

Optimality of Diminutive Forms in Modern Standard Arabic

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Abstract

Optimality is applied in this study to plain as well as diminutive forms of three – consonantal, four – consonantal and five – consonantal nouns in M. S. A. Among the findings of the present study is the frequent violation of the markedness constraints (- Cod) which reflects the existence of closed syllables in Arabic diminutive forms. Moreover, the markedness constraints (Ons) and (Nuc) and the faithfulness constraints (Fill^{Ons}), (Fill^{Nuc}) and (Parse) are neither violated by the plain forms nor by the diminutive ones, which explains the absence of onsetless syllables, syllables lacking nuclei, and deformed syllables that witness segmental deletion.

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1. Introduction:

Conflicts and their resolution construct the core of many linguistic theories, and one of them is Optimality Theory (henceforth, OT). The precursor theories of OT used different means to solve potential conflicts. For instance, derivationalism used rules and their orderings to address such conflicts, whereas representationalism treated phonological structures that were supposed to be licensed by Universal Grammar (henceforth, UG) by the formulation of suitable constraints. Conflicts between different types of competing constraints lie at the heart of OT. Kager (1999:4) states that "[at] the heart of OT lies the idea that language, and in fact every grammar, is a system of conflicting forces. These 'forces' are embodied by constraints, each of which makes a requirement about some aspect of grammatical output forms."

In (1999) Prince and Smolensky, while teaching at the Summer Institute of the Linguistic Society of America, introduced for the first time OT to the academic society. However, their (1993) manuscript represents their most detailed first exposition of OT.

Prince (1998: 3) lists the basic theses of OT as follows:

- a. Grammar is defined by the interaction of constraints.
- b. Constraints come in two basic kinds:
 - 'Markedness' constraints evaluate output representations.

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- 'Faithfulness' constraints demand that input and output must be the same in a certain way.
- c. Constraints may conflict with each other over the relative value of representations.
- d. Even so, all constraints are in every grammar.
- e. Constraints are violable: conflicts are decided by prioritization (ranking).
- f. Differences between grammars are precisely differences in their prioritization schemes.
- g. Each input gives rise to a set of potential outputs, a candidate – set.
 - (i) This candidate – set is the same for all grammars.
 - (ii) The candidate that best satisfies the ranked constraint – set is output for the given input.

For the sake of understanding the above theses, we need to explain them in some detail. Kager (1999: 8) states that the "preliminary definition of constraint is: a structural requirement that may be either satisfied or violated by an output form. A form satisfies a constraint if it fully meets the structural requirement, while any form not meeting this requirement is said to violate it... ." Basically, there are two types of constraints recognized by OT: markedness constraints and faithfulness ones, which can conflict with each other. The first type of constraints " evaluate output representations only, penalizing them for the presence of certain configurations", whereas the second type " evaluate the relationship between input and output forms, demanding exact replications of the input along some specified structural dimension" (Prince and Smolensky, 2002:2). These two types of constraints compete with each other. OT resolves all kinds of conflicts by different schemes of constraints ranking. UG provides a set of constraints that are universal and universally present in all grammars. They are violable and ranked on a language – particular basis. McCarthy and Prince (1994:45) contend that "[The] construction of a grammar in Optimality Theory is essentially a matter of determining the proper ranking of the set of constraints... ." Given a grammar, a complete ranking of constraints, we say that candidate (a) is more harmonic or better than candidate (b), if (a) is preferred by the highest-ranking constraint that distinguishes (a) from (b).

A candidate (x) is optimal if it is better than every distinct alternative candidate. Perfect output forms do not exist in any grammar, since each output form in a candidate – set is, in principle, violable by, at least, a certain constraint. Accordingly, in this theory optimality of output forms is reflected by their conflicts that are usually resolved by the domination of higher – ranked constraints over lower – ranked constraints. The present study is an attempt to apply OT to diminutive forms in Modern Standard Arabic (henceforth, MSA). It is based on the hypothesis that since MSA is basically a (cv) language, then OT should be applicable.

This study is organized as follows: the second section presents a theoretical background concerning diminution in MSA. The third section examines the applicability of OT to diminutive forms in MSA. Finally, the study ends with the conclusions arrived at.

2. Diminution in MSA:-

Diminution is an expressive characteristic of the Arabic language. It causes a change in the morphological form of a word by the addition of the letter /ja?/ which is called the diminutive /ja?/. this addition results in a specific meaning of lessening or belittling something or someone.

Ibn – Ya'eesh (part 5:289) says that minimization is similar to belittling which is the opposite of maximization and magnificence. AL-Sayyid (1976: 130 – 131) mentions four prerequisites that should be available in the word to be diminished. They are stated below:

1. The word should not be similar in form to pronouns, interrogative nouns and conditional nouns.
2. The word should be a noun, and not a verb or a particle.
3. The noun to be diminished should be devoid of any form of diminution.
4. It should be liable to diminution. So, nouns devoting Almighty Allah, the names of His messengers and prophets (when referring to them), His angels, the Holy Qur'an, Al-Ka'ba, and prophet Muhammad's mosque should never be diminished. Moreover, he explains that words indicating greatness, generality, Arabic months, days of the week, weights and special periods of time should never be diminished.

Generally, Arab grammarians specify eight purposes and semantic meanings for diminution. They are: belittling , minimizing a thing , minimizing amounts and numbers, nearing time and place, amiability, graciousness, mercy and magnificence.

One of the clearest and most essential meanings of diminution is modification. So, when we diminish a thing we are actually modifying it; that is characterizing it with a special characteristic. This meaning is given by many of the Arab grammarians such as Al-Khalil bin Ahmad AL-Faraheedy (Sharh AL-Zujaji, part 2:289), Ibn Usfoor (part 2:317), and Ibn Ya'eesh (AL-Kitab, part 2:135). Then diminution assigns an adjectival function to a noun.

There are three forms for diminution in MSA, all of which depend on the number of the original consonants in a noun. So, if the noun is composed of three consonants, then its diminutive form is /cuceic/ such as /qalb/ (heart) becomes /quleib/, /nahr/ (river) becomes /nuheir/ and /qalam/ (pen) becomes /quleim/. If, on the other hand, the noun is composed of four consonants, then it takes the diminutive form /cuceicic/ as in /?arnab/ (rabbit) which becomes /?ureinib/ and /xaalid/ (a male's proper name) becomes /xuweilid/. However, a five consonantal noun of which the fourth letter is a vowel sound, is diminished according to the form /cuceiciic/ such as /mindil/ (handkerchief) which

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becomes /muneidiil/ and /ʕuSfuur/ (sparrow) becomes /ʕuSeifiir/. Of course, these three diminuted forms are the only acceptable ones, and it is the morphological structure of the word which determines whether it should be diminuted according to one form or another of these three forms.

Out of the structure of the three forms, one can notice that in order to diminute a noun, one must follow the following rules:

1. The first consonant of the diminuted word should be followed by the short, high, back and rounded vowel /u/.
2. Its second consonant should be followed by the open diphthong /ei/ which represents the diminutive /ja?/.
3. If the word is composed of more than three consonants, then a short, high, front and closed vowel /i/ should be added after the third letter, under the condition that the original word is composed of four consonants. Moreover, a long, high, close and front vowel /ii/ is added after the third letter of a five – consonantal noun.

There are other diminution conditions, but they are applicable only to special cases and exceptions of nouns. In this study such cases are not investigated, and only the straight forward diminuted forms are considered in the light of OT.

3. Optimal Diminutive Forms in MSA:

Basing on the theoretical conception given in the immediately preceding section, we can investigate the optimality of the Arabic examples mentioned in that section, namely:

- a. 1. /qalb/ - /quleib/
2. /nahr/ - /nuheir/
3. /qalam/ - /quleim/
- b. 1. /ʔarnab/ - /ʔureinib/
2. /xaalid/ - /xuweilid/
- c. 1. /mindjil/ - /muneidiil/
2. /ʕuSfuur/ - /ʕuSeifiir/

Recall that there are only three morphological patterns according to which Arabic nouns can be diminuted, the first of which is /cuceic/ suitable for three – consonantal nouns. The second pattern is /cuceicic/ representative of diminuted four – consonantal nouns. The last pattern /cuceiciic/ characteristic of five – consonantal nouns. The example groups (a,b,c) are representatives of these three patterns, respectively.

In this investigation, the following notation is used:

.Y. The element Y is a syllable and its boundaries are denoted by dots.

<Y> The element Y is unparsed.

□ An empty syllable position (onset, nucleus, coda).

Ẏ The element Y is a nucleus.

✓ The denoted output is optimal.

* A violation of a constraint.

A tableau is also used to show the optimality of a set of possible candidates with the related constraints relevant for an illustrative example.

Prior to any adequate analysis of optimal forms one needs to set first the relevant constraints and fundamental observations (i.e. props.) according to which decisions are taken. The following quoted material is necessary:

From Kager (1999):

MAX – IO

Input segments must have output correspondents. ('No deletion')(P. 67)

DEP – IO

Output segments must have input correspondents. ('No epenthesis') (P.68)

Root LIN – IO

The output reflects the precedence structure of input segments of the root, and vice versa. (P.76)

From Prince and Smolensky (2004):

- ONS

A syllable must have an onset.

- - COD

A syllable must not have a coda.

- PARSE

Underlying segments must be parsed into syllable structure.

- FILL

Syllable positions must be filled with underlying segments. (p.106).

- NUC

syllables must have nuclei.

- *Complex

No more than one C or V may associate to any syllable position node. (P.108)

Back to Kager (1999):

- * Complex^{ONS}

*[₆CC ('Onsets are simple.')

- * Complex COD

*CC]₆ ('Codas are simple.')(P.97)

- SON – SEQ

Complex onsets rise in sonority, and complex codas fall in sonority. (P.267).

And back to Prince and Smolensky (2004):

- Coda Theorem

Codas are allowed in a language if – COD is dominated by both PARSE and FILL^{NUC} (P.114).

- Prop.3 *(□)□ C.

No syllable can have Cod as its only filled position.

- Prop. 4*[] []

Adjacent empty nodes cannot occur in an optimal parse. (P.117)

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- Under the Basic Syllable – Structure Constraints, epenthesis is limited to the following environments:
 - a. Onset, when Nucleus is filled:
 - □V•
 - □VC•
 - b. Nucleus, when Onset is filled:
 - C□•
 - C□C•

Furthermore, two adjacent epentheses are impossible, even across syllable boundaries. (P.118)

- Onset Theorem

If ONS dominates either PARSE or FILL^{ONS} onsets are required in all syllables of optimal outputs,

Now, we may start examining the three – consonantal nouns group, which unlike the other two groups contains three example nouns. The reason behind this addition is that monosyllabic Arabic nouns may either end in a consonant cluster rising in sonority or with one falling in sonority. These two forms are given to see their manipulation of the related constraints. However, in what follows we need to remember that impossible outputs are not dealt with; that is to say outputs that violate theorems and/or fundamental observations are not considered in this investigation.

First, consider the possible outputs of the monosyllabic three – consonantal noun /qalb/ in the following tableau:

1.

Candidates	Constraints								
	Ons	COD	FILL ^{ONS}	NUC	FILL ^{NUC}	Parse	*Complex _{ons}	*Complex _{Cod}	Son - Seq
1. •qalb•		*						*	
2. •qal•		*		*	*				
3. •qa• •b				**	**				
4. •qa• •				*	*	*			
5. •qa• •b		*		*	*				
6. • qalb•		*				*			

Before presenting any explanation, we need to clearly state that neither in the above tableau nor in any of the coming ones there is a predetermined constraints – ranking. As a matter of fact the scheme of ranking is not as important as the selection of the most optimal candidate/output of the input in question.

Out of the preceding tableau, one can conclude that the first output is the most optimal one among the other candidates since it violates only two of the nine given constraints, whereas the other inputs violate three or four constraints. Notice that the most violable constraints are (Nuc) and (Fill^{Nuc}) and this renders those outputs as non – optimal because they break one of the basics of the universal syllable structure (•CV•) namely, an optimal syllable must have a nucleus. Notice also that the least violable constraint is (*Complex) which allows only one element (C or V) to associate to a syllable position node, yet the output that violates its related sub – constraints (*Complex^{Cod}) is ranked as the most optimal one. The violation of this constraint entails the violation of the (-Cod) constraint too. But why do we regard the first output as the most optimal one rather than the sixth candidate(•qal•) which also violates only two constraints, namely (-Cod) and (Parse)? Of course , the answer lies in the interpretation of the (Parse) constraint rather than the shared (-Cod) constraint. The ultimate force of the faithfulness constraint (Parse) is to forbid deletion and its violation would suggest the phonetic deletion of the bracketed element and this is contra – factual since it is phonetically present. This justifies the optimality of the first output.

Consider now the candidate – set of the diminutive input /quleib/ in the foll

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2.

Candidates	Constraints								
	Ons	- COD	FILL ^{ons}	NUC	FILL ^{NUC}	parse	*complex ^{ons}	*complex ^{Cod}	Son - Seq
1. •qu•leib•		*							
2. • qu•lei ••						*			
3. • qu•le. b •				*	*				
4. • qul•_eib •	*	**	*						
5. • qul•_ei• 	*	*	*			*			
6. • qul•_ei• b	*	*	*	*	*				

The last three candidates (i.e., 4, 5 and 6) are not optimal mainly because they violate a very active constraint in Arabic namely (Ons). Prince and Smolensky (2004: 30) affirm that the "constraint Ons is never violated in Arabic." Then, we are left only with the first three candidates (i.e., 1, 2, and 3). The number of violated constraints in the third candidate (two violations) allows us to disregard it in comparison with the first and second outputs each of which violates only one constraint. The second output violates the (Parse) constraint and as we have already explained in the preceding case, this violation results in contra – evidence structures which in turn leads us to the consideration of the first output which violates the (-Cod) constraint. Arabic, among other languages such as Tunica and English, allows codas ((Blevins, 1995; Kager, 1999). Therefore, the (-Cod) constraint violation is tolerated and this marks the first output as the most optimal one among the other candidates. Then, it seems that both of the optimal outputs (•qalb•) and (•qu•leib•) share the violation of the same markedness constraint (-Cod).

The input pair /nahr/ and /nuheir/ has the same possible candidates and the same violations of the six constraints: (Ons, -Cod, Fill^{ons}, Nuc, Fill^{Nuc}, and Parse). However, unlike the optimal output (*qalb*), the optimal output (*nahr*) seems to violate another markedness constraint that was suggested by Clements in (1990), namely: The Sonority Sequencing Principle, which is stated below:

Son – Seq

Complex onsets rise in sonority, and complex codas fall in sonority.

One can see that the complex coda in (*qalb*) obeys this constraint. That is to say, according to the sonority scale (see Kager, 1999: 215) liquids are more sonorous than obstruents which include both stops and fricatives, while the complex coda in (*nahr*) violates it (i.e., /-hr/ rises in sonority). Consequently, the related tableau for the optimal outputs (*qalb*) and (*nahr*) would look as follows:

3.

Optimal Candidates	Constraints								
	Ons	- COD	FILL ^{ons}	NUC	FILL ^{NUC}	Parse	*Complex _{ons}	*Complex _{Cod}	Son - Seq
1. *qalb*		*						*	
2. *nahr*		*						*	*

The above tableau suggests that these overtly similar optimal outputs incur different numbers of violations: two for the first and three for the second.

We move now to the candidate – set of the disyllabic input /qalam/. Examine the tableau given below:

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4.

Candidates	Constraints								
	Ons	- COD	FILL ^{ons}	NUC	FILL ^{NUC}	Parse	*Complex ^{ons}	*Complex ^{Cod}	Son - Seq
1. *qa·lam*		*							
2. *qa·la*				*	*				
3. *qa·la·<m>						*			
4. *qal·lam*	*	**	*						
5. *qal·la·<m>	*	**	*			*			
6. *qal·la·l*	*	**	*	*	*				

After examining the above set of the candidates and their associated violations, we can say that only the first output is optimal. Why is it so? The answer is as follows. Outputs 4 – 6 are all non - optimal simply because, in addition to the violation of other three to four constraints, they violate the (Ons) constraint which can never be violated in Arabic as stated previously. The third output is not optimal though it incurs only one violation, because its violation of the (Parse) constraint suggests the deletion of the final consonant /-m/ and this is not factual for the latter is phonetically realized (i.e., pronounced). This leaves us with the first two candidates, the second of which violates the markedness constraint (Nuc) and the faithfulness constraint (Fill^{Nuc}). Again, this is not acceptable because the (Fill) constraint is used in Arabic only to fill in onsets and not nuclei. Prince and Smolensky (2004: 30) declare that "Fill is violated, but only to provide onsets" in Arabic. Hence, the only optimal output is the first one (*qa·lam*) which violates only the markedness constraint (-Cod). Its diminutive form /quleim/ has the same candidate – set and the candidates incur the same violations of the same constraints related to the plain input /qalam/.

Therefore, the only optimal output of the input /quleim/ is (*qu·lcim*) violating the (-Cod) constraint. This means that in Arabic plain forms and their diminutive forms need not incur different numbers of violations of similar or different constraints.

Consider now the tableaux of the second group of examples, that is: /ʔarnab/ - /ʔureinib/ and /xaalid/ - /xuweilid/. First, examine the following

tableau representing the behaviour of the candidates of the input /ʔarnab/ regarding the related markedness and faithfulness constraints

5.

Candidates	Constraints								
	Ons	- COD	FILL ^{ons}	NUC	FILL ^{NUC}	Parse	*Complex _{ons}	*Complex _{Cod}	Son - Seq
1. •ʔar•nab		**							
2. •ʔar•na		*		*	*				
3. •ʔar•na•		*				*			
4. •ʔa [/] • •nab	r	*		*	*				
5. •ʔa [/] • •na•b				**	**				
6. •ʔa [/] • •na•	r			*	*	*			
7. •ʔa•rnab		*					*		*
8. •ʔa•rna				*	*		*		*
9. •ʔa•rna•						*	*		*
10. •ʔarn•_ab	*	**	*					*	
11. •ʔarn•□a	*	*	*	*	*			*	
12. •ʔarn•□a 	*	*	*			*		*	

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Of course, the most and only optimal output among these outputs is the first one, which violates only the (-Cod) constraint, that is normally violated in Arabic as was shown above. The second output violates, beside the (-Cod) constraint, two other constraints: (Nuc) and (Fill^{Nuc}), which can never be violated in Arabic. On the one hand, the violation of (Nuc) would result in phonetic realizations that are unpronounceable in the language; on the other hand, the (Fill) constraint functions in a restricted way in the sense that it cannot lead to the epenthesis of a vowel, but rather to the epenthesis of a consonant in the onset position, as already stated above.

The (Parse) constraint is of no value in Arabic, that is why the third output cannot be optimal. The following three candidates (i.e., 4 – 6) are not optimal mainly because of the violation of the (Nuc) and (Fill^{Nuc}) constraints beside other constraints. The outputs (7 – 9) are non – optimal at all because they violate, in addition to other constraints, the quite active constraint (*Complex^{Ons}) which disallows the appearance of complex onsets (viz. initial consonant - clusters) in Arabic syllables. The last three candidates (10 – 12) are essentially rejected due to their violation of the very active constraint in Arabic (Ons), beside the violation of some already mentioned constraints. So, incurring two violations of the (-Cod) constraint seems to be acceptable in Arabic, thus the optimality of the first output (*?ar.nab*).

As for the diminutive form /?ureinib/, the candidate – set differs and it incurs different violations of constraints as illustrated in the following tableau

6.

Candidates	Constraints								
	Ons	- COD	FILL ^{ons}	NUC	FILL ^{Nuc}	Parse	*Complex _{ons}	*Complex _{Cod}	Son - Seq
1. *?u•rei•nib•		*							
2. *?u•rei•ni / b •				*	*				
3. *?u•rei•ni•						*			
4. *?u• rein•lib•	*	**	*						
5. *?u•rein• / b •	*	*	*	*	*				
6. *?u• rein•li•	*	*	*			*			
7. *?ur• lei•nib•	*	**	*						
8. *?ur• lei•n / b •	*	*	*	*	*				
9. *?ur• ei•ni•	*	*	*			*			
10. *?ur• ei• / i• b •	**	**	**	*	*				
11. *?ur• ein• i• 	**	**	**			*			
12. *?ur• ein• lib•	**	**	**						

One can clearly notice that only the first output (*?u•rei•nib•) is optimal, violating only the (-Cod) constraint. The second output violates the (Nuc) and (Fill^{Nuc}) constraints, which are not usually violated in Arabic. The (Parse) constraint suggests the deletion of the final consonant /b/, hence rendering the unacceptability and non - optimality of the third output. All of the remaining outputs (i.e., 4 -12) are not optimal basically because they violate, among other constraints, the active (Ons) constraint.

The input /xaalid/ exhibits a similar candidate-set behaviour to that of the three - consonantal noun input /qalam/, and its only optimal output is (*xaa•lid•)

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which violates only the (-Cod) constraint. As for the diminutive form /xuweilid/, it has a similar candidate-set to that of the input /?ureinib/. Thus, its most optimal output is (*xu•wei•lid•) that again violates only the (-Cod) constraint.

Now, consider the optimization behaviour of the third group of examples /mindii/ - /muneidiil/ and /?uSfuur/ - /?uSeifiir/. First, examine the following tableau which exhibits the candidate-set of the input /mindii/:

7.

Candidates	Constraints								
	Ons	- COD	FILL ^{ons}	NUC	FILL ^{Nuc}	Parse	*Complex _{ons}	*Complex _{Cod}	Son - Seq
1. •min•dii/		**							
2. •min•di. /		*		*	*				
3. •min•dii• < >		*				*			
4. •mi•ndiil•		*					*		
5. •mi•ndi. /				*	*		*		
6. •mi•ndii•< >						*	*		
7. •mind•□iil•	*	**	*					*	
8. •mind•□i. /	*	*	*	*	*			*	
9. •mind•□ii• < >	*	*	*			*		*	

One can notice that only the first output is optimal in the sense that its violation of only the (-Cod) constraint is acceptable. All the other candidates are non-optimal for their violation of quite active constraints such as (Nuc, Fill^{Nuc}, Parse, *complex, Ons, and Fill^{ons}), respectively.

The diminutive input /muneidiil/ has a different set of candidates and of violations as shown in the tableau below:

8.

Candidates	Constraints								
	Ons	- COD	FILL ^{ons}	NUC	FILL ^{NUC}	Parse	*Complex _{ons}	*Complex _{Cod}	Son - Seq
•mu•nei•dʒil•		*							
•mu•nei•dʒil•				*	*				
•mu•nei•dii•< >						*			
•mu•neid•ɔ̄iil•	*	**	*						
•mu•neid•ɔ̄i•l•	*	*	*	*	*				
•mu•nei•ii•< >	*	*	*			*			
•mun•ɔ̄ei•diil•	*	**	*						
•mun•ɔ̄ei•ɔ̄l•	*	*	*	*	*				
•mun•ɔ̄ei•dii•< >	*	*	*			*			
ɔ̄.•mun•ɔ̄eid•ɔ̄iil•	**	***	**						
l.•mun•ɔ̄eid•ɔ̄i•l•	**	**	**	*	*				
ɔ̄.•mun•ɔ̄eid•ɔ̄ii•< >	**	**	**			*			

The first candidate is the most optimal one violating only the (-Cod) constraint. The second candidate violates the very active constraint in the language (Nuc) and its related constraint (Fill^{Nuc}) resulting in a non-optimal output. (Parse) is violated by the third output causing the deletion of the final consonant /-l/ and rendering the resulting form to be unpronounceable and therefore unacceptable. The remaining outputs are also rejected for violating different constraints, the most important among which is the unviolable one (Ons).

The inputs of the other pair in this group /ʔuSfuur/ - /ʔuSeifir/ behave in a similar way to /mindii/ - /muneidii/, resulting in the optimality of only the outputs (•ʔuS•fuur•) and (•ʔu•Sei•fir•), respectively.

4. Conclusions:-

On the basis of the immediately preceding optimality investigation of the behaviour of diminutive forms in M. S. A., we can conclude the following:

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- 1) Plain forms need not trigger the same type and/or number of constraints violations as their diminutive counterparts. For instance, monosyllabic three – consonantal nouns violate more constraints than the diminutive forms, as in the case of (*qalb*) – (*qu•leib*) and (*nahr*) – (*nu•heir*). On the other hand, disyllabic three – consonantal forms, four – consonantal forms and five – consonantal forms violate the same constraint, though in this case the plain forms violate that particular constraint as twice as their diminutive counterparts.
- 2) Closed syllables are allowed and acceptable in M. S. A. and this explains the frequent violation of the markedness constraint (-Cod).
- 3) Some closed syllables violate the (Son – Seq) constraint; thus, they end in a rising rather than a falling sonority.
- 4) Optimal forms in Arabic of both plain as well as diminutive nouns can never violate the markedness constraints (Ons) and (Nuc) nor the faithfulness constraint (Fill^{Nuc}), simply because these constraints are quite active in the language. Hence, onsets and nuclei slots can never be expected to be empty.
- 5) Deformed forms resulting from the deletion of segments do not exist in M. S. A., that is why the (Parse) constraint cannot be violated by optimal forms.
- 6) Unlike codas which can be complex in Arabic, especially in the case of plain nouns, onsets are never complex in this language. In other words, initial consonant – clusters are forbidden to exist. Therefore, optimal forms do not violate the constraint(*complex^{Ons}); though they may violate the (*complex^{Ons}) constraint.
- 7) In the light of the above stated conclusions, we can say that OT is applicable to M. S. A. and this validates the hypothesis upon which this study is based.

One last point worth mentioning just before closing this work: though it is not the main aim of this study to give the ranking scheme of constraints characteristic of MSA in general and of diminution in particular, still we feel that after the preceding investigation of the optimality of diminutive forms in Arabic that we are in a better position to suggest such a ranking scheme. This scheme is suggested bellow:

Nuc>>Fil^{Nuc}>>Parse>>Ons>>Fill^{Ons}>>Complex^{Ons}>>Son-Seq>>Complex^{Cod}>>
Cod

The two arrows (>>) indicate the domination of the left constraint over the right one; accordingly, the highest – ranked constraint is the markedness constraint (Nuc) which is quite active and unviolable in the language. On the other hand, the lowest ranked constraint is the markedness constraint (-Cod) that is quite often violated in MSA, thus allowing closed syllables to exist.

References

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تفاضل أنماط التصغير في اللغة العربية الفصحى الحديثة

الخلاصة:

طبقت نظرية التفاضل اللغوية في هذه الدراسة على الأسماء ثلاثية الحروف الصحيحة ورباعيتها وخماسيتها، الصحيحة منها والمصغرة في اللغة العربية الفصحى الحديثة. ومن بين الاستنتاجات التي خرجت بها الدراسة الحالية تجاوز القانون اللغوي والذي بموجبه تكون المقاطع مفتوحة النهاية (أي منتهية بحرف علة) وهذا ما يفسر وجود مقاطع مسدودة النهاية في اللغة (أي منتهية بحرف صحيح وليس بحرف علة)، بالإضافة إلى ذلك بينت النتائج أن بعض قوانين التمييز وقوانين الولاة تطبق في اللغة بشكل دقيق مما يفسر عدم وجود مقاطع مبدوءة بحرف علة أو أخرى تخلو من نواة مركزية ومقاطع مبتورة نتيجة لعمليات حذف