

Free Variation in Epenthesis and Syncope in a Jordanian Arabic Dialect: An Optimality-Theory Perspective

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Abstract

This paper sets out to investigate aspects of free variation in a variety of Jordanian Arabic spoken in the northern parts of the country. The study will consider two basic linguistic phenomena; namely segment addition ‘epenthesis’ in word final coda clusters, and segment deletion ‘syncope’ between word final identical coda consonants. Both phenomena in the dialect feature cases of free variation. These phenomena will be analyzed within the framework of Optimality Theory with reference to free ranking of constraints. The paper details three major approaches within Optimality Theory used to account for cases of free variation and will provide evidence that in Jordanian Arabic, free variation in epenthesis and syncope results from the interaction of constraints that are freely ranked in the phonology of the language.

Keywords: Jordanian Arabic, Epenthesis, Free variation, Optimality theory, Syncope.

1. Introduction

In generative phonology, the theory maps an input onto a single, grammatical output (Coetzee 2008). However, natural languages feature different non-categorical phenomena. For instance, the same word can be pronounced in more than one way. There is a large volume of literature on variation, both in sociolinguistics (Labov 1997, Tranel 1999) and in formal phonological theory (Anttila 1997, Boersma and Hayes 2001) among many others. All research on the topic of variation concludes that variation is not random. It is strongly influenced by grammar. This is a real challenge to classic generative grammar which is designed to categorically derive a single output. Optimality Theory (Prince and Smolensky 1993/2004) has an advantage over generative theories since the design of OT allows the grammar to generate more than one potential output form. It is true that in Standard OT only one of these potential output forms is optimal, but the other potential outputs are still available for the grammar. There is no need to provide OT with generative power; what really needs to be added to the grammar is a mechanism that will allow, under specific conditions, more than one of the candidates generated by the grammar to become actual outputs.

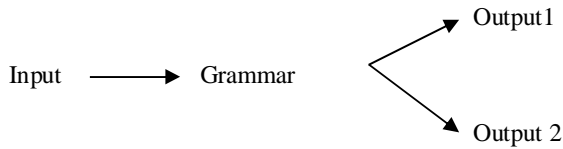
Free variation arises when a single input is mapped onto two outputs, each of which is grammatical. This in effect creates cases of opacity (Kager 1999)

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(1) Free Variation



In this study, free variation will be used to refer to the state of affairs represented by (1) within the speech of an individual or a speech community who are said to speak the same dialect.

Kager (1999, 404) notes that “a wide range of extragrammatical factors may affect the choice of one variant over the other, including sociolinguistic variables (such as gender, age, and class), and performance variables (such as speech style and tempo)”.

2. Free Variation as a Challenge

The discussion of free variation is problematic for derivational theories in phonology as well as for OT. Labov (1997, 147) notes that linguistics is the search for invariance, and thus the study of linguistic variation might then be considered marginal to this effort. However, the same conception of linguistics leads us to the notion of variation as the fundamental problem of linguistics from which every investigation departs.

The challenge free variation confronts OT with is just as serious. OT grammar is deterministic, in the sense that each input is mapped onto a single output. Then how can two candidates ever both be optimal? If two candidates, O and $O\sigma$ are different in grammatical form, then this difference must be relevant to some constraint(s) in the hierarchy (Kager 1999, 404).

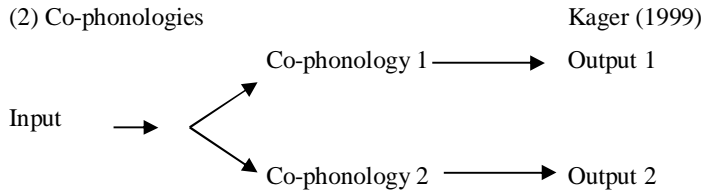
In the pre-OT literature, free variation was seen as the result of optional rules (François, 1981). In a derivation, a rule may apply resulting in one output, or it may be left out resulting in a different output. The problem for OT is the fact that constraints are presumed to be all universal while rules may be language specific and thus can be optional (Kager 1999).

3. Proposals within OT

Three major proposals have been suggested to handle cases of free variations within OT. Only one of these proposals will be followed in the discussion of the data from JA.

3.1. Co-phonologies

Within this view, the grammar of a language is split into multiple constraint hierarchies called *co-phonologies*. Each co-phonology is responsible for selecting a specific output. Within each co-phonology, constraints are ranked differently in order to be equipped to produce an optimal candidate that would differ from the optimal candidate produced by another co-phonology within the same grammar. Co-phonologies are represented by (2):



Given the data in (3) from JA and proposing the co-phonologies in (4) to be active in the grammar of JA, the data in (5) would be generated as optimal outputs of (3):

(3) kalb dog

(4) Co-phonology 1

*COMPLEX^{CODA} >>> DEP-IO(v)

Co-phonology 2

DEP-IO(v) >>> *COMPLEX^{CODA}

(5) Input	Output	Gloss
kalb	kalib (according to co-phonology 1)	dog
	kalb (according to co-phonology 2)	

According to (5), an input form like /kalb/ will have two optimal variants, namely /kalb/ and /kalib/. This is the correct prediction.

The problem with the notion of co-phonologies is that it splits the grammar of the language into two separate sub-grammars. This implies that these sub-grammars can be drastically different from one another. This is a wrong prediction when it comes to cases of free variation where the optimal variants are minimally different. As such, co-phonologies in essence give the grammar too much power that does not really reflect the actual state of affairs.

3.2. Tied Ranking

The notion of tied ranking has been used by Smolensky (1996) to account for cases of optionality in syntax and by Ito and Mester (1997) for cases of free variation in phonology. The basic idea behind tied ranking is that violations incurred by two different constraints count as equivalent (Ito and Mester 1997). The two constraints in a tied ranking situation are assigned to the same columns in the tableau without a separating vertical line as exemplified by (6) where C and D are in a tied ranking relation and candidate 1 violates C and candidate 2 violates D:

(6) Tied Ranking

	A	B	C	D	E
a. cand 1			*		
b. cand 2				*	

In (6), both candidates are optimal outputs if and only if they both share the same violation marks for all other constraints in the grammar regardless of their ranking in the grammar with respect to C and D. Ito and Mester (1997) admit that this condition is frequently not fulfilled.

3.3. Free Ranking

A less radical approach to free variation involves the notion of free ranking of constraints. This notion goes against the idea of a fixed ranking of constraints. This assumption was upheld even when two constraints could not be ranked with reference to one another due to lack of interaction. Prince and Smolensky (1993, 51) mention the notion of free ranking as a theoretical option for which no evidence could be found where they state that “We assume that the basic ranking hypothesis is that there is some total ranking which works; there could be (and typically will be) several, because a total ranking will often impose noncrucial domination relations (noncrucial in that either order will work). It is entirely conceivable that the grammar should recognize nonranking of pairs of constraints, but this opens up the possibility of crucial nonranking (neither can dominate the other, both rankings are allowed), for which we have not yet found evidence.

Free ranking is interpreted as in (7):

(7) Interpretation of free ranking of constraints C1, C2 Kager (1999)

Evaluation of the candidate set is split into two subhierarchies, each of which selects an optimal output. One subhierarchy has $C1 \gg C2$, and the other $C2 \gg C1$.

Free ranking will be the tool used in this study to account for cases of free variation in JA.

4. Epenthesis and Syncope in JA

A good number of phonological processes affect the way groups of segments are pronounced. Segment insertion (Epenthesis) and segment deletion (Syncope) are two such processes, which are governed by the structure of syllables or larger groupings of sounds. It is extremely common to find that a language inserts a segment (usually a vowel, less commonly a consonant) into strings of segments that would otherwise violate syllable structure principles of the language.

4.1 Epenthesis

Each language has a set of phonotactic constraints, i.e., constraints on the way sounds are grouped or ordered. Epenthesis operates in many languages to satisfy syllable-based phonotactic constraints. Across word-boundary, epenthesis is generally found when the morphology of the language combines morphemes in such a way as to result in a violation of the phonotactics of the language like creating illegal consonant clusters (Spencer 1996).

At the word level, JA involves a process of epenthesis which inserts a glottal stop /ʔ/ as the onset of an otherwise onsetless syllable or the high short vowel /i/ is epenthesized to break up illicit consonant clusters and produce well-formed syllables. /ʔ/-epenthesis is triggered by an undominated well-formedness constraint on syllable structure in JA and most Arabic dialects, which requires syllables to have onsets (Abu-Abbas 2003).

Epenthesis of a short high vowel /i/ or /u/ is triggered by a constraint militating against complex codas in the language that requires no more than a single consonant in coda position unless that consonant is a geminate. Cases involving complex coda clusters are discussed in section 5.

Coda consonants are allowed in JA. This implies that the universal markedness constraint against coda consonants is violated in the language and is thus dominated by the faithfulness constraints that ban

consonant deletion. Complex codas are prohibited in JA (8). Their absence is governed by a constraint that bans complex codas with exceptions (9) discussed in section 5:

(8) Complex codas banned

Input	Output	Gloss
waʕD	waʕiD	Preaching
ʔamn	ʔamin	Security
kitf	kitif	Shoulder
ħibr	ħibir	Ink
gabr	gabir	Grave
badr	badir	Full moon
rasm	rasim	drawing

(9) Complex codas optional

Input	Output	Gloss
kalb	kalb/kalib	Dog
bard	bard/barid	Cold
qalb	galb/galib	Heart
dʒarħ	dʒurħ/ dʒuruħ	Wound (n.
gird	gird/girid	Monkey

The claim that the second vowel in (8) is actually epenthetic is supported by evidence from stress-assignment rules in JA which ignore epenthetic vowels in weight considerations (Abu-Abbas 2003).

4.2 Syncope

A very pervasive phonological process in almost all Arabic dialects is one that involves the deletion of unstressed short vowels from open syllables. In JA, this process targets only the high short vowels /i/ and /u/ in that environment. The same is found in Egyptian Arabic (EA) (Kenstowicz 1980) and Lebanese Arabic (LA) (Haddad 1983). However, in other dialects like Syrian Arabic (SyA) (Cowell 1964) and Iraqi Arabic (Odden 1978), the process extends to all short vowels. Cantineau (1939) refers to dialects, which syncope the high short vowels alone as ‘differential’ and those that allow the syncope of all short vowels as ‘nondifferential’. In this section, word and phrase level syncope in JA are discussed.

A second syncope rule in JA will be introduced in section 5.2. This rule deletes /i/ between two identical consonants word finally. To my knowledge, this rule has never been discussed in the literature on the phenomenon of syncope in Arabic. A full account is found in Abu-Abbas (2003).

5. Free Variation

Most research on free variation is interested in variant pronunciations of a particular phoneme. Holes (1980) investigates variation between dʒ and j in Bahrain and concludes that the variation is socially constrained and depends on sect-membership, literacy, and sex. As-Sammer (2010) investigates the pronunciation of the phoneme /dʒ/ and its allophones [dʒ] [ʒ] [g] and concludes that the prominent findings of the study are: (i) native dialect habits are deeply rooted and have their great influence on the speakers' performance regardless of the formality of the context under which the speech takes place, (ii) formal style has scored a slight impact in coda position only, (iii) the distribution of the standard variant

shows great predictability of the occurrence of the standard form, (iv) the non-standard variants /g/ and /ʒ/ have registered free distribution in both dialects with different rates, (v) the rates of the variant distribution is relative and dialect-bound, and (vi) there was a great linguistic evidence of dialect continuum within one and the same dialect and within two neighbouring dialects.

Mashaqba et al. (2023) provide an analysis of cases of lexical ambiguity and free variation in loan word adaptation resulting from a single template generating multiple outputs that vary in meaning creating lexical ambiguity, and cases of a single template creating multiple optimal outputs with the same meaning creating cases of free variation. Epenthesis and syncope as linguistic phenomena are discussed in Abu Salim (1980) for Palestinian Arabic, Alghazu (1987), Abu-Abbas (2003), and Mashaqba (2015) for Jordanian Arabic, and in Kenstowicz (1980) for Egyptian Arabic.

The term JA is used loosely to refer to a particular variety spoken in the northern parts of Jordan. Several rather distinct varieties are common in the northern parts of the country. Although mutually intelligible and with plenty of overlap, each variety has some distinct morphophonological traits that set it apart from others including the quality of epenthetic vowels in some contexts, pharyngealization, and assimilation processes. For a detailed account, see Abu-Abbas (2003) and Mashaqba (2015). These variations are irrelevant to the present discussion.

The current study considers two areas where free variation occurs in JA. These two areas will be discussed below and an OT account that relies on the notion of free ranking will prove perfectly suited for the data.

5.1 Free Variation and Epenthesis

Vowel epenthesis is rather common in JA. Consider the data in (10):

(10) Vowel Epenthesis

Input	Output	Gloss
a. kalb	kalb / kalib	Dog
ʕilm	ʕilm / ʕilim	Knowledge
ʕilt	ʕilt / ʕilit	I lifted
qalb	galb / galib/galub	Heart
ʕarD	ʕarD / ʕariD	Demonstration
b. ʔibn	ʔibin / *ʔibn	Son
hibr	hibir / *hibr	Ink
ʕaql	ʕagil/ ʕagul / *ʕagl	mind/brain
ʕabd	ʕabid / *ʕabd	Slave
ʔamn	ʔamin / *ʔamn	Security
ʔism	ʔisim / *ʔism	Name

The data in (10a) involve cases of free variation. The epenthetic vowel used to break up coda clusters is optional. The nature of the epenthetic vowel is independently determined by a set of ranked markedness constraints depending on the variety of JA investigated (Abu-Abbas, 2003) and is irrelevant to the

rationale of argumentation in the current discussion. Epenthesis will automatically lead to resyllabification, which should, at least theoretically, affect stress assignment. The interaction between epenthesis and stress assignment in the dialect is currently under investigation by the author and is believed to lead to cases of free variation as well. Since epenthesis may be employed to break up coda clusters, this suggests that complex codas are disfavored in the language, a function of (11)

(11) *COMPLEX^{CODA}

Codas are simple

In order to correctly predict the variation, the constraint in (11) must be ranked freely with the constraint that would prohibit epenthesis in (12)

(12) DEP-IO

Every segment in the output has a correspondent in the input

The free ranking of the two constraints above will produce the variant outputs in (10a) as tableau (13) shows. I will be using two solid lines between freely ranked constraints:

(13)

kalb	DEP-IO	*COMPLEX ^{CODA}
a. \varnothing kalb		*
b. \varnothing kalib	*	

Under the interpretation of free ranking in (7), tableau (13) can be introduced as two distinct tableaux each producing an optimal candidate as in (14) and (15):

(14)

kalb	DEP-IO	*COMPLEX ^{CODA}
a. \varnothing kalb		*
b. kalib	*!	

In this subhierarchy, candidate (14a) will be chosen as the optimal output since its rival (14b) violates the higher ranked DEP-IO.

(15)

kalb	*COMPLEX ^{CODA}	DEP-IO
a. kalb	*!	
b. \varnothing kalib		*

In this subhierarchy, candidate (15b) will surface as the optimal output since it violates the lower ranked DEP-IO while its rival violates the higher ranked *COMPLEX^{CODA}

Given the free ranking of the constraints above, the data in (10b) will prove problematic to the analysis. In (10b) it seems that epenthesis is obligatory and must split the coda cluster. This suggests that *COMPLEX^{CODA} will have to dominate DEP-IO as (16) shows

(16)

ʔibn	*COMPLEX ^{CODA}	DEP-IO
a. \varnothing ʔibin		*
b. ʔibn	*!	

Candidate (16a) wins the competition due to the domination relation that holds between the two constraints. If we rank the two constraints freely then we will expect both (16a) and (16b) to surface as optimal outputs and this is not the correct prediction. In order to uphold the free ranking relation between the two constraints, a fact that is crucial to derive free variants in the language, it is important to justify the lack of free variation in (10b).

A closer look at the data in (10) will show that epenthesis is obligatory only in cases where the coda consonants violate sonority requirements in the language. A function of the constraint in (17)

(17) SONORITY SEQUENCING (SS)

Coda consonants fall in sonority.

This constraint crucially dominates the two freely ranked constraints above. The new hierarchy will produce the correct results all the time as (18) and (19) exemplify:

(18)

kalb	SS	DEP-IO	*COMPLEX ^{CODA}
a. \varnothing kalb			*
b. \varnothing kalib		*	

Both candidates follow the dictates of SS and the free ranking of the other two constraints produces two optimal outputs as desired.

(19)

ʔibn	SS	*COMPLEX ^{CODA}	DEP-IO
a. \varnothing ʔibin			*
b. ʔibn	*!	*	

Candidate (19a) surfaces as the sole optimal output since its rival violates the higher ranked SS.

5.2 Free Variation and Syncope

A very pervasive phonological process in almost all Arabic dialects is one that involves the deletion of unstressed short vowels from open syllables. In JA, this process targets only the high short vowels /i/ and /u/ in that environment (Abu-Abbas 2003; Mashaqba 2015).

In JA, another syncope rule optionally deletes /i/ between two identical consonants word/stem finally creating cases of free variation. Consider the data in (20):

(20) Syncope between final identical consonants

Input	Output	Gloss
a. dʒaarir	dʒaarir / dʒaar	Dragging
maarir	maarir / maar	Passing by
maadid	maadid / maad	Stretching
ʕaadid	ʕaadid / ʕaad	Counting
faarir	faarir / faar	Escaping
ʃaadid	ʃaadid/ ʃaad	Tightening
b. haarr	haar /*haarir	Hot
haadd	haad /*haadid	Sharp
saamm	ʕaam /*ʕaamim	Poisonous
ʕaamm	ʕaam /*ʕaamim	General
xaamm	xaam /*xaamim	Bad

Free Variation in Epenthesis and Syncope in a Jordanian Arabic Dialect: An Optimality-Theory Perspective

The data in (20a) involve cases of free variation while those in (20b) do not. Note that the input in each set of examples differs in that in (20a) the final vowel between the two identical consonants is part of the input while in (20b) it is not. The forms in (20a) have the canonical pattern /CaaCiC/, which is used to derive the active participle of Form I verbs in Arabic (McCarthy and Prince 1990). The forms in (20b) on the other hand are adjectival forms with the canonical pattern /CaaCC/, where the last two consonants are identical.

In order to derive the correct outputs in (20a), the syncope rule banning an /i/ between two identical consonants word/stem finally, i.e., *C_j i C_j and a constraint against syncope, i.e., MAX-IO(v) will have to be freely ranked in the grammar. Consider the tableau in (21)

(21)

Input: jaadid	*C _j i C _j	MAX-IO(v)
a. faadid	*	
b. faad		*

The free ranking of the two constraints in (21) guarantees that both candidates will be optimal. In one hierarchy *C_j i C_j will dominate MAX-IO(v), and in the other the opposite will be true.

Now we need to consider if the constraint hierarchy in (23) can produce the correct outputs in (20b). Consider the tableau in (22):

(22)

Input: xaamm	*C _j i C _j	MAX-IO(v)
a. xaam		
b. xaamim	*	

The free ranking of the other two constraints does not affect the outcome of the competition. Regardless of the ranking of *C_j i C_j and MAX-IO(v), candidate (22a) will surface as the only optimal output.

Degemination in (22a) is motivated by a constraint against trisyllabic syllables. However, the final consonant is still long but does not contribute to weight. A complete investigation is found in Abu-Abbas et. al. (2011).

Suffixation to stems will require further stipulations. Consider the data in (23):

(23) Suffixation to stems

Input	Output	Gloss
a- jaadid-ha	ʃaa.did.ha / ʃaad.ha	Tightening it (fem.)
maadid-hen	maa.did.hen / maad.hen	Stretching them
ɖʒaarir-na	ɖʒaa.rir.na / ɖʒaar.na	Dragging us
b- jaadid-u	ʃaad.du / *ʃaa.di.du	Fastening it (mas.)
maadid-u	maad.du / *maa.di.du	Stretching it (mas.)
ɖʒaarir-ak	ɖʒaar.rak / *ɖʒaa.ri.rak	Dragging you (mas.)

An interesting scenario is at hand in (23). When a consonant-initial suffix is added to a CaaCiC stem, two variants surface optimal (23a), whereas when a vowel-initial suffix is added to the same stem, only one variant is optimal.

The constraint ranking in (21) is sufficient to derive the correct optimal form in (23a) as (24) clarifies.

(24)

Input: jaadid-ha	*C _j i C _j	MAX-IO(v)
a. \varnothing jaa.did.ha	*	
b. \varnothing jaad.ha		*

Both candidates surface equally optimal. A hypothetical candidate like /jaa.dha/ is ruled out by the dictates of a higher ranked constraint against complex onsets, and another possible candidate like /jaa.di.ha/ will be ruled out by the dictates of MAX-IO. Further tableaux to exemplify are not needed. Note that (24a) violates *C_j i C_j since the /i/ between two identical consonants at the end of the stem /jaadid/.

Of more interest to the discussion are the data in (23b) involving the addition of a vowel-initial suffix. The constraint hierarchy developed so far will not derive the correct outputs. Consider tableau (25):

(25):

(25)

Input: jaadid-u	*C _j i C _j	MAX-IO(v)
a. \varnothing jaa.di.du	*	
b. \varnothing jaad.du		*
c. \varnothing jaa.du		*
d. \varnothing jaa.did.u	*	

According to (25), all candidates are equally optimal. Candidates (25a,d) violate *C_j i C_j and candidates (25b,c) violate MAX-IO(v). Since the two constraints are freely ranked, all candidates are equally optimal. Candidate (2d) is ruled out by the dictates of an undominated constraint in JA and many other Arabic dialects which ban onsetless syllables. This constraint is presumed to be active in all the tableaux introduced in this study. We still need to remove (25a) and (25c) from the competition.

All forms in (23) are affixed words which implies the presence of a base word. In (25), there are two possible bases, namely, /jaa.did/ and /jaad/ which are the free variants in (21). Candidates (25a) and (25c) both violate a constraint that requires the right edge of the base to be aligned with the right edge of a syllable. This constraint is formulated in (26):

(26) ALIGN(Base, R, σ , R) Adapted from Kager (1999, 119)

For every base there must be some syllable such that the right edge of the base matches the right edge of the syllable.

This constraint will necessarily dominate the freely ranked constraints in order to derive the correct output as (27) exemplifies:

(27)

Input: faadid-u Base 1: faa.did Base 2: faad	ONSET	ALIGN	*C _j i C _j	MAX-IO(v)
a. faa.di.du		*!	*	
b. faad.du				*
c. faa.du		*!		*
d. faa.did.u	*!		*	

Candidate (27b) will surface as the only optimal output since it does not violate neither of the higher ranked ONSET or ALIGN. Each of the remaining candidates violates one of these two constraints. Note that introducing ALIGN into the hierarchy will not affect the outcome of previous tableaux.

6. Conclusion

In this paper, I have examined cases of free variation in JA. The language allows more than one optimal output to surface as a result of the interaction of different constraints in the language. Two different sources of free variation were considered in this paper. The first results from an optional rule of epenthesis which inserts a vowel between the last two consonants in an otherwise complex coda cluster. The free variation was found to result from a free ranking hierarchy that holds between a constraint against complex codas, i.e., COMPLEX^{CODA} and another that bans epenthetic vowels, i.e., DEP-IO(v). Cases were found where the epenthetic vowel is obligatory. Such examples were found to result from a higher ranked constraint that bans coda consonants that violate the sonority scale in the language, i.e., SONORITY SEQUENCING (SS). Thus, a domination hierarchy exists where by SS crucially dominates both COMPLEX^{CODA} and DEP-IO(v).

The second source of free variation in JA was found to result from an optional syncope rule that deletes /i/ between two identical consonants word/stem finally. It is concluded that cases of free variation result from a free ranking relation between a constraint against /i/ between two identical consonants word/stem finally, i.e., *C_j i C_j and a constraint that bans deletion, i.e., MAX-IO(v). Vowel-initial suffixes were found to be problematic to the analysis where only one of the expected variants surfaces as the optimal output. This was found to be a function of a higher ranked constraint demanding the right edge of the base to coincide with the right edge of a syllable in the output, i.e., ALIGN (Base, R, σ, R).

7. Recommendations

It is worth noting that cases of free variation in stress assignment also exist. This project requires careful investigation and is actually under investigation in a separate research endeavor. Another area of research interest would be an investigation of the sonority sequencing restriction in JA. It would be interesting to find whether epenthesis, or the lack of it, is affected by a minimum sonority distance (Steriade 1982; Selkirk 1984). The same can be investigated for JA onset clusters.

The choice between variants is usually linked to sociolinguistic variables (such as gender, age, and class), and performance variables (such as speech style and tempo)". An in depth investigation will enrich the phenomenon of free variation.

Comparing the dialect under investigation with other dialects in Jordan, other Arabic varieties, or even other languages will be a huge step towards understanding the similarities and differences cross linguistically.

البدايل اللفظية الحرة حذف وإضافة صوت في اللهجة الأردنية: دراسة ضمن نظرية المفاضلة

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الملخص

يهدف هذا البحث إلى دراسة ظاهرة البدايل اللفظية الحرة في لهجة من لهجات شمال الأردن، ويناقش ظاهرتي إضافة صوت وحذفه من الكلمة بشكل اختياري في اللهجة، وسنفسر هذه الظاهرة ضمن إطار نظرية المفاضلة وذلك بالاعتماد على ظاهرة الترتيب الحر للقيود الصوتية، وستعرض الدراسة لثلاث آليات يُرجع إليها في محاولة تفسير ظاهرة تعدد اللفظ للكلمة الواحدة، وستثبت الدراسة أنه يمكن تفسير هذه الظاهرة في اللهجة الأردنية تفسيراً مباشراً عن طريق اقتراح تفاعل محدد بين مجموعة من القيود الصوتية المرتبة ترتيباً حراً في اللهجة.

الكلمات المفتاحية: اللهجة الأردنية، إضافة صوت، تعدد اللفظ، نظرية المفاضلة، حذف صوت.

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