕa tih "She bit it."
'lasaʕ-ih bit-it	'lsa ʕih *'lsʕih "He bit it."
'lasaʕ-an-ih bit-they fem-it	'lsa ʕa nih. *'lsʕa nih "They bit it."

From the data in Tables 6-9 above, we see that the first light vowels are deleted even if their deletion creates illegal sequences as onset clusters. However, this vowel deletion is banned in cases where marked structure like tri-consonantal clusters is created.

On the other hand, if the second syllable retains its coda, the first vowel is not deleted; the following are the same verbs with the first vowel surfacing in the light syllable.

Table 10. 'kisar break

The Input	The Output
'kisar-naa-ih broke-we-it	ki sar 'naah "We broke it."
'kisar-t-hum broke-I-them.masc	ki 'sar ti hum "I broke them."
'kisar- naa- hum broke-we-them	ki sar 'naa hum "We broke them."

Table 11. 'fihim understand

The Input	The Output
'fihim-naa-ih understood-we-it	fi him 'naaw "We broke it."
'fihim-t-hum understood-I-them.masc	fi 'him ti hum "I understood them."
'fihim-naa-hum understood-we-them	fi him 'naa hum "We understood them."

Table 12. 'd3alas sit

The Input	The Output
'd3alas-naa sat down-we	d3a 'las naa "We sat down."

Table 13. 'lisaʕ bite

The Input	The Output
'lisaʕ-naa-ih bit-we-it	li saʕ'naah "We bit it."
'lisaʕ-t-hum bit-I-them	li 'saʕ ti hum "I bit them."
'lisaʕ-naa-hum bit-we-them	li saʕ 'naa hum "We bit them."

From the data in Tables 10-13 above, it can be seen that light vowels in the open syllables are not deleted if they are followed by closed syllables. In other words, there is a ban on creating syllables with both a complex onset and a coda.

CVVCVC verbs

When attaching suffixes to CVVCVC verbs where the coda of the second syllable is re-syllabified as the onset of the following syllable, the vowel remaining in the second light open syllables is not deleted, as the following tables show.

Table 14. 'xaabar call

The Input	The Output
'xaabar-at-ih called-she-it	xaa 'bi ri tih *'xaab ri tih "She called him." "She remembers him."
'xaabar-an-ih called-they fem-him	xaa 'bi ra nih *'xaab ra nih "They called him." "They remember him."

Table 15. 'haasab punish

The Input	The Output
'haasab-at-ih punished-she-hiim	haa 'si bi tih *'haas bi tuh "She punished him." "She calculated it."
'haasab-an-ih punished-they fem-him	haa 'si ba nih *'haas ba nuh "They punished him." "They calculated it."

Table 16. 'qaa Tiʕ leave forever

The Input	The Output
'qaa Tiʕ-at-ih left forever-she-him	qaa 'Ti ʕi tih *'qaaT ʕi tuh "She left him forever." "She cut it."
'qaa Tiʕ-an-ih left forever-they fem-him	qaa 'Ti ʕa nih *'qaaT ʕa nuh "They left him forever." "They cut it."

The data in Tables 14-16 seem to contradict the first generalizations. In other words, vowels in CV syllable are not deleted in position where illegal onset clusters are not created. As a matter of fact, the light vowel in the above strings is never deleted by native

speakers of this dialect. The output with a deleted vowel will be phonologically identical to a string already exists in the dialect, a string with another meaning. Therefore, the generalization to be made here is that to avoid homophones, vowels in light syllable are not deleted although the deletion does not create any illegal sequences.

Discussion

After studying the data above, I conclude that the speakers of this dialect of Arabic prefer to keep their strings as short as possible via deleting short vowels even if this deletion creates illegal onset clusters. On the other hand, speakers do not delete the short vowel in cases where the deletion creates strings phonologically identical to ones that are already in the dialect. Therefore, the preference of having short strings to long ones is maintained even if it produces illegal clusters, but it is not if homophones are formed. To ensure that every CVVCC that exists in the dialect has a correspondent CVVCVC and vice versa, as a native speaker of this dialect, I have considered all possible combinations of CVVCC and whether these combinations exist in the dialect as words. And if they're not, then I made sure that there is also no corresponding CVVCVC in the dialect. See the following Table 17.

Table 17. Some CVVCVC verbs and their correspondent CVVCC verbs

(a) CVVCVC	(b) CVVCC
'ʕaamal dealt with/he dealt with.	'ʕaamʔl made/he made.
'raafaʕ stood against in the court/he stood against.	'raaʔiʕ lifted/he lifted.
'waadaʕ saw off/he saw off.	'waadʕ left with/he left with.
'xaatab talked to/he talked to.	'xaatʔb proposed/he proposed.
'qaabal met/he met.	'qaabʔl accepted/he accepted.
'haadid rammed with/he rammed with.	'haadd made clear/he made clear.
'ʕaayar made fun of/he made fun of.	'ʕaayʔr measured/he measured.
'Saaraʕ fought with/he fought with.	'Saariʕ made dizzy/he made dizzy.
*'daafas	*'daaʔʕs
*'maawiʕ	*'maawiʕ
*ʕaafaal	*ʕaafʔl
*ʕaaxam	*ʕaaxim
*'haanam	*'haanʔm
*'xaawaʕ	*'xaawiʕ
*'Taaʕak	*'Taaʕʔk
*'waazam	*'waazim

We see from the examples in Table 17 above that every CVVCC word that exists in the dialect has a correspondent CVVCVC word in the dialect; and if it does not exist, there is also no corresponding CVVCVC word in the dialect. The short high front vowel ‘i’ surfacing in the CVVCC words in column (b) is an epenthetic vowel to break up a coda cluster. This is clear if we take the table below where suffixes are attached to these words. For the words in column (a), we see that the vowel is retained because it is part of the underlying representation; whereas for words in column (b) the vowel does not surface because it is not part of the UR. Notice also the difference in meaning.

Table 18. Suffixes with CVVCVC and CVVCC verbs

(a) CVVCVC+VC+VC	(b) CVVCC+VC+VC
'ʕaamil-it-ih dealt with-she-him “She dealt with him.”	'ʕaaml-it-ih made-she-it “She made it.”
'raafiʕ-it-ih stand against in the court-she-him “She stood against him in the court.”	'raafʕ-it-ih lifting-she-it “She is lifting it.”
'waadiʕ-it-ih saw off-she-him “She saw him off.”	'waadʕ-it-ih left with-she-it “She left it with.”
'xaatib-it-ih talked to-she-him “She talked to him.”	'xaatb-it-ih proposed-she-him “She proposed him.”
'qaabil-it-ih met-she-him “She met him.”	'qaabl-it-ih accepted-she-him “She accepted him.”
'xaabir-it-ih called-she-him “She called him.”	'xaabr-it-ih remembered-she-him “She remembered him.”
'haadid-it-ih rammed with a car-she-him “She rammed him with a car.”	'haadd-it-ih made it clear-she-it “She made it clear.”
'ʕaayir-it-ih made fun of-she-him “She made fun of him.”	'ʕaayr-it-ih measured-she-it “She measured it.”
'Saariʕ-it-ih Fought with-she-him “She fought with him.”	'Saarʕ-it-ih made dizzy-she-him “She made him dizzy.”
'laaʕib-it-ih played with-she-him “She played with him.”	'laaʕb-it-ih played-she-it “She played it.”
'vaazil-it-ih Courtied-she-him “She courtied him.”	'vaazl-it-ih wove-she-it “She wove it.”
'saaʕid-it-ih helped-she-him “She helped him.”	'saaʕd-it-ih made happy-she-him “She made him happy.”
'baayiʕ-it-ih elected-she-him “She elected him.”	'baayʕ-it-ih sold-she-it “She sold it.”
'Saadiq-it-ih Adopted as a friend-she-him “She adopted him as her friend.”	'Saadq-it-ih told the truth-she-him “She told him the truth.”
'dʕaabir-it-ih	'dʕaabr-it-ih

condoled-she-him “She condoled him.”	forced-she-him “She forced him.”
'haasib-it-ih punished-she-him “She punished him.”	'haasb-it-ih calculated-she-it “She calculated it.”
'xaaniq-it-ih reproached-she-him She reproached him.	'xaanq-it-ih strangled-she-him She strangled him.
'ʕaajil-it-ih helped him carrying something- she-him “She helped him carrying something.”	'ʕaajl-it-ih lifted-she-ih “She lifted it.”
'Saafih-it-ih Shook hand with-she-him “She shook hands with him.”	'Saafh-it-ih made flat-she-it “She made it flat.”
'Daadʕiʕ-it-ih slept with-she-him “She slept with him.”	'Daadʕiʕ-it-ih laid on the ground-she-it “She laid it on the ground.”
'ʕaaSir-it-ih lived with at the same generation- she-him “She lived with him at the same generation.”	'ʕaaSr-it-ih squeezed-she-it “She squeezed it.”
'kaasib-it-ih rivalled-she-him “She rivalled him.”	'kaasb-it-ih won-she-it “She won it.”
'waalid-it-ih gave it in stages-she-it “She gave it in stages.”	'waald-it-ih gave birth to-she-him “She gave birth to him.”
'waaxið-it-ih blamed-she-him “She blamed him.”	'waaxð-it-ih stole-she-it “She stole it.”

Thus, we notice from the data in Table 18 that there are two types of verbs, CVVCVC and CVVCC verbs. The deletion of the vowel in the first group of verbs in column (a) would create homophones to the CVVCC verbs in the second column. For that reason, speakers of this dialect do not delete the light vowels in the strings in column (a).

Before providing an OT account of the data in this dialect of Arabic, it is important to point out that there are other verbs with two open syllables where the vowels in light syllables are never deleted, as the following table shows.

Table 19. Words with two open syllables

The Input	The Output
'ʕara buy/he bought.	'ʕara buy/he bought.
'bika cry/he cried.	'bika cry/he cried.
'vaza invade/he invaded.	'vaza invade/he invaded.
'dʕiba he leaped.	'dʕiba he leaped.
'siqa irrigate/he irrigated.	'siqa irrigate/he irrigated.

Here are some of the CVCV verbs with different suffixes attached to them:

Table 20. 'ni si forget

The Input	The Output
'nisi-at-ih forgot-she-it	'ni si tih "She forgot it."
'nisi-u-hum forgot-they masc-them	ni 'suu hum "They forgot them."
'nisi-ih forgot-it	ni 'siih "He forgot it."

Table 21. 'siqa water

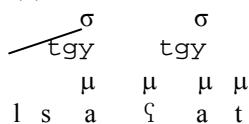
The Input	The Output
'siqa-at-ih irrigated-she-it	'si qi tih "She irrigated it."
'siqa-u-hum irrigated-they masc-them	si 'quu hum "They irrigated them"
'siqa-ih irrigated-it	si 'qaah "He irrigated it."

Table 22. 'vaza invade

The Input	The Output
'vaza-at-ih invaded-she-it	'vi zi tih "She invaded it."
'vaza-u-hum invaded-they masc-them	va 'zuu hum "They invaded them."
'vaza-ih invaded-it	va 'zaah "He invaded it."

From Tables 20-22, it can be seen that in CVCV verbs, vowels in light syllables are not deleted. I propose that this is due to the Root Minimality requirement. In this dialect, the verb root needs to be at least bi-moraic (see McCarthy and Prince (1993) for word minimality constraint). The "ʕ" in the output string, [ʕa.ʕat] "she bit him" in Table 9, belongs to both the first and the second syllable, ambi-syllabic, (Daniel, 1976). In other words, the "ʕ" belongs to the second syllable as an onset and to the first syllable since the first syllable needs a mora, as the following diagram shows:

(3)



In the following section, I propose an optimality-theoretic analysis of the syncope process in Turaif Arabic.

An OT Analysis

In this section, I provide an optimality-theoretic analysis for the syncope pattern in Turaif Arabic.

Root Minimality is un-dominated in Turaif Arabic. Turaif Arabic allows forms that violate *Struc-Syll at the expense of maintaining at least bi-moraic prosodic words. So, we need the following constraints:

Root Minimality

*Root (μ):

A Root must contain at least two moras. (McCarthy and Prince, 1993: p. 44)

*Struc-Syll:

Keep the strings with few syllables as possible. (Zoll, 1996; Hargus, 1997)

Onset:

Syllables must have onsets.

Max (V):

The vowel in the input must be kept in the output.

Let us take a string and see how these constraints interact to yield the correct output.

Table 23. /'ʃab/ → ['ʃab] "He set a fire or he became angry"

'ʃab	Onset, *Root (μ)	*Struc-syll	Max (V)
ʃab		*	
ʃa	*! *Root (μ)	*	
ab	*! onset	*	

From Table 23 above, we see that the optimal output does not violate the highly ranked constraints Onset and *Root (μ). It only violates the lower constraint *Struc-Syll. The second and the third candidates lose because they violate the highest ranked Onset and *Root (μ). The faithfulness constraint Max (V) is not violated by any of the candidates. Ranking of the constraint Max (V) lower than the constraint *Struc-Syll will be motivated shortly.

The next constraint that needs to be ranked higher than *Struc-Syll is *Coda, as the following table shows.

*Coda:

Syllables are open.

Table 24. /'siqa/ → ['siqa] "He watered"

'siqa	Onset, *Root (μ)	*Coda	*Struc-syll	Max (V)
ʕsiqa			**	
sqa	*! *Root (μ)		*	*
siq		*!	*	*
iqa	*! onset		**	

From Table 24, it can be seen that *Coda, being ranked higher than *Struc-Syll, rules out the candidate ‘siq’. The optimal output [‘siqa’] does not violate the highest ranked constraints or the constraint *Coda. The second candidate violates the highest ranked constraint *Root (μ), which makes it lose. The fourth candidate loses because it violates the highest ranked constraint Onset.

Since this dialect allows complex onsets but not tri-consonantal clusters and bans syllables with simultaneous complex onset and coda, we need the following three constraints:

***CCC:**

Tri-consonantal clusters are not allowed.

***Complex Onset:**

Syllables are without complex onset clusters.

***Complex Onset/*Coda:**

Complex onset and a coda should not surface in one syllable.

Let us see how these new constraints interact with other constraints to yield the real output.

Table 25. /‘fitah-at-ih/ → [‘fta ha tih] “She opened it”

'fitah-at-ih	Onset,*Root(μ) *Complex Onset/*Coda,*CCC	*Coda	*Struc-Syll	Max (V)	*Complex Onset
⊖fta ha tih		*	***	*	*
⊖fit ha tih		**!	***	*	
ftiha tih	*! *CCC	*	**	**	*
fi ta ha tih		*	****!		
ftah tih	*! Complex Onset/*Coda	**	**	**	*

We see from Table 25 that the optimal candidate wins because it does not violate the highest ranked constraints Onset, *Complex Onset/*Coda, and *CCC. It only violates the constraint *Coda once, but this does not make it lose, since other crucial rivals violate it twice. The second candidate ‘fit ha tih’ loses because it violates the constraint *Coda twice. From the second candidate, we see that the ranking *Coda >> *Complex Onset is motivated. As for the third candidate, it loses because it violates the constraint *CCC. As for the fourth candidate, it loses because it has more light vowels. This motivates the *Struc-Syll >> Max (V). The fifth candidate loses because it violates the highly ranked candidate *Complex Onset/*Coda.

We are now at the crucial point of the analysis. There are cases where the light vowels are not deleted despite the fact that their deletion does not create any illegal cluster. Deleting the vowel leads to

homophony. To begin with, let me take the string [‘xaa bi ri tih] and see if the constraints proposed so far can yield the optimal output.

Table 26. /‘xaa bi ri tih/ → [‘xaa bi ri tih] “She called him”

'xaa bi ri tih	Onset,*Root(μ), *Complex Onset/*Coda, *CCC	*Coda	*Struc-Syll	Max (V)	*Complex Onset
⊖xaabi ri tih		*	****!		
⊖xaa bri tih		*	***	*	*
xaa bir tih		**!	***	*	
xaa brtih	*! *Complex Onset/*Coda	*	**	**	*
xaab ri tih		**!	***	*	

We see from Table 26 that the second candidate wins and the real output loses. The crucial observation that will resolve this problem is that, in this dialect, there is another string with a different meaning that has no light vowel in its underlying representation. This string is /‘xaab ri tih/ “she remembered him”. Therefore, we need a constraint that prevents having homophonous strings. Following Crosswhite (1999), I propose that Anti-Ident is what we need here. To evaluate this constraint, we need to compare a candidate output with another input that occurs in the dialect and determine whether there is homophony or not. The constraint as stated by Crosswhite (1999) is as follows.

Anti-Ident:

For two forms S₁ and S₂, where S₁ ≠ S₂, ∃α, α ∈ S₁ such that α ≠ ℞(α).

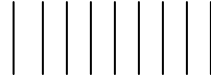
“This constraint states for two forms, S₁ and S₂, there must be some segment α which is a member of S₁ such that α is not identical to its correspondent in S₂”. Anti-Ident requires that S₁ and S₂ are not “the same” (Crosswhite, 1999: p. 8).

The input that needs to be compared to the winning output [‘xaab ri tih] is /‘xaab ri tih/ “she remembered him”. I follow the same technique Crosswhite uses in her paper. In the diagram below, a line will be drawn between the two segments that are correspondents. If a line unites two identical segments, it will be a dashed line, whereas if it unites two non-identical segments, it will be a dotted line. According to Crosswhite, the satisfaction of this constraint depends on the availability of one or more dotted line correspondences.

We could see from the diagrams below that both the winning output and the input have the same segments. In other words, there are no dotted lines. Therefore, this would be a violation of Anti-Ident.

(3) The output /'xaab ri tih/ is compared with the underlying representation of the string /'xaab ri tih/ “she remembered him”

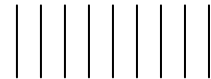
Output candidate with the deleted vowel: 'x a a b r i t i h “She called him.”



The input form found in this dialect: 'x a a b r i t i h “She remembered him.”

(4) The first comes from the underlying representation of the string /'haasibitih/ “She punished him.”

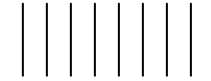
Output candidate with the deleted vowel: 'h a a s b i t i h “She punished him.”



The input form found in this dialect: 'h a a s b i t i h “She calculated it.”

(5) Here is the string /'Daa ri bi tih/ “She fought with him.”

Output candidate with the deleted vowel: 'D a a r b i t i h “She fought with him.”



The input form found in this dialect: 'D a a r b i t i h “She beat him.”

Table 27. The tableau again for the string /'xaa bi ri tih/ with the proposed constraint

xaa bi ri tih	Onset,*Root(μ), *Complex Onset/*Coda,*CCC, Anti-Ident	*Coda	*Struc-Syll	Max (V)	*Complex Onset
☞ xaa bi ri tih		*	****		
xaa bri tih	*! Anti-Ident	*	***	*	*
xaa bir tih		**!	***	*	
xaa brtih	*!*Complex Onset/*Coda *CCC	*	**	**	*
xaab ri tih		**!	***	*	

From Table 27, we see that the second candidate that competes to be the winning candidate now loses because of the highly ranked constraint Anti-Ident. Moreover, the second candidate violates all the other lower constraints. The third candidate loses because it violates *Coda twice which the optimal output only violates it once. As for the fourth candidate, it violates the two highly constraints *Complex Onset/*Coda and *CCC, which makes it lose. And finally, the last candidate loses because of two violations of *Coda.

Thus, this indicates that the following constraint ranking is able to yield the real output in the data given in this paper:

Onset, *Complex Onset/*Coda,*CCC, *Root (μ), Anti-Ident >> *Coda >> *Struc-syll >> Max (V), *Complex Onset.

Conclusion

In this paper, I provide an OT-based analysis of vowel deletion in Turaif Arabic. Syncope occurs in open syllables even if onset clusters are created. But syncope is blocked when it creates a string that is phonologically identical to a string that already exists in the dialect. To account for this blockage, I use the constraint Anti-Ident proposed by Crosswhite (1999), which bans having two homophonous strings in the dialect.

References

- Brame, M.** "The Cycle in Phonology: Stress in Palestinian, Maltese, and Spanish." *Linguistic Inquiry*, Vol. 1, (1974), 39-60.
- Broselow, E.** "Parametric Variation in Arabic Dialect Phonology." In: Mushira Eid (Ed.), *Perspectives of Arabic Linguistics*. Vol. 7, Cambridge University, John Benjamins Publishing Company, (1992), pp. 7-43.
- Crosswhite, K.** "Intra-paradigmatic Homophony Avoidance in Two Dialects of Slavic." *UCLA Working Papers in Linguistics*, Vol. 1, (1999), 48-67.
- Daniel, Kahn.** *Syllable-based Generalizations in English Phonology*. New York: Garland, (1976).
- Hargus, Sharon.** "Prosodically Conditioned Allomorphy in Optimality Theory: Brevity in Witsuwit'en." *MS Thesis, University of Washington, Seattle*, (1997).
- Kenstowicz, M. and Charles, K.** *Generative Phonology*. San Diego, CA: Academic Press, (1979).
- McCarthy, John and Prince, Alan.** *Prosodic Morphology I: Constraint Interaction and Satisfaction*. Cambridge, Mass.: MIT Press, (1993).
- Newman, Stanley.** *Yokuts Language of California*. New York: The Viking Fund, (1944).
- Prince, A. and Smolensky, P.** "Optimality Theory: Constraint Interaction in Generative Grammar." *MS Thesis, Rutgers University, New Brunswick; University of Colorado, Boulder*, (1993).
- Sommerstein, Alan.** "Phonotactically Motivated Rules." *Journal of Linguistics*, Vol. 10, (1974), 71-94.
- Zoll, Cheryl.** "Parsing Below the Segment in Constraint Based Framework." *PhD dissertation, University of California, Berkeley*, (1996).

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. يناقش هذا البحث عملية تجنب المجانسة اللفظية والحذف في النظام الصوتي لهجة الطريفية ويقدم تحليلاً لها تحت النظرية التكاملية Optimality Theory، ففي اللهجة الطريفية، والتي تتحدث في الشمال من الجزيرة العربية، وبالتحديد بمحافظة طريف، هناك ميلٌ عند متحدثي اللهجة إلى تقليل عدد المقاطع في السلسلة اللفظية عن طريق حذف حروف العلة حتى وإن كان الحذف يؤدي إلى تكوين تراكم صوتي غير مرغوب فيه، بل إن هذا الحذف لا يظهر في مقاطع ينتج عنها تراكم صوتي مرغوب فيه. والحذف هنا لا يحدث في سلسلة لفظية بحيث يكون لها شبيه لفظي في اللغة يحمل معنى آخر. ففي تحليل هذه الظاهرة اللفظية استخدم الباحث القيد Anti-Ident (للباحث كرسوايت، ١٩٩٩م) والذي يمنع حصول سلسلتين لفظيتين متشابهتين في اللهجة.