

AN EXPERIMENTAL SOCIOLINGUISTIC STUDY OF LANGUAGE VARIATION IN JORDANIAN ARABIC

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ABSTRACT

The use of instrumental techniques in studies on the correlation of social variables with consonantal variation is a new trend in linguistic research. This trend is part of a new eclectic research area called socio-phonetics. This technique, to our knowledge, has not been so far utilized in investigating the phonological variations in Arabic. Therefore, the purpose of this study is to examine the social impact of gender and educational setting on patterns of variation in the use of /θ/, / dʒ /and /ð/ by means of instrumental as well as auditory techniques. A pictorial interview was used to elicit data from the speech of 40 male and female respondents from two educational backgrounds. The main results of the study indicate that gender and educational setting differences affect the use of linguistic variants. Auditory examination reveals that men and individuals with high school education have a higher tendency to maintain the use of local variants, whereas women and individuals with university education have a higher tendency to adopt non-local prestigious variants. Furthermore, employment of acoustic measurements uncovered that in the use of local variants female respondents tend to consciously lower the degree of salience of these variants. In conclusion, male and female speech behavior depends on social priority. Men are driven by the concept of masculinity and toughness, while women are driven by prestige and softness.

1 INTRODUCTION

Socio-phonetics focuses on the interrelation between phonetic/phonological forms and social variables. It seeks to provide explanations of how language change originates and spreads through different communities (Foulkes 2005). In Wolfram's (1991) view, the linguistic variable is the basic conceptual tool to relate variation in language to social factors. Wolfram and Schilling-Estes (2000) define the linguistic variable as a varying linguistic structure (e.g. -ing/ in') which may correlate with social

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factors such as region or status, or with linguistic factors such as linguistic environment.

Variants of a phonological variable can be identified either auditorily or acoustically. In auditory identification, phoneticians rely entirely on their own impression of a sound (Hayward 2000), whereas acoustic identification requires technological aids because acoustics studies the physical properties of speech sounds. Auditory techniques are used in measuring relatively discrete variants, which are easily coded or discriminated, while acoustic measurements are used in underpinning continuous variation, i.e. differences that cannot be distinguished auditorily. They translate speech signals into visual representations (Milroy and Gordon 2003). These instrumental techniques allow investigators to take a closer look into the details of particular speech components that are not auditorily recognizable.

The social variables, on the other hand, affect the probability of linguistic variant selection. These variables include, among others, gender, age, social class, social network, education, ethnicity and religion. They differ from one speech community to another because each society has its own social norms (Trudgill 1983). Each factor has been known to influence the probability of variant occurrence. As indicated in most correlational studies in sociolinguistics, males and females differ within each age group, social class, social network, educational group, ethnicity, race and religion. For instance, females have a higher tendency than males to use the prestigious varieties in their society.

Several explanations have been given in an attempt to interpret how social factors manipulate individual's choice of a linguistic variant. Wolfram and Schilling-Estes (2000) consider matters of identity and personal presentation essential in relating linguistic differences to social ones. Additionally, rationalizations such as avoidance of ridicule and stigma, as well as the expression of local or ethnic identification and membership justify a particular variant selection (Abdel Jawad 1986). Other researchers such as Chambers (1995) promote the effect of social pressure on the usage of standard or non-standard dialect. This social pressure is what Labov (1966) refers to as prestige awareness. Language prestige depends on the social evaluation the upper social class gives to a particular variety of language. This prestige represents the cosmetic makeover, which determines whether or not a variety is acceptable in society. Nevertheless, what might be viewed as pleasing and satisfactory in one society might not necessarily be so in another.

Several studies have examined the influence of social factors such as age, gender, education, origin, social class, religion and occupation on the choice of linguistic variants. One of the pioneering studies is Labov (1966). He examines how social factors such as age, style and social class affect *r*-pronunciation. His results show that *r*-production increases with social class, consciousness and formality of speech. Following Labov's footsteps, Trudgill (1974) demonstrates that an increase in social class and formality results in a

higher tendency in the occurrence of standard variants. Milroy and Milroy (1978) notice that increases in the strength of social networks lead to increases in the use of certain linguistic features of a vernacular.

Several studies have been conducted in Arab societies relating linguistic variation to social variables such as origin, gender, age and occupation. For example, Salam (1980) notes that the [q] variant is always present in communication between educated Arabs of all origins, and is most frequently used among politicians, whereas Jabeur (1991) observes that, in Rades, Tunisia, the urban variant of /q/ increases with the increase in social integration and education among rural migrants. In Damascus, Syria, Dahir's (1997) data analysis reveals that the use of [q] is far more established in men's than in women's speech. Women, especially young educated ones, are more likely to use the urbanized variant [ʔ] than the standardized variant [q]. Amara, Spolsky and Tushyeh (1999) study some of the phonological changes in the vernacular Arabic spoken in the West Bank town of Bethlehem. They investigate religious and gender differences in the use of the variables /q/ and /θ/. Their results show that the use of [q] and [θ] is significantly higher in Muslims and males in general. On the other hand, Christians and women tend to adopt the prestigious urban dialect of Jerusalem (i.e. [ʔ] and [t]).

In Jordan, Abdel Jawad (1986) examines linguistic variation and change in five phonological variables (/q/, /θ/, /ð/, /D/ and /k/) in the speech of families from Amman and Irbid. His data reveal that people living in Amman seem to use more instances of urban variants than those living in Irbid. In both cities, females seem to use urban variants more frequently than males. He also indicates that within Jordanian urban centers there are processes of urbanization in which stigmatized local variants are being eliminated while locally and socially prestigious ones are being adopted. In a study of the effect of age and education on the use of four phonological variables (/θ/, /D/, /q/ and /dʒ/) in women's speech in Jordan, Al-Wer (1991) reveals that young and well-educated women with contacts outside their communities accommodate their speech to non-local variants of the Jordanian community more often than old and less educated women who are exposed to local network pressure. In a subsequent study, Al-Wer (1999) addresses the issue of the linguistic and social correlates of sound diffusion with reference to the variables /θ/ and /D/ in the speech of Jordanian women. Her findings indicate that interdental variables exhibit the largest amount of variation; they tend to change towards the direction of stop variants (i.e. [t] and [d]).

All the studies reviewed so far have investigated the effect of social factors on linguistic variation. In western-based sociolinguistic/socio-phonetic studies, a combination of methods were used to analyze both consonant and vowel variation. Some researchers used auditory and/or instrumental techniques. However, in the studies that used data from Arabic, generally auditory techniques were used to analyze consonants. In particular, to the best

of our knowledge, no attempt has been made to analyze the social meaning of fricative use by means of acoustic analysis. Therefore, this study is intended to fill this gap by examining auditorily and acoustically the impact of gender on using /θ/, /ð/ and /dʒ/ variants in the speech of Jordanians in Irbid city.

Specifically, this study seeks to answer the following questions:

1. To what extent do differences in terms of gender affect variant choice in the speech community of Irbid city?
2. To what degree does gender affect the duration of frication of the local variants of /θ/, /ð/ and /dʒ/?
3. Does educational setting correlate with variant choice?

2 THE DIALECTAL SETTING

Irbid is a Jordanian city located about 88 km to the north of the capital city, Amman, with an area of 1, 572 km² and 1 million inhabitants (2005 census). The governorate of Irbid, which includes the city of Irbid and several surrounding small towns and villages, is the second largest city in terms of population. This region has several colleges and four universities, the two most prominent of which are Jordan University of Science and Technology and Yarmouk University. The demographic composition of the population of Irbid has changed since 1948. The 1948 and 1967 wars led to the settlement of a number of Palestinians in the city; this, in turn, has led to the interference of non-local Palestinian dialects in addition to the local Jordanian variety.

In Jordan, Modern Standard Arabic (MSA) is considered the official language and is commonly used in formal situations such as public speeches, news announcements, and religious services. Besides, there are four regional dialects which are spoken locally in day-to-day communications: Urban, Rural, Bedouin, and Ghorani (Zurairq and Zhang 2006). The rural dialect is further divided into two subdialects: rural Palestinian and rural Jordanian. According to Zurairq and Zhang (2006), most Jordanians employ MSA, which is learned during the course of education in a classroom setting, and at least one regional dialect, which is naturally acquired.

The urban dialect is endowed with superior status and is considered more prestigious than the other three (Abd-el-Jawad 1986). Furthermore, the urban speakers are perceived to be culturally superior to speakers of other varieties (Swai 1984). Because of this attitude, the speakers of the local dialects (i.e. rural and Bedouin) tend to adopt the urban dialect at the expense of their local variants, while the opposite does not occur (Abd-el-Jawad 1981). Some of the linguistic variables that are subject to change among the speakers of local variants are the phonological variables /θ/, /dʒ/ and /ð/. These three

phonological variants were chosen because they exemplify meaningful social variation.

3 SAMPLING, STUDY VARIABLE AND RECORDING

The data were collected from a sample of 40 male and female high school and university students living in Irbid. The high school sample was selected from the population of senior high school students. The university sample was chosen from senior university students at Jordan University of Science and Technology (JUST) and Yarmouk University (YU) who are native residents of Irbid. All subjects belong to the same age group (i.e. 16–24). Table 1 shows the distribution of the sample according to gender and educational setting. The subjects were selected using a snowball technique or what is called a social network approach by Milroy and Milroy (1978), whose desire to investigate the vernacular speech of Belfast led Lesley Milroy to introduce herself to the community as a friend of a friend. This approach allowed the researchers to collect casual, spontaneous and relaxed patterns of speech from subjects.

Table 1: Distribution of the Sample

Gender \ Education	High School Seniors	Just Seniors	Yarmouk Seniors
Males	10	5	5
Females	10	5	5
Total	20	10	10

3.1 Study variables

Three dependent phonological variables (i.e. /θ/, /dʒ/ and /ð/) and two independent social factors (i.e. educational setting and gender) were investigated in this study.

3.1.1 Phonological variables

The three phonological variables under consideration have been chosen because they indicate auditorily observable social variation.

1. The voiceless interdental fricative /θ/ has the following three discrete voiceless variants: voiceless interdental fricative [θ], voiceless dental stop [t], and voiceless alveolar fricative [s]. In fact, each of the three variants represents a separate phoneme in Jordanian Arabic. That is to say, the three variants contrast in quite a number of words when they occur in different environments. They contrast in a number of minimal pairs, as illustrated in the following examples:

e.g.1.	/θa:mIr/	[θa:mIr]	"Thamir" (Proper name)
	/ta:mIr/	[ta:mIr]	"Tamir" (Proper name)
	/sa:mIr/	[sa:mIr]	"Samir" (Proper name)
e.g.2.	/θara/	[θara]	"soil"
	/tara/	[tara]	"She can see"
	/sara/	[sara]	"He left early"

However, due to social dialectal factors, these three variants, [T], [t], and [s] can be allophonic variants of the same phoneme /T/. Consider:

/θala:T/	[θala:T]	"three"
/θala:t/	[tala:t]	"three"
/θala:s/	[sala:s]	"three"

The interdental fricative variant [T] is associated with Standard Arabic and the local speech variety of Irbid. The [t] and [s] variants, on the other hand, represent the prestigious urban speech which is non-local in the community under study.

2. The voiced post-alveolar affricate / dʒ / has the following two variants: voiced post-alveolar affricate [dʒ], and voiced alveolar fricative [Z]. It is noteworthy that [dʒ] is associated with Standard Arabic and the local variety of Irbid whereas [Z] is associated with the speech of prestigious urban varieties which is non-local in Irbid community.

3. The voiced interdental fricative /ð/ has the following three discrete voiced variants: the voiced interdental fricative [ð], the voiced dental stop [d], and the voiced alveolar fricative [z]. Due to social dialectal variables, these three variants are used as allophones of the same phoneme /ð/ in different settings. For example, [ð] is associated with Standard Arabic and the local variety of Irbid, while the other two variants represent prestigious urban speech which is non-local. Consider the following example:

/ðahaba/	[ðahaba]	"he went"
	[dahaba]	"he went"
	[zahaba]	"he went"

However, the distinction between [ð], [d] and [z] in Arabic is phonemic in nature because they are used as separate contrastive phonemes in a large

number of minimal pairs in Standard Arabic. The following examples illustrate this case:

e.g.1	/ðala/	[ðal: ¹ a] "he disgraced himself"
	/dala/	[dal:a] "he guided someone"
	/zala/	[za:la] "he made a mistake"
e.g.2	/ðaka/ sacrifice"	[ðak:a] "he made a 'religious'
	/daka/	[dak:a] "he pounded"
	/zaka/	[zak:a] "he paid alms"

3.1.2 *Social Variables*

A broad mix of people from different social backgrounds were interviewed to guarantee proper representation of the population. The present study considered the effect of gender and educational setting on the three phonological variants under study, whereas the effects of other social factors were neutralized. The term educational setting is used in this study as a cover term to distinguish high school students living in a homogeneous speech community from senior university students living in a heterogeneous one. Therefore, this study attempts to investigate to what extent a community's homogeneity or heterogeneity affects the language behavior of males and females.

3.2 *Recordings*

The recordings took place in an isolated room to block out outside noise that may affect the quality of data elicited. The participants were recorded by carrying out a picture-based word elicitation procedure consisting of production of words elicited by asking the participants to tell the story depicted in 32 pictures presented in Microsoft PowerPoint instead of the written forms of words (see Appendix I). Some of these words are common in everyday speech, whereas others are borrowed from Standard Arabic. The subjects were presented with the same pictures twice. In the first time, each subject had to guess what the pictures represented. Some written hints and clues were given to help them figure out what the items were. In the second go, each subject was recorded pronouncing the word which referred to each picture by using computer-based PRAAT, which is a computer-based program used to analyze and synthesize speech with spectrographic figures. The

¹ The use of colon (:) after the consonant is to indicate that it is geminate. Gemination is phonemic in Arabic.

elicited items were grouped into three categories: 11 words begin and end with /θ/, 11 begin and end with /dʒ/, and 12 begin and end with /ð/.

4 DATA ANALYSIS

Two data analysis techniques were carried out in parallel: auditory techniques to measure the discrete variants of /θ/, /dʒ/ and /ð/, which could be coded and distinguished just by listening to them and acoustic measurements to underpin continuous variation in [θ], [dʒ] and [ð], which could not be detected without an instrumental aid.

We analyzed the 34 target words found in the 32 pictures presented to each subject auditorily and acoustically. The target words produced by each of the 40 participants gave a total of 1480 sounds since 3 out of 11 words that began with /T/ also ended with it. The acoustic analysis was done using PRAAT. Each word can be enlarged and magnified to take a closer look at the acoustic properties of each sound in each word.

In this study, we measured acoustic differences among male and female respondents in terms of duration of frication in /θ/, /ð/ and /dʒ/. The duration of frication in /θ/, /ð/ and /dʒ/ was determined by analyzing the time range labeled on the horizontal axis of the spectrogram or by measuring the aperiodic wave length at the beginning or end of the word depending on the place where the consonant sound is located, see Figures 1 and 2 in Section 5.

As for controlling the neighboring sounds, all words were recorded in isolation; therefore, no effect of neighboring sounds was detected. After measuring the duration of frication in each word, males and females' results were sorted out separately. Then, the average of duration for each consonant in each word was drawn independently. Male and female respondents' averages were compared, re-examined and grouped according to their location within a word (i.e. beginning or end) and which sound they represented.

In the auditory analysis, the tape-recorded data was carefully listened to and the variants of /θ/, /dʒ/ and /ð/ were written down. In order to investigate the effect of gender on the speakers' usage of one variant rather than another and the effect of educational setting on the same variables, the averages of the duration of frication were calculated.

5 RESULTS

As stated earlier, we analyzed the relevant consonants of /θ/, /dʒ/ and /ð/ produced by the forty participants acoustically and auditorily. The acoustic findings include gender differences in frication duration, whereas the auditory

findings include gender and educational setting differences in discrete variant choice.

5.1 Acoustic findings

In analyzing [θ], [dʒ] and [ð], distinctions were found in frication duration.

5.1.1 Frication duration of [θ]/ms

Table 2 illustrates the average frication duration of [θ] in males and females' responses. Obviously, at the end of a word, [θ] tends to be longer than at the beginning. The findings indicate that males have longer frication duration noise than females in their speech.

Table 2: Gender and frication duration of [θ]/ms

Gender	At the beginning	At the end
Males	96/ms	100/ms
Females	81/ms	97/ms

5.1.2 Frication duration of [dʒ]/ms

As stated earlier, [dʒ] is an affricate sound which consists of a voiced dental stop and an alveolar fricative.

Table 3: Gender and frication duration of [dʒ]/ms

Gender	At the beginning	At the end
Males	32/ms	59/ms
Females	34/ms	59/ms

Table 3 above indicates the distinction in duration between [dʒ] located at the beginning and at the end of words. Female respondents show a longer duration in the fricative part in comparison to males. This could be attributed phonetically to the fact that lengthening the stop of an affricate will result in more affricate [dʒ] response, whereas lengthening the fricative part will produce more fricative [ʒ] responses (Hayward 2000). For example, in listening to one of the female university respondents, the researchers assumed that she had produced [ʒ] rather than [dʒ]. But the results of the acoustic examination showed a short period of burst before frication. This burst

indicates that the fricative was preceded by a short stop segment, thereby making the sound produced [dʒ]. As it is illustrated in Figures 1 and 2, it can be noticed that the frication duration in the female's spectrogram is substantially longer than that in the male's.

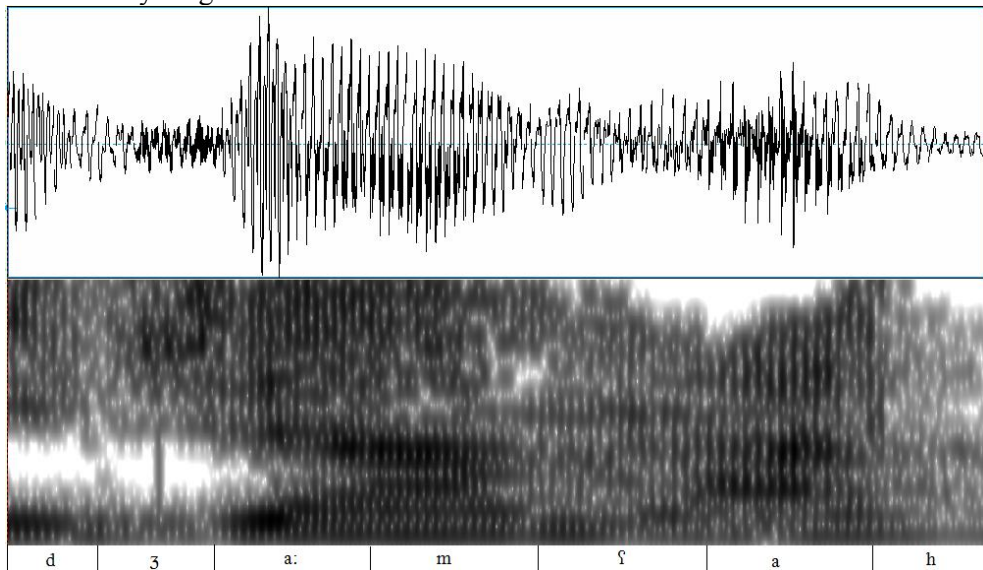


Figure 1. Friction duration of [Z] in the word [dʒ a:mɪah] "university" in the female's spectrogram

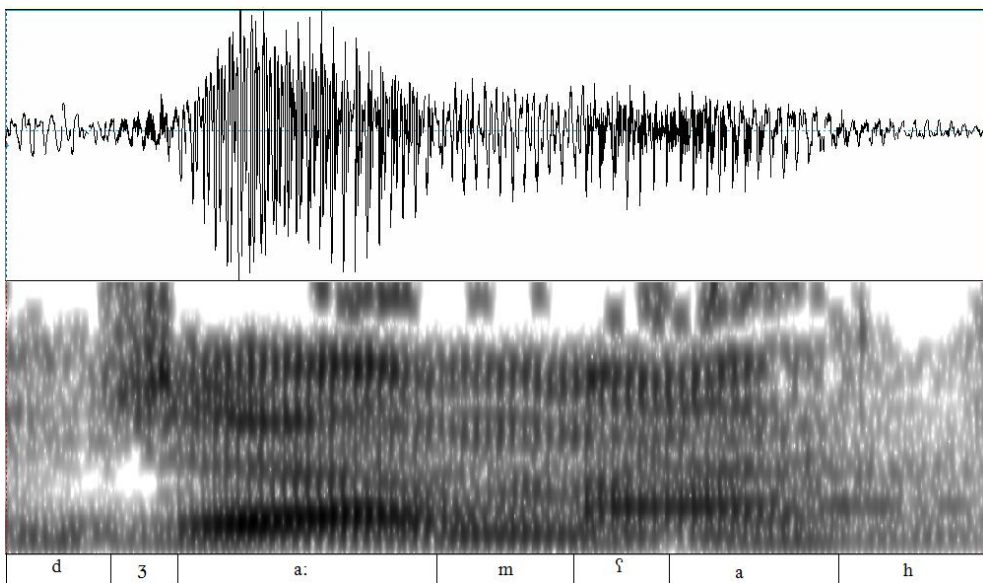


Figure 1. Friction duration of [Z] in the word [dʒ a:mɪah] "university" in the male's spectrogram

Socially, the [Z] variant has a higher prestigious connotation than [dʒ]. Consequently, females lengthen the fricative part to achieve responses which sound both urban and feminine.

5.1.3 Frication duration of [ð]/ms

Table 4 displays the average frication duration of [ð] in the speech of the respondents.

Table 4: Gender and frication duration of [ð]/ms

Gender	At the beginning	At the end
Males	75/ms	79/ms
Females	60/ms	73/ms

As shown in Table 4 above, [ð] is longer in duration at the end than at the beginning of words. Evidently, female respondents show shorter [ð] than their male counterparts. This may be attributed to female respondents' desire to reduce the masculinity featured in lengthening frication noise in fricatives.

5.2 Auditory findings

The auditory findings are limited to revealing the effect of the social variables of gender and educational setting on the use of /θ/, /dʒ/ and /ð/ variants.

5.2.1 Voiceless interdental fricative /θ/

As mentioned in Section 3, /θ/ has three variants (i.e. [θ], [τ] and [s]). Figure 3 shows their distribution among the subjects' speech.

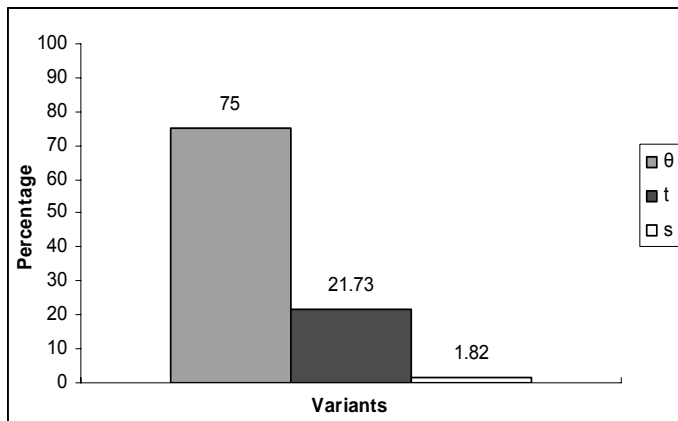


Figure 3. Distribution of /θ/ variants among the subjects in Irbid

The variant [θ] has the largest amount of distribution with a percentage of (75%), whereas [t] has the frequency of (21.73%), and [s] has the lowest frequency (1.82%) in the participants’ speech.

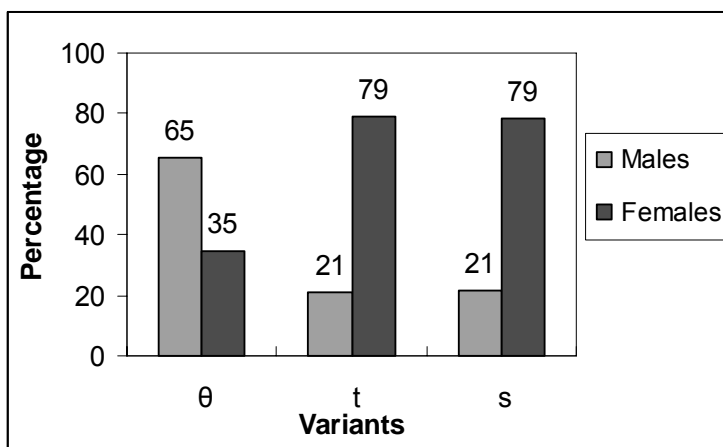


Figure 4. Distribution of /θ/ variants across gender

In studying the relation between the variants of /θ/ and gender, the data analyzed indicate that males and females tend to pronounce words with /θ/ differently. As displayed in Figure 4, males use [θ] more frequently than females. For example, males pronounce /θaani/ (second) and /θaaliθ/ (third) with [θ] 88% of the time. However, in words borrowed from Standard Arabic like /θuur/ (bull), males and females exemplified similar behavior in their use of /θ/.

On the other hand, women showed a higher usage (i.e., 79%) of [t] in comparison to that of men, especially in words of daily use. Although Figure

3 shows that [s] has a very low frequency in comparison to the rest of the variants, Figure 4 illustrates that its use is found more in females' speech with a percentage of (79%). Obviously, these results show that when [t] and [s] are found, they are distinguishably used by females.

Clear differences could not be found in the use of [θ] and [t] among high school and senior university students. High school students were found to use [θ] 52% of the time as opposed to 48% by university students. This means that an increase in education results in a decrease in the use of the local variant [θ]. University seniors formed 61 % of [t] usage. In [s] usage, considerable variation in behavior can be seen between both groups. Seniors use [s] more frequently (71%) than high school students (29%).

5.2.2 Voiced post- alveolar affricate /dʒ/

/dʒ/ was found to have 4 variants, two of which have been referred to in the literature (i.e. [dʒ] and [ʒ]) and the other two (i.e. [tʃ] and [ʃ]) are being revealed here for the first time. It was found that [ʒ] has the widest distribution with a percentage of 46% in comparison to [dʒ] which formed 39%, and [tʃ] and [ʃ] which show a very low frequency of occurrence of 9% and 6%, respectively.

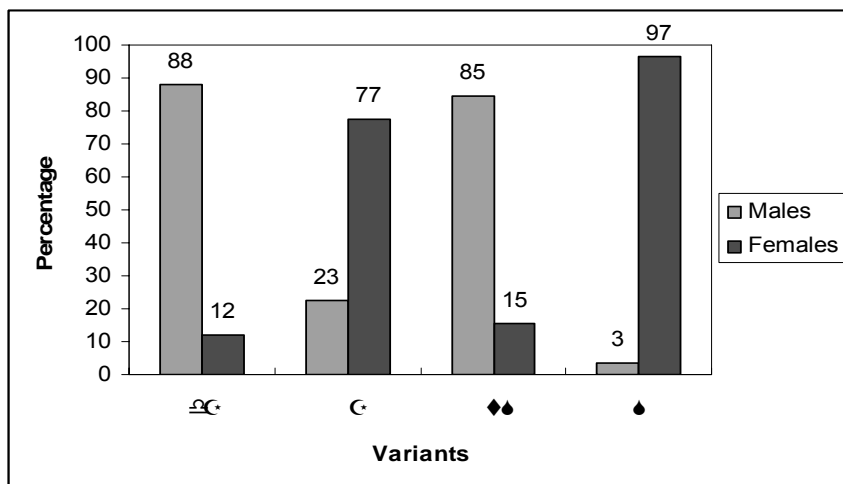


Figure 5. Distribution of /dʒ/ variants across gender

Figure 5 presents the relationship between /dʒ/ variation and gender. It shows that [dʒ] surfaces in (88%) of males' speech in comparison to (12%) in female's. On the other hand, females show a higher tendency (77%) to use [ʒ] than males (23%). The [tʃ] is a characteristic of male speech since young men

formed (85%) of all its occurrences. In contrast, females exhibited (97%) of all [ʃ] occurrences. Regarding educational setting, high school students use [dʒ] more frequently (67%), whereas university seniors utilize [ʒ], [tʃ] and [ʃ]. Again, as the level of education increases the use of the standard variant decreases.

5.2.3 Voiced interdental fricative /ð/

The data analysis revealed that /ð/ had four variants, [ð], [d], [z], and [t] with the following frequencies: the variant [ð] formed 57% of the distribution, and [d] formed 39%, while [z] and [t] were present only in 3% and 0.91%, respectively.

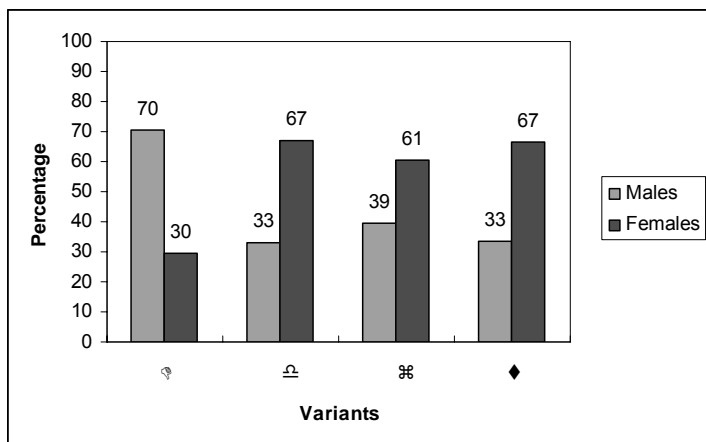


Figure 6. Distribution of /ð/ variants across gender

Regarding the relationship between the variants of /ð/ and gender, Figure 6 displays that male respondents use the local variant [ð] more often (70%) than females (30%). On the other hand, it shows very clearly that females opt for the other three variants [d], [z], and [t] more often than men do.

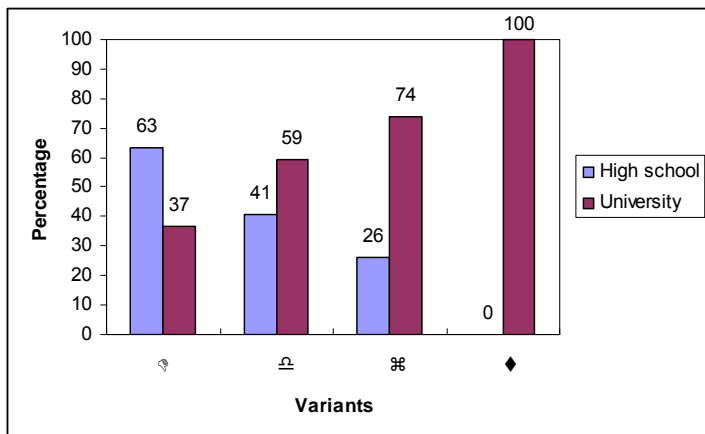


Figure 7. Distribution of /Δ/ variants across educational setting

Concerning educational setting, the results show that high school students tend to use the local variant [θ] more frequently (63%) than university students do (37%), whereas university students show a higher tendency to use the non-local variants, [d], [z], and [t], which formed (59%), (74%) and (100%) of all [d] and [z] usages, respectively.

6 6. DISCUSSION

6.1 Interaction of gender with the choice and duration of phonological variant

The results of the data analysis showed that each of the phonological variables /θ/, /dʒ/ and /ð/ has various realizations. The interdental /θ/ has the standard and the local variant [θ], and the two non-local variants [τ] and [s]. The other interdental /ð/ variable has four variants: the standard local variant [ð], and the other non-local ones [d] [z], and [t]. Likewise, the affricate /dʒ/ has 4 variants: the standard and local [dʒ], and the non-local [ʒ], [tʃ] and [ʃ]. Males and females vary in their adoption and frication duration of the phonological variants of /θ/, /dʒ/ and /ð/.

Regarding the /θ/ variable, our results revealed that the [θ] variant, which is considered the standard and the local variant, was used in 75% of the total number of occurrences of the /θ/ variable, while the other three, which are perceived as non-local urban variants and identified with prestige, were employed in 25% of /θ/ occurrences. However, speakers vary in their adoption of these non-local urban varieties. Females use them more often than males. Seventy-nine percent of women change the interdental /θ/ to the corresponding non-local variant stop [t] or sibilant [s] in their speech. This

suggests that females clearly tend to use non-local variants in their speech in Irbid. In the long run, their adoption of the non-local variants is expected to result in language change at the phonological level. Likewise, the tendency to replace [ð] with the non-local variants [d], [z] or [t] in forty-three percent of /ð/ occurrences is more frequent among the female subjects. This tendency reflects a drift, which is more frequent (70%) in females' pronunciation, towards the non-local urban variants. In contrast, males tend to use the standard local interdental variant [ð] more often.

In studying the voiced affricate /dʒ/, the following four variants were identified: the standard local [dʒ] variant and the non-local [ʒ], [tʃ] and [ʃ]. In contrast, Al-Wer (1991) found only the former two variants [dʒ] and [ʒ] in females' speech in Jordan. Although the [tʃ] and [ʃ] variants have not yet been well established in Jordanian society, the use of these variants in the near future may be more frequent in people's speech, especially in words ending with /dʒ/. For example, [tʃ] is used in 25% of /taadʒ/ (crown) occurrences, while the variant [tʃ] is not found in /dʒazar/ (carrots). It should be noted that all occurrences of the [tʃ] variant appear in males' speech, while [ʃ] occurs in females'. This indicates that the [tʃ] variant is associated with males, whereas [ʃ] is a feature of females' speech. Concerning the [ʒ] variant, it forms the larger portion of females' speech, while [dʒ] is used mainly by males. Al-Wer (1991) relates the use of [dʒ] variant to toughness and [ʒ] to softness as no social stigma is attached to the use of one variant rather than the other.

The use of non-local stop and sibilant variants tends to be associated with softness and femininity. They often symbolize urbanized and prestigious social life style, whereas the local variants tend to be related to masculinity and toughness. So, out of a desire to associate oneself with a particular lifestyle, women tend to accommodate while men most often retain the use of local variants. These results are in agreement with those of Abdel Jawad (1986), and Abdel Jawad and Awwad (1989) who point out that men use the standard variants more often than women do, whereas women use the socially prestigious forms more often than men do. Having the assumption that the standard and prestige coincide in English, Wolfram and Schilling-Estes (2000: 189) have given similar justifications. They state that the tendency of males to use more stigmatized variants in their speech than females may be seen in terms of the symbolic value of such variants in defining oneself as either masculine or feminine.

With regard to the duration of frication accompanying the [θ], [ð], [ʒ] and [dʒ] variants, the acoustic examination of data indicated that males appeared

to produce longer duration than females do in [θ] and [ð]. Lengthening the fricative, probably, makes frication noise more obvious. This may also be an attempt by males to demonstrate virility. Unlike males, females tend to shorten frication duration in order to produce less noisy and noticeable fricative, a feature regarded as suiting female softness. However, females' speech demonstrates longer duration of frication in the fricative part (i.e., [ʒ]) of the [dʒ] variant. One rationalization is that women reduce the salience of the dental stop by prolonging the frication part of the affricate, thereby the segment produced resembles the non-local prestigious [ʒ] variant rather than the local [dʒ].

6.2 *Interaction of educational setting with speech variation*

As stated earlier, the data collected was elicited from two groups: high school and university students. The former live in a homogenous community where they interact with peers who are somewhat similar to them socially. They are part of the native local community and have a high level of contact with its members. The latter includes students who are natives of Irbid, but are exposed to an educational setting which involves students who come from different geographic and social backgrounds to study in the universities of Irbid. That is to say, they have moved away from their local networks to a new university setting, which can be thought of as a national heterogeneous one. Consequently, clear differences were found between the use of the local variants [ð], [dʒ], and [θ] and their corresponding non-local ones among high school and senior university students. The auditory findings in Section 4 above indicate that university seniors tend to use the non-local variants more frequently than high school students. In contrast, high school students tend to use the local variants [ð], [dʒ], and [θ] more frequently with the percentages of (63%), (67%), and (52%), respectively. It is noteworthy saying that the retention of the local variants is much more remarkable among female university students than their male counterparts due to the reasons given in the previous section. This means that the patterns of linguistic behavior of university students are influenced by the university setting. Exposure to new settings would lead them to opt for non-local pronunciation in order to associate themselves with the norms and varieties of the new social setting. Thus, as the nature and number of contacts with people from outside communities increase (Milroy 1987b, cited in Al-Wer 1991), people start moving away from their local forms and adapting to new ones to accommodate (cf. Giles and Smith 1979) with the new social setting. We would conclude from the results and the explanations given that as the level of

education and the degree of contact with members of a non-native community increase, the use of local variants decreases.

However, awareness of the social meanings of these non-local variants does not arise abruptly. Rather, it has been building up and developing for years but is acted on when patterns of variation start to carry social meanings and people are evaluated accordingly. Eckert (2000: 8) points out:

While adolescence patterns of variation begin to fall into the kinds of global patterns found in the adult population, I would argue that this does not signal a sudden awareness of the social functions of variation, but the adaptation of an already robust sociolinguistic competence to a new set of social meanings.

Therefore, although the high school participants know the social meanings attached to the use of particular variants, they tend to favor localized variants and to suppress the non-local ones in order to accommodate themselves to the community they live in. However, when they reach the university level, they put their social knowledge in practice. One way to accomplish this is to use the non-local speech variety which carries connotations of prestige.

7 CONCLUSION

Our analysis has revealed how gender and educational setting affect sound variation in Irbid. Overall, gender has a greater effect on speech variation than education setting. Unlike males who tend to use local variants, females generally adopt the urban non-local ones. Male and female linguistic choices of these variants are not arbitrary. Rather, they are usually constrained by gender motivations and social expectations. One possible motivation for divergence in females' speech is prestige protocols. It is normal for women to be concerned with the linguistic 'cosmetic' of prestige language (Wolfram and Schilling-Estes 2000); thus, they adopt the urban non-local varieties which are considered the code of prestige. In contrast, the local variants are the most salient features of males' speech. Their affiliation of locality, in turn, confirms Milroy and Milroy's (1997) claim that males generally tend 'to favor more localized variants, which carry some kind of identity-based social meaning in the local community' (p.55). For the same reason, the college students, in general, tend to accommodate their linguistic behavior to the new university community. In Myers-Scotton's (1995) view, 'a major motivation for using one variety rather than another as a medium of interaction is the extent this choice minimizes costs and maximizes rewards for the speaker' (p.100).

Another possible interpretation is that women, in nature, are socially expected to show softness, while men reveal their macho, virile and tough nature. Thus, it is probable for women to adopt the non-local prestigious

variants which reflect urbanization, features regarded as suiting the nature of some women in the Arab World (Al-Wer 1991; Al-Wer 1999; Amra, Spolsky, and Tushyeh 1999; El Salman 2003), whereas males retain the local variants associated with masculinity, toughness and virility to reflect a masculine character.

However, the individual's choice of a particular variant depends on the social environment s/he lives in. This means that the social context of speech may lead participants to make their speech conform to the non-local prestigious dialect to demonstrate their membership in the new university setting. This tendency may be explained in light of peer pressure and contact in the sense that both sexes are subject to the influence of friends and colleagues. This results in pulling individuals into either one of two directions: maintaining the local identity or accommodating to social norms. In the case of university students, this interaction motivates them to suppress their local variants and adapt to the prevailing prestigious urban ones. In contrast, high school students are restricted to domestic chores, and have a narrow homogenous social network, so they tend to draw on their local variants in order to identify themselves with the local community since they do not have the same opportunity to use the non-local variants.

The present study is hopefully of benefit to speech therapists as it acquaints them with the fact that differences in the physical properties of sounds pronounced may sometimes be a result of social variation rather than genuine speech impairment. This study may also have implications for teaching foreigners patterns of variation in the pronunciation of /θ/, /ðʒ/ and /ð/ and their social meanings in Jordanian Arabic. A suggestion for future research is to examine what effect other social factors have on the physical properties of [θ], [ðʒ] and [ð] spoken in Irbid and elsewhere.

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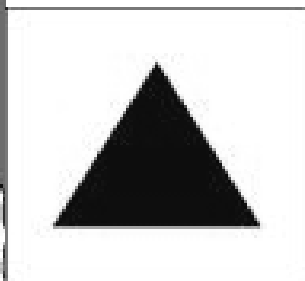
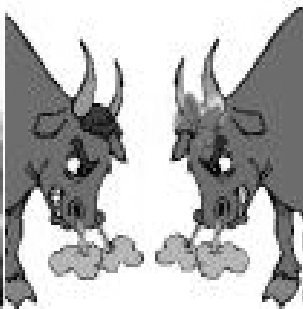
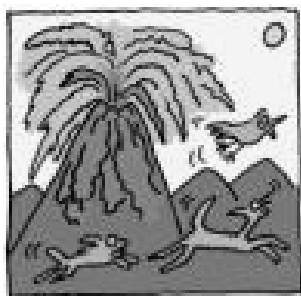
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APPENDIX I.

الاول-----و-----و-----



مصارعة----- ايش عم بصير بالبركان؟



شو اسم الحشرة على الكلب؟



لسوطان ورمخ—



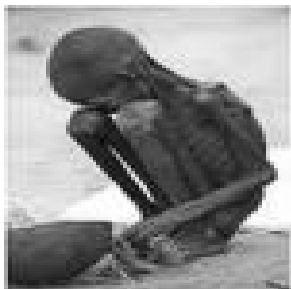
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أهل السودان يعانون من الفقر وال----

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شو صار بالتجة؟



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شحا-



--شح--

