ISSN 1799-2591
Theory and Practice in Language Studies, Vol. 14, No. 5, pp. 1350-1359, May 2024
DOI: https://doi.org/10.17507/tpls.1405.07

The Impact of Three Social Factors on the Variation of "Qaf" in Ammani Arabic

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***Abstract*—This study aims to explore the effects of three social factors on the variation of (Qaf) in Ammani Arabic. In specific, the social factors investigated were gender, age, and level of education. In order to elicit a corpus of vernacular speech, thirty sociolinguistic interviews with 30 speakers who were all born and raised in Amman were conducted. Using computer software GOLDVARB X (Sankoff et al., 2005), it was found that all social factors were statistically significant. Furthermore, gender was considered the most significant factor while education appeared to be the least significant factor. The results of the study support previous research that females frequently use [?], presenting their feminine identity. In regard of age, old participants favored the use of [g] rather than [?] while [?] was most frequently used by young speakers. Moreover, education was also found as a significant social factor. In this respect, low-educated preferred [g] and highly-educated speakers preferred [q]. In regard to education, the researcher followed Abdel-Jawad's (1987) proposal that education in Arabic is a genuine variable which directly affects language variation in Arabic.**

***Index Terms*—Qaf variants, age, gender, education, Ammani Arabic**

I. Introduction

A. Language Variation

Interest in linguistic variation has developed rapidly since the rise of sociolinguistics in the 1960s. Thus, the study of language variation is crucial to sociolinguistics, to the degree that it involves the impact of social factors on the choice of a particular phenomenon. Essential to the Variationist paradigm as developed by Labov is to understand language change and the framework of variability. This is achieved by forming relations between the speakers' social characteristics and their use of linguistic choice. In this regard, Labov (1982) states that "heterogeneity is an integral part of the linguistic economy of the community, necessary to satisfy the linguistic demands of everyday life" (p. 17). Moreover, Wolfram (2006) adds that "if structure is at the heart of language, then variation defines its soul" (p. 333). Accordingly, this approach is based on the assumption that variability is an internal element of human language (Labov, 1969) where various forms of same function can be communicated.

In the variationist approach, the linguistic variable is realized as the main analytical construct which is defined as "two or more ways of saying the same thing" (Labov, 1972, p. 271). In this respect, Poplack and Tagliamonte (2001) assert that "speakers engage in a multitude of choices among discrete alternatives in discourse which, for all intents and purposes, have the same referential value or grammatical function within their respective grammatical sectors" (p. 88). Variation can be perceived in pronunciation, word choice and grammatical structures. However, this variability is structured and not random (Labov & Herzog, 1968) as well as being rule-governed by a number of social and linguistic factors that constrain variant choice (Bayley, 2013). To this effect, the specific analysis is based on the distribution of competing variants found in linguistic data that is modelled via statistical analysis.

Given the above, this study examines the influence of three social factors (i.e., age, gender, and educational attainment) on the variation of (Qaf) /q/ in Ammani Arabic (AA). In this paper, I seek the answer to this question in terms of variationist sociolinguistics (Labov, 1972, 1982, et seq.; see also Tagliamonte, 2012).

B. The Variation of /q/ and the Selection of the Social Factors

In the literature of modern Arabic studies, there is a widespread interest and debate concerning the most effective factors that influence the linguistic context of Arabic speakers (Al-Wer, 2000). In regard of previous work, Ferguson (1959) drew distinctions between various dialects by referring to the concept of 'diglossia' in speech communities, when "two or more varieties of the same language are used by some speakers under different conditions" (p. 325). In regard of status, Abd-El-Jawad (1987) states that sociolinguists tend to "equate the terms 'prestige' and 'standard'. Consequently, considering Modern Standard Arabic (MSA) as the only prestige variety in all settings" (p. 359). He further argues that there are "also local or regional varieties which act as local spoken standards competing with MSA in informal settings" (p. 359).

Regarding this aspect, the (Q) variable is a fundamental sound in Arabic dialects (Salman, 2003). Abdel-Jawad (1981) states that "because of the social and geographical importance of this variable [Q] as a carrier of local or regional loyalties, it has often been used by dialectologists as the main criterion for establishing the dialect boundaries or isoglosses in the Arabic dialects" (p. 159). Accordingly, many studies addressed the variable /q/ and

considered this variable as a crucial example to demonstrate the phonological variation in the Arabic language (Cleveland R, 1963; Abdel-Jawad, 1981; Al-Khatib, 1988; Al-Wer, 1991; Salman, 2003). In the matter of this variable (Q), it has four major variants: the voiceless uvular stop [q]; the glottal stop [ʔ]; the voiced velar stop [g]; and the voiceless velar stop [k]. For example, the possible pronunciations for the word /qaal/ 'he said', namely [qa:l], [ga:l], [ʔa:l], [ka:l] (Al-Wer, 2009). The various alternants of the word /qaal/ 'he said' do not express different propositional meanings. However, the difference remains in their social meanings (Al-Wer, 2009). Moreover, such variation of these different forms of the word /qaal/ 'he said' is never random, but relate to the influence of certain social factors (e.g., age, gender, education attainment, regional origin, residential area, social class, etc.) (Al-Wer, 2013b).

In spite of the inter-dialectal variation concerning the variable /q/, in CA, [q] as a uvular plosive has been retained due the use of this specific realization in official places such as news broadcasts, schools, universities, and mosque sermons, while the urban [ʔ] is recognized in urban areas, such as the capital Amman and other surrounding cities like Al-Zarqa. In specific, Al-Wer and Herin (2011) illustrate that the emergence of [ʔ] in Jordanian Arabic manifested by the contact and connection with urban Levantine dialects. The most notable impact came from urban Palestinian caused by the Palestinian migration to Jordan post the Arab-Israeli war. Consequently, the connection between Jordanians and Palestinians resulted in the appearance of [ʔ] in local dialects.

Another social factor affecting the use of [q] is age. In this regard, the youngsters of Amman nowadays refer to themselves as 'Ammaniyiin', separating from their parents and their origins. Therefore, the new linguistic features and new combinations of existing features, are symbols of this new identity (Al-Wer & Herin, 2011).

Furthermore, women have guided the way in this linguistic innovation, as a manner to elevate their social status. A significant number of females who were raised in [g] or [q] speaking surroundings have been found to frequently produce the [ʔ] variant when talking to others (El Salman, 2003). This specific variant [ʔ] is by no means "intrinsically 'softer' or 'feminine'" (Al-Wer & Herin, 2011), when set side by side to other variants of [q]. However, the fact that it is frequently used more by women has encouraged such a classification. Therefore, the majority of male speakers feel prohibited from producing this variant (Al-Wer & Herin, 2011).

Consequently, a series of events, primarily of socio-political nature, have caused the redefinitions between the social meanings and different linguistic features. For example, the realization [g] has become a main symbol of 'Jordanian identity'. Despite the fact that origin as a social parameter continues to impact the linguistic situation, other parameters such as education, gender and age have also become prominent. The prominence of social parameters is never static, but shifts with social evolution in general. Universal education, urbanization and modernization demand a certain extent of homogenization, or normalization of social practices. In this regard, this normalization includes the linguistic one, which eventually blurs the original ethnically-based linguistic differences. However, pressure in the opposite direction, in the attempt to maintain distinctive local identity, will ensure that certain local features will be preserved (Al-Wer & Herin, 2011).

The selection of "education" as a speaker variable is based on the presumption that linguistic changes in spoken Ammani Arabic are controlled by systemization to Standard Arabic. However, this is still not widely understood. An alternative model of speaker selection and investigation is needed. Thus, it is the purpose of the current study to examine the role of certain social factors i.e., age, gender, education that may constrain the phonological variation of "qaf" /q/ in JA.

II. Review of Literature

This section reviews available research in the context of existing knowledge regarding socio- linguistic variation, with attention to research concerning the variation of phonological variables. Researchers have approached sociolinguistic variation differently; this has resulted in creating different understandings and approaches towards studying this phenomenon. For example, Al-Tamimi (2001) set out to examine phonetic and phonological variation in the speech of Fallahi (rural) migrants in the city of Irbid. In specific, the study addressed four linguistic variables: (Q), (D), (θ) and (dʒ) in relation to four social variables (social class, gender, education, and age). The sample included 72 informants who lived in the same area with similar social and cultural backgrounds. Tamimi's (2001) study found that the standard [q] does not have significant association with class, whereas the rural [k] does not display any correlation to any extent. It also showed that the [k] variant is not used by the rural Jordanian speakers and the rural [g] is used by the lower-class speakers more than any other class. However, the urban [ʔ] is more frequent in the speech of higher-class informants.

Comparing the frequency of the /q/ variants across gender, the study reported that the male speakers use the standard variant more than the females in Jordan. Moreover, male speakers use the rural [g] variant in their speech almost twice as much as females, while the urban [ʔ] variant is used considerably more by the female speakers. The study also suggested that high level of education of speakers should not necessarily result in a higher approximation towards standard Arabic. The study's conclusions show that in Jordan, the two main factors that significantly affect how non-local, prestigious features are used are gender and social class (Tamimi, 2001).

Similarly, El-Salman (2003) conducted a study in the Karak region of Jordan to look into linguistic variance in the speech of the 1948 immigrant Palestinian Fallahis. It aimed to shed light on the pattern of variation that exists in the speech of the Fallahis in Karak and its relation to sociolinguistics variables, such as age, gender, and education. In

specific, the study stressed on the following phonological variables: (Q), the reflex of the voiceless uvular stop /q/ in Standard Arabic; (K), the reflex of the voiceless velar stop /k/ in Standard Arabic and many dialects; and the 2nd person feminine singular pronoun, produced as /Vki/ in Standard Arabic and as /ik/ in most Arabic dialects (El-Salman, 2003).

The sample of the study consisted of 48 Jordanian informants, specifically those whom were displaced from Palestine to the area in 1948 as a consequence to the Arab-Israeli war. El-Salman (2003) adopted Labov's variationist approach as the theoretical framework and face-to-face interview techniques were employed to elicit data. SPSS was also employed to analyze the data.

The findings of El- Salman's (2003) study showed that young Fallahi speakers have shifted from speaking their native dialect to local and urban variations. Specifically, the younger Fallahis now prefer the local form [g] or [ʔ] over the [k] variant of the variable (Q). Moreover, this was also the case concerning the [ik] variant of the variable (Vki), favoring the local variant [ki]. Additionally, they have a tendency to have given up on the variant [ʧ] in favor of the [k] variant. On the other hand, the gender effect was found to have some effect on some phonological variables. In specific, none of the young males have abandoned the use of the non-local variant [k] in favor of the urban variant [ʔ]. While a considerable proportion of young females seem to have discontinued using the non-local [k] variant in favor of the urban variant [ʔ]. It was pointed from this study (El-Salman, 2003) that a sizable fraction of the middle age group showed signs of being able to adjust to both the local variant [g] and the local variant [ki]. As a result, the older generation appears to have preserved the native dialect's variants [k] and [ik].

Another relevant study concerning phonological variables was carried out by Omari and Jaber (2019), they investigated the effect of gender and social class on the acoustic correlates of emphasis in JA. They considered the specific acoustic measurements: VOT (Voice Onset Time) for voiceless stops, post-release duration (voiced stops), friction duration, vowel duration, and vowel formants (F1, F2, and F3) at onset and midpoint positions to probe such variation (Omar & Jaber, 2019). A list of 1216 monosyllabic minimal pairs, comprising the plain coronals [t, s, ð, d] and their emphatic counterparts [tˤ, sˤ, ðˤ, dˤ], served as the study's stimuli. A total of 40 native speakers of JA who come from two socioeconomic groups (upper class and lower-middle class) were recorded.

According to the study's findings (Omari & Jaber, 2019), female speakers often suppress the magnitude of strong emphasis cues in order to avoid them. In other words, compared to male speakers, female speakers produced less F1 rising at onset position and F2 lowering (onset and midpoint). Women prefer the weak emphasis production variant because their emphasis pronunciation cues appear to be weaker than those of men. As a result, they identify as urban and feminine. Nonetheless, male speakers appear to be more conservative than females, favoring strong emphasis production, the nonstandard variant. This finding is in line with the debate about the effect of gender on emphasis production in JA (see Abudalbuh, 2010) by showing that weak emphasis production, the prestigious form, is favored by female speakers. Furthermore, gender-related emphasis variation is related to social class variation in two distinct linguistic environments: F1 (onset and midpoint) and F2 (midpoint). Omari and Jaber (2019) concluded that the role of gender cannot be thoroughly acknowledged in isolation from the speakers' social class background.

III. Methodology

A. Speech Community

Amman which is the capital city of Jordan, was targeted for this study. The reason for this choice was due to the city's variety of distinct dialects as a result of immigrations from neighboring countries, such as Palestine, Syria and Iraq (Abd-El-Jawad, 1981, 1987). In this regard, Al-Wer (1991) points out that "carriers of new social standards, and perhaps new linguistic norms, from the larger communities into the communities of their hometowns" (p. 25). Therefore, a number of studies, e.g., by Abd-El-Jawad (1981) and Al-Wer (2007), Abd-El-Jawad (1981) and Al-Wer (2007) suggest that Amman does not have a definite dialect because there exists a blend of distinct dialects.

B. Sample

A corpus of over 25 hours of audio recordings from 30 native speakers of AA makes up the current study. Participants are divided into age, gender, and educational attainment categories. With respect to age, the youngest participant is 19 years old whereas the oldest participant ages 70 years old. As for the educational attainment of the speakers, the lowest level of education is high school, while the highest level of education is a PhD degree. This is displayed in Table 1.

TABLE 1
SAMPLING POPULATION ACCORDING TO AGE, GENDER, AND EDUCATION ATTAINMENT

Age	Male		Female		Total
	High educated	Low-education	High education	Low education	
Old (+55)	2	2	2	2	8
Middle-aged (35-55)	3	3	2	2	10
Young (18-35)	3	3	3	3	12
Total	8	8	7	7	30

In regard of age, the participants were distributed into three age cohorts (young, middle-aged, and old). The young speakers' age range was between 18-35 years old while middle-aged speakers' age range was between 35-55 years. Old speakers included participants +55. In addition, speakers were stratified by gender (Labov, 2002). According to Table 1, speakers were categorized based on their educational level in order to consider whether education has an impact on variant choice. The categorization did not include uneducated participants as the education system in Jordan is obligatory up to ten years (Education Act, 1994). Nonetheless, education attainment was stratified into two cohorts: speakers who have obtained a secondary degree or less were classified as low educated speakers and participants who have obtained university or higher degree were classified as highly educated speakers.

C. Data Collection

To conduct this investigation, the researcher adopted a "friend-of-a-friend approach", or the "snowball technique" (Milroy & Milroy, 1977). In this respect, the greater number of the participants was from the researcher's social networks as well as meeting with some people in public locations such as cafes, malls, supermarkets, and universities who were all from Amman. The researcher received a consent from every participant and informed them that the recordings of the interviews will be confidential and solely used for research purposes.

The length of the audio-recordings was in the range of 30-60 minutes in order to elicit a corpus of data on vernacular speech which is considered "the most systematic data for linguistic analysis" (Labov, 1984, p. 29). In this regard, the participants were asked questions based on the face-to-face technique that allow them to speak freely without paying attention to their choice of variants and were recorded using an iPhone mobile as a portable recording device. The topics used were related to emotional experiences, personal narratives, ghost stories (Herman, 1999), politics, and recent natural phenomena (Feagin, 2013) in issues in order to encourage the participants to express their views and experiences.

D. Data Extraction, Coding and Analysis

Qaf variants were targeted, extracted and transcribed from all of the audio-recordings without a full transcription for the entire duration of the recording. Next, the extracted data (1302 tokens) obtained was transcribed to an Excel file then coded for a number of specified variables (age, gender, and education). Each token's correlated coding string was gathered and imported into a token file, which is a flat-text file ready for statistical and distributional analysis (Tagliamonte, 2006; Poplack & Tagliamonte, 2001). The distributional and binominal logistic regression analyses are provided by GOLDVARB X (Sankoff et al., 2005), which was utilized by the researcher for data analysis.

Additionally, a cross-tabulation setup was made to evaluate the influence of particular variables on the selection of /q/ variants. The goal of the cross-tabulation method is to perform quantitative analysis and display the relationship between several variables. Statistical analysis and a quantitative tool were used to model the impact of social factors on the variant choic (Tagliamonte, 2006; Poplack & Tagliamonte, 2001).

IV. FINDINGS AND DISCUSSION

In this section, the researcher provides the main findings of the GOLDVARB X program.

A. Overall Distribution

A total number of 1302 tokens were extracted from the interviews. The results in Table 2 provide the overall distribution of the variant [g] (48.2%) which is higher than that of [ʔ], [q] and [k] in AA (30.3%, 21.5%, 0.0%, respectively).

TABLE 2
OVERALL DISTRIBUTION OF (QAF) VARIANTS IN AMMAN[1]

Variant	Percentage (%)	Number (N)
[g]	48.2%	628
[q]	21.5%	280
[ʔ]	30.3%	394
[k]	0.0%	0
Total	100%	1302

B. Analysis of Social Factors

This section presents the distributional analysis, cross-tabulations, and multivariate analysis of the social factors.

(a). Distributional Analysis of the Social Factors

To report a more complete distribution of the variants, I present the frequency of each variant's occurrence with regard to the social factors.

1. Speaker's Gender

Figure 1 exhibits that males (70.2%) use [g] more than females (24.0%). However, females use [ʔ] more than males (59.5 & 3.7%, respectively). It also indicates that males (26.1%) use [q] more than females (16.5%).

		?	Q	G	Total	%
F	N	369	102	149	620	47.6
	%	59.5	16.5	24.0		
M	N	25	178	479	682	52.4
	%	3.7	26.1	70.2		
Total	N	394	280	628	1302	
	%	30.3	21.5	48.2		

Figure 1. Distribution of [q], [g] and [ʔ] According to Speaker's Gender
Gender (M: Male, F: Female)

2. Speaker's Age

Figure 2 below displays that young speakers have a higher tendency to use [ʔ] (38.6%) than old aged speakers (8.3%). In this regard, the distribution shows that the younger the speaker, the higher percentage of using [ʔ]. While old aged speakers (71.8%) use [g] more than middle aged and young speakers (36.7%, 41.4%, respectively). Moreover, middle aged speakers have a higher tendency to use [q] (25.3%) than the other groups.

Group		?	Q	G	Total	%
		?	Q	G		
Y	N	221	114	237	572	43.9
	%	38.6	19.9	41.4		
M	N	144	96	139	379	29.1
	%	38.0	25.3	36.7		
O	N	29	70	252	351	27.0
	%	8.3	19.9	71.8		
Total	N	394	280	628	1302	
	%	30.3	21.5	48.2		

Figure 2. Distribution of [q], [g] and [ʔ] According to Speaker's Age
Age: Y: (18-35 years), M: (35-55 years), O (55+)

1The variant [k] is ruled out as a result of the lack of tokens in the data (0 tokens). This means that the [k] variant was not included in the distributional and multivariate analyses due to its vanishing rare number of tokens.

3. Speaker's Education

The results in Figure 3 below demonstrate that low educated speakers use the variant [g] (53.4%) more frequently than highly educated speakers (43.4%). Furthermore, low educated speakers also use the variant [ʔ] (38.9%) more than highly educated speakers (22.2%). On the other hand, the variant [q] is more frequent in the speech of highly educated speakers (34.4%), compared to low- educated speakers (7.7%).

		?	Q	G	Total	%
H	N	150	232	293	675	51.8
	%	22.2	34.4	43.4		
L	N	244	48	335	627	48.2
	%	38.9	7.7	53.4		
Total	N	394	280	628	1302	
	%	30.3	21.5	48.2		

Figure 3. Distribution of [q], [g] and [ʔ] According to Speaker's Education
Education (H: high education, L: low education)

C. Cross Tabulation of the Social Factors

The social factors have also been cross-tabulated in order to investigate any unrevealed intersections in the dataset.

(a). Cross-Tabulation of Speaker's Age and Gender

The cross tabulation analysis of speakers age and gender in Fig 4 displays that middle aged, female speakers have the highest percentage of using /ʔ/ while it is non- existent and almost non-existent in the speech of young, male speakers and middle aged, male speakers respectively. On the other hand, young, male speakers use [g] more than the other groups. Whereas middle aged, males use the variant [q] more than other speakers.

		Y	%	M	%	O	%	∑	%
F	ʔ:	221	72:	142	97:	6	4	369	60
	Q:	59	19:	5	3:	38	23	102	16
	G:	27	9:	0	0:	122	73	149	24
	∑:	307	:	147	:	166		620	
M	ʔ:	0	0:	2	1:	23	12	25	4
	Q:	55	21:	91	39:	32	17	178	26
	G:	210	79:	139	60:	130	70	479	70
	∑:	265	:	232	:	185		682	
∑	ʔ:	221	39:	144	38:	29	8	394	30
	Q:	114	20:	96	25:	70	20	280	22
	G:	237	41:	139	37:	252	72	628	48
	∑:	572	:	379	:	351		1302	

Group #1 - horizontally(Y:young,M:middle aged,O:old)
Group #2 - vertically(F:female,M:male)

Figure 4. Distribution of [q], [g] and [ʔ] According to the Cross-Tabulation of Age and Gender

(b). Cross-Tabulation of Speaker's Age and Education

The cross tabulation of age and education shows that the variant /ʔ/ is most frequent in the speech of young, low-educated speakers whereas it is non-existent in the speech of old, highly educated speakers. On the other hand, middle-aged, highly educated speakers use [q] more than other groups but this variant seems to be vanished in the speech of middle-aged, low educated speakers.

		Y	%	M	%	O	%	∑	%
H	?:	62	24:	88	39:	0	0|	150	22
	Q:	98	38:	96	43:	38	20|	232	34
	G:	100	38:	39	17:	154	80|	293	43
	∑:	260	:	223	:	192	|	675	
L	?:	159	51:	56	36:	29	18|	244	39
	Q:	16	5:	0	0:	32	20|	48	8
	G:	137	44:	100	64:	98	62|	335	53
	∑:	312	:	156	:	159	|	627	
∑	?:	221	39:	144	38:	29	8|	394	30
	Q:	114	20:	96	25:	70	20|	280	22
	G:	237	41:	139	37:	252	72|	628	48
	∑:	572	:	379	:	351	|	1302	

Group #1 - horizontally(Y:young,M:middle aged,O:old)
Group #3 - vertically(H:high education,L:low education)

Figure 5. Distribution of [q], [g] and [ʔ] According to the Cross-Tabulation of Age and Education

(c). Cross-Tabulation of Speaker's Gender and Education

The results in Figure 6 indicate that female speakers use [?] more than males regardless of their level of education. In regard of the standard [q], it is more frequent in the speech of highly educated speakers, particularly highly educated males, compared to low- educated, males and females.

		F	%	M	%	∑	%
H	?:	150	48:	0	0|	150	22
	Q:	66	21:	166	46|	232	34
	G:	97	31:	196	54|	293	43
	∑:	313	:	362	|	675	
L	?:	219	71:	25	8|	244	39
	Q:	36	12:	12	4|	48	8
	G:	52	17:	283	88|	335	53
	∑:	307	:	320	|	627	
∑	?:	369	60:	25	4|	394	30
	Q:	102	16:	178	26|	280	22
	G:	149	24:	479	70|	628	48
	∑:	620	:	682	|	1302	

Group #2 - horizontally(F:female,M:male)
Group #3 - vertically(H:high education,L:low education)

Figure 6. Distribution of [q], [g] and [?] According to the Cross-Tabulation of Gender and Education

D. Multivariate Analysis of the Factors

This section illustrates the results of the stage of analyzing the factor groups simultaneously and incorporating the logistic regression method into the GOLDVARB X computer program. This is used to assess the statistically significant social factors, such as age, gender, and educational attainment. In this regard, Tagliamonte (2012) proposed that "using the variable rule program, it is ill advised to run more than about six factor groups in a model" (p. 136). Furthermore, the multivariate analysis works along the description of three primary lines of evidence. According to Poplack and Tagliamonte (2001), these three lines are: "(statistical) significance of independent variables (at the 0.05 level), intensity of influence, as measured by the distribution between the highest and lowest factor weight in a factor group, and hierarchy of restrictions, or ordering of factor weights within a factor group" (p. 92).

Multivariate Analysis of the Factors Influencing [g]

In Table 3, the results indicate that the social factor groups which are included in the multivariate analysis are all statistically significant. In other words, all social factors examined in this study have a crucial role in conditioning the use of /q/ variants in AA.

TABLE 3
VARIABLE RULE ANALYSIS OF THE CONTRIBUTION OF THE SOCIAL FACTORS TO THE PROBABILITY THAT THE VARIANT [G] WILL BE SELECTED

Corrected mean	0.476
Log likehood	-665.919
Significance	0.000
Total number	1302
Gender	**Factor weight**
Females	.22
Males	.76
Range	*54*
Age	
Old	.80
Middle	.30
Young	.43
Range	50
Education	
High	.42
Low	.59
Range	17

Based on the range values of the statistically significant factors, the results presented in Table 3 demonstrate the greatest influence of "gender" on the selection of variants. This is predicated on the social factor groups' range values. The constraints hierarchy within this factor group (gender) reveals that, in contrast to females (.22), men favor the variable [g] (.76). The factor group of age represents the second strongest effect on the variant selection; old speakers favor the variable [g] (.80) while middle aged speakers disfavor it (.30). Furthermore, the speaker's level of education has the third strongest impact on the form choice. In this respect, low educated speakers favor the variant [g] (.59); however, highly educated speakers disfavor it (.42).

In conclusion, the findings clearly demonstrate that the variation of /q/ is socially conditioned. After presenting the results of the multivariate analysis of the social factors, the following section discusses the significance of the social factors and sheds light on how the findings are related to the previous literature.

V. DISCUSSION

A. Gender

The results in Table 3 above show that according to the magnitude of effect, gender has the strongest influence on variant choice. It can be observed that female speakers highly disfavor the use of the variant [g]. This use may be justified being based on the idea that such forms of pronunciation seem less urbanite and therefore less prestigious. Meanwhile, this variant is highly preferred by male speakers. It is noticeable that in the cross-tabulation of age and gender, the percentage of the variant [ʔ] was found to be highest in the speech of middle-aged and young female participants.

These results can be well accounted for based on the notion that such choices are related to the prestigious forms. Regarding the variants of /q/ in AA, [ʔ] is the prestigious form. Therefore, it is highly favored by female speakers (in particular young and middle-aged). As revealed in variation literature (Labov, 1990; Cameron, 2003), prestigious forms are more likely to be used by women. This also lends support to Habib's (2010) finding that females use [ʔ] much more than males. Moreover, Harahsheh (2014) found that males and females differ in their style of speech, confirming that females tend to use prestigious forms in their speech more than males. Furthermore, [ʔ] could be considered as a sign of femininity as young females usually adopt certain variants that represent gender identity in order to distinguish them from males. This conforms with Al-Hawamdeh (2016), who states that "women's linguistic preference could be described as supra-local features, while men prefer the localized features" (p. 70).

In regard of the preference of the variant [g] in males' speech, this specific variant could be assumed as a sign of masculinity as supported by Al-Wer (2007). This assumption is based on gender-specific competitive qualities where male speakers favor [g] and female speakers favor [ʔ]. This is also in line with what was stated by Al-Ali and Arafa (2012) in that the choice of variants is a gender specific matter. Overall, female choices of variants can be interpreted in that they tend to use more prestigious forms in their speech. Nonetheless, males tend to preserve their original accent and favor the variants that indicate their masculinity, which is in this case is the variant [g].

However, in the case of the standard [q], this variant is mostly preferred by highly educated males. This is similar to what was reported by Al-khatib (1988). He specifically found that males use the variant [q] twice as frequently as females, concluding that the variable (Qaf) is a gender marker.

In conclusion, the findings and its relation to previous literature reveal that given the role that women play in steering cross-linguistic language change, the social factor (gender) has a significant influence on language change cross-linguistically (Labov, 1990). Moreover, in Jordanian Arabic, gender has significantly influenced a number of phonological factors, such as in the finding of El-Salman (2015) who reported that males favor affrication more than

females concerning the pronunciation of the variant [k].

B. Age

The results in Table 3 above illustrates that the second strongest, social factor that has influence on variant choice is age. In this regard, the old speakers favor the variable [g] (80) while middle-aged speakers disfavor it (30). Furthermore, the distribution shows that the younger the speaker, the higher percentage of using [ʔ]. Moreover, middle aged speakers have a higher tendency to use [q] (25.3%) than the other groups. A justification for this high use of [q] may be that engaging in higher education and studies usually take place at that specific range of age (35-55), while younger speakers use more prestigious forms of pronunciation. In this respect, the results of this study agree with the results of Habib (2010) who stated that the choice of variants is affected by the speaker's age; older speakers favored the variant [q] and younger speakers favored the variant [ʔ].

In conclusion, older speakers favor the variants that reflect their origin whereas younger speakers use more prestigious and innovative forms in their speech. Therefore, the age of the speaker has an influence on the choice of the variants. This agrees with Jarrar and Jumhuria's (2019) proposal that the variable (Qaf) is considered a marker of speaker's age.

C. Education

In terms of education, Table 3 above shows that speakers with lower levels of education utilize the variant [g] more frequently (59) than speakers with higher levels of education (42) do. According to the cross-tabulations, the standard [q] was favored by highly educated speakers more than low-educated speakers.

The influence of education can be viewed from two different views. The first view is based on the assumption of Abdel-Jawad (1987) who specifically suggests that educated speakers favor standard variants as a result of usually being influenced by the standard speech norms as education exposes speakers to the standard variants of the language. Furthermore, speakers prefer such standard variants to distinguish themselves from uneducated or low-educated speakers. Consequently, they adopt the supra-local variation rather than the local variety in order to avoid stigmatization. To this concern, Miller (2008) adds "in order not to be looked down upon for being provincial" (p. 40).

However, Al-Wer (2013a), maintains a counter view, proposing that education is rather a tool through which educated speakers enhance their mobility and not a primary reason for variation. Hence, pursuing education normally requires the speakers to relocate to large cities due to the location of universities and colleges, extending their social network. As a result, the speakers adopt the prestigious variants whether similar to or different from the standard variants. Furthermore, Al-Tamimi's (2001) study supports this view, referring to education as "a channel that brings people in contact with the locally prestigious dialect" (p. 29). In addition, Ismail (2007) further agrees that education is "a tool to better one's social and professional status" (p. 209).

Regarding this study, the findings point to the likelihood that the variant [q] is preferred by highly-educated participants is related to the influence of Standard Arabic on the speakers. Both variants [ʔ] and [g] are rather used in colloquial speech. In regard to phonological variants, such variants in AA are considered stigmatized. In this study, the researcher refers to the effect of education on the variant choice to Abdel-Jawad's view. In this respect, the researcher agrees that educated speakers adopt standard variants due to the influence of the standard speech norms. In that education highly expose educated speakers to the standard variants of the language.

VI. Conclusion

The present study explored the effects of some social factors, age, gender, and level of education on the variants of "qaf" in Ammani Arabic. The analysis revealed that all social factors are statistically significant. It was also found that gender is considered the most significant factor while education is the least significant factor. Furthermore, the study supports previous research that females frequently use [ʔ], presenting their feminine identity. In regard of age, old participants adopted [g] rather than [ʔ] which was most frequently used by young speakers. Education was also found significant. In this respect, low-educated use [g] and highly-educated speakers use [q]. I have followed Abdel-Jawad's (1987) proposal that education in Arabic is a genuine variable which directly affects language variation in Arabic.

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