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SYNCHRONIC *Jīm*-VARIATION IN JORDAN — A MIRROR OF HISTORICAL CHANGE

The consonant *Jīm* (j) is not only one of the most prominent diglossic variables but also an important isogloss that differentiates regional and tribal variants of Arabic. The relatively large number of dialectal variants of *j* demonstrates that the fronting of Semitic /g/ in Arabic shook the basic stability of the phoneme. A number of eminent scholars, notably BLANC, CANTINEAU, KAYE and MARTINET, have investigated the historical development of *Jīm* within Classical Arabic. The regional and tribal diversification of *j*-variants is increasingly well documented, and interesting patterns of dialect levelling have emerged. By contrast, little work has been done on synchronic variation resulting from the internal dynamics of the different dialects. The first part of this paper, an edited extract from the author's forthcoming doctoral thesis, is a report on the present state of *j*-variants in Jordan, as reflected in national radio broadcasts. In the second part, the patterns of *j*-variation in Jordan are compared with data for other varieties of Arabic, past and present. The third part attempts to create a discussion of the diachronical issues raised by the present analysis.

1. Regional and tribal variation

The main current dialectal variants of *j* in Greater Syria are /ʒ/ (= IPA [ʒ]), a palato-alveolar voiced fricative, and /ǧ/ (= [dʒ]), a palato-alveolar affricate. The former is generally associated with the urban vernaculars, the latter with non-urban, i.e. rural and Bedouin dialects. In Jordan, Iraq and Saudi Arabia all major dialects, including the sedentary ones, have the affricate. These vernaculars are either Bedouin-based or Bedouinized to a greater or lesser extent.¹ Other Bedouin variants are palatal /y/, /gʲ/ ([j]), dorso-palatal /g/, dental /dʲ/ and /ǧ/ (= [dʒ]).

Table 1. Regional and socio-cultural distribution of *Jīm*-variants in Greater Syria and the Peninsula.²

¹ MITCHELL, Arabic II, 18.

² This table is based upon the following studies: BANI-YASIN & OWENS, Phonology 298; BANI-YASIN & OWENS, *Bduul* 202; CANTINEAU, Études I 25-25; CANTINEAU, Études II 137; GARBELL, Remarks 323; GROTZFELD, Arabisch 174; PALVA, *Balgāwi* I-III passim; PALVA, Classification 6, 7 fn., 10; PALVA, *Ḥuweyāt* 116; PALVA, *El-Kerak* 227; PALVA, *Bani Ṣaxar* 111; PROCHAZKA, Dialects 15-16; ROSENHOUSE, Bedouin Arabic dialects, appendix table 5.1.; ROSENHOUSE, Analysis 17; STEWART, Texts passim; SABUNI, Laut 21; YRTTIAHO, Texts passim. The data for the Ahl aš-Šimāl tribes are based upon CANTINEAU, Études, and own observations.

<i>Dialect</i>	<i>primary variant</i>		<i>secondary variant(s)</i>
Urban dialects			
Hama	ǧ		
Aleppo	ǧ (Muslim)	ž (Christian)	ž (+contextual)
Jerusalem	ž		ǧ (Muslim) (+initial)
Damascus	ž		ǧ (Muslim?) (+initial)
Mecca	ǧ		
Others	ž		
Rural dialects			
Galilee	ž		
Jerusalem Plain	ž		ǧ ? Muslim (+initial)
Damascus Plain	ž		ǧ ? (+initial)
Central Syria	ǧ (regressive)		ž (progressive)
Lebanon	ž		
Palmyra	č (regressive)		ǧ
Suxne	č		ǧ
Others	ǧ		ž
Bedouin dialects			
Ahl aš-šimāl ³	ǧ (progressive)		y (regressive) g'/d' (artistic)
Anazi ⁴	ǧ ^y		ǧ (K?)
Bani Šaxar	ǧ	ǧ (Al-Fāyiz)	
Negev	ǧ/g ^y		ž
Galilee	ǧ		ž
Sinai	ǧ		ž
Najd	ǧ/g ^y		
Hijaz	ǧ		
Southern Jordan	ǧ		

? = present status unclear

+contextual = contextual variation

K = koine

+initial = in initial position

The distribution is not entirely clear-cut, nor sufficiently documented for all regions. Under influence from the urban centres, /ž/ is at any rate steadily gaining ground, especially among the rural population of central Syria and the Bedouin of North Israel.⁵ The town-dwellers of northern Syria share affricate /ǧ/ with the peasants and sheep-rearing Bedouins of the area.⁶

The current state of /ǧ/ in Jerusalem and the surrounding plains is unknown. In the first decades of this century, the Christian communities generally featured /ž/ and the Muslim communities /ǧ/, whereas by the late fifties /ǧ/ was clearly in the process of disappearing—Garbell reports that the affricate is in use among older Muslims, but only word-initially.⁷

³ The sheep-rearing tribes as-Sirhān, as-Sardiyye and al-Šīša in North Jordan, the first two of which are mentioned by CANTINEAU and classified as B-C dialects (Études 137). The data were collected from inquiries and recordings made by the present author in 1985. The variant /y/ is also found in southern Iraq, up to about *al-Batha* on the Euphrates and *Kuut* on the Tigris, in the Gulf litoral and much of Khuzistan, as well as the isolated case of the interior part of the *al-Hauṭa* area south of Riyadh (INGHAM, Dialects 35).

⁴ Based upon recordings made among the *Rwala* in *Ar-Ruwayšid*, Jordan 1985.

⁵ GROTZFELD, Arabisch 174.

⁶ LEWIN, Hama *34*. LEWIN transcribes [ǧ] with the corresponding Turkish grapheme c.

⁷ BERGSTRÄSSER, Sprachatlas 176-177; BROCKELMANN, Grundriß 123; DRIVER, Grammar 5 fn. 1; GARBELL, Remarks 323.

In several Syro-Palestinian dialects /ǧ/ and /g/ occur as marginal variants. The occurrence of the latter is, however, lexically constrained.⁸

2. Variation within the High Arabic system

The first surviving reference to the pronunciation of *j* is found in *al-Kitāb*. Sibawayh (d. 793) places *Jīm* in the middle part of the hard palate together with *Yāʾ* and *Šīn*.⁹ It is not altogether clear which sound is meant. Like the eight stops, the laterals and the nasals, *Jīm* is *šadīd*, 'tight', meaning that the articulators are in full contact before being separated, in contrast with the fricatives, which are *rixw* 'lose'. It can therefore not be identical with /ʒ/. This leaves two candidates, viz., palato-alveolar /ǧ/ and palatal /gʲ/, which combines features of a fronted *g* and an off-glide in the form of *y* (= [j]).¹⁰ Whereas a few modern linguists such as AL-NASSIR are proponents of /ǧ/, most scholars, including CANTINEAU, FLEISCH, BLANC, MITCHELL and ROMAN argue for /gʲ/.¹¹ It remains unclear whether on this point Sibawayh's phonetics is prescriptive or descriptive. Sibawayh knew and disapproved of other pronunciations, viz., the *Jīm* which is like *Qāf* (q) — /g/ — and the *Jīm* which is like *Šīn* — /ʒ/ or /ǧ/, possibly both.¹² At any rate, 250 years later the standard pronunciation was clearly a palato-alveolar /ǧ/ — the anatomically skilled *Ibn Sīna* gives a detailed and distinct description of the *j*-variant which is still considered to be most 'Classical' and normative, not only by a majority of Arabs, but by Western linguists in general. Their case rests not only upon the historical evidence but upon living tradition, as formalized in the art of reciting the Koran, *tajwīd*. Most professional Koran reciters, it seems, read /ǧ/ and only /ǧ/ for *j*, which in most cases means they substitute the affricate for their basilectal variant.¹³ It is generally assumed that this behaviour reflects the linguistic tradition as practised at the al-Azhar University and other institutes of Islamic learning. This tenet is not, however, supported by any concrete evidence—on the contrary, primary sources indicate that palatal /gʲ/ ~ /dʲ/ remains the normative pronunciation for *j* in the canonic traditions *Ḥafḍ*, *Qālūn*, *Warš* and *ad-Dūri*. As illustrated by the anatomical figures in *Ḥaqq at-tilāwa*, a modern *tajwīd* manual published in Amman 1393 A.H., the normative pronunciation of *Jīm* is definitely palatal like *Yāʾ*, not palato-alveolar like *Šīn*.¹⁴ The present author has also had the privilege of consulting Sheykh Mohamad YAKOUBI from Damascus, who reports that in the Syrian capital Koran students are specifically instructed in avoiding palato-alveolar pronunciation in favor of a palatal fricative /dʲ/ ~ /gʲ/.¹⁵ It is difficult to

⁸ Cf. FERGUSON, Syrian Arabic 114.

⁹ Sibawayh, *Kitāb* 453:8.

¹⁰ In Arabic linguistics palatal /gʲ/ (=IPA [j]) is variably described as a plosive or an affricate, since separation of the tongue from a place of occlusion at the hard palate inevitably involves its passing through the position for the palatal semi-vowel [j] (= /y/). MITCHELL, Arabic I 51 & II 42.

¹¹ KAYE, who attempts to prove that this phoneme was already pronounced as a fricative in early Arabiyya bypasses Sibawayh altogether. KAYE, /ziim/ 34.

¹² Sibawayh, *Kitāb* 452:14.

¹³ Cf. KAYE, /ziim/ 36 fn. 11; MITCHELL, Arabic II 18.

¹⁴ ¹Uṭmān, *Ḥaqq* 192. ²Uṭmān primary refers to the tradition of *Ḥafḍ*, mainly practised in Syria, the Levant and Egypt, but compares with the three other major schools whenever differences occur.

determine how the aforementioned conception of /ǧ/ as the normative variant of *j* has come about, but two possible sources of error suggest themselves.

Firstly, it cannot be ruled out that the majority of professional Koran readers actually use /ǧ/ and not /gʷ/ in violation of the established rules. /ǧ/ is, at any rate, the pronunciation of Sheykh Muḥammad Xalīl al-Huṣarī and Sheykh ʿAbd al-Bāsiṭ ʿAbd aṣ-Ṣammād, both distinguished reciters from al-Azhar. For native speakers of urban vernaculars both [dʒ] and [ʤ] are foreign sounds, the acquisition and systematic use of which demand constant drill and practice. Nevertheless, palato-alveolar [dʒ] is more familiar and easier to produce since it may be analysed as a cluster /dʒ/ or /dʒ/ through regressive voice-assimilation. Palatal [ʤ] does not, on the contrary, fit into the phonetic system of the vernacular since it cannot be broken up into smaller components.

Secondly, Arabic audiences and investigators alike may very well perceive /ǧ/ as /gʷ/ because that is what they expect to hear. The sound quality of recorded Koran recitations is often extremely low. When listening to a tape recording of Sheykh ʿAnṭar Musallam from Egypt, the author was in fact unable to distinguish any other quality in *j* than voice and affrication of some kind. In live performances, the combined effect of inferior technical equipment and extremely high volume similarly distort the sound quality to such an extent that fine phonetic distinctions are lost. In this situation even the keenest and most scrupulous observer may resort to guesswork.

Even in the most formal contexts educated urban speakers are remarkable faithful to their native dialectal stereotype. The palato-alveolar fricative /ʒ/ is considered to be an acceptable approximation of *j* for MSA use in all areas in which this voiced fricative constitutes the predominant or most prestigious dialectal variant. Likewise accepted is the Cairene plosive /g/. Interestingly, however, many Egyptians who have not received specialized linguistic training of the kind offered at al-Azhar use /ʒ/ in contexts which demand a distinctly literary style.¹⁶ Historically this 'superformal' variant of Educated Egyptian Arabic is most probably a pseudo-correction of the same type as the substitution of sibilants for CA interdental. On the synchronic level, however, /ʒ/ carries more prestige than /ǧ/ in many parts of the Arab world. This phenomenon is particularly noticeable in North Africa. In Morocco, for instance, /ǧ/ is frequently scorned as affected.¹⁷ Moreover, Algerians regularly substitute /ʒ/ for their native /ǧ/ in conversation with speakers of other North African dialects.¹⁸

In Jordanian broadcasting, rural speakers display a similar though considerably weaker tendency in verbal interaction of any kind with urban speakers, whether using HA (= CA & MSA) or ESA. In a previous study the present author demonstrates that with most speakers deviation from the dialectal stereotype generally does not exceed 20% and that at least half of the observed variation was phonemically conditioned.¹⁹ Affricate

¹⁵ Sheykh YAKOUBI is presently conducting undergraduate studies at the Dept. of Oriental languages at the University of Gothenburg.

¹⁶ MITCHELL, Arabic II 18.

¹⁷ FORKEL, Situation 61.

¹⁸ TALMOUDI, Situation 117.

¹⁹ Jīm-variation in Jordanian Broadcasting Arabic, presented in fulfillment of the requirements for the

pronunciation is, however, in general successfully avoided by all female migrants, who, contrary to males, readily adopt the speech patterns of their urban compatriots.

In other words, in the whole Arab world, all but a very limited number of highly educated and specialized individuals regard the prestige variant of the region in question as the correct pronunciation for formal educated speech, but /ʒ/ is *primus inter pares*. In societies of Bedouin-based speech such as Jordan male speakers are more loyal to the local stereotype, which is nevertheless steadily losing ground.

3. The problem

Surprisingly, a totally different description of *j*-variation in Jordan is offered by KANAKRI, who reports that both male and female urban speakers decrease the frequency of /ʒ/ to a remarkable degree in the higher styles.²⁰ In the reading and word-list styles the fricative is reported to be virtually non-occurrent.²¹ Although KANAKRI partly relies upon unspecified broadcast transcripts collected about the same time as the material underlying this study and of roughly the same proportions, neither his conclusions on this point nor the statistics he presents tally with the data collected by the present author.²² In fact, though individual grammars may differ considerably from one other, no clear connection between *j*-variation and stylistic formality could be discerned.

The aforementioned contradictions motivated a critical re-examination of the author's data and a careful comparison with the source material of KANAKRI, as well as a thorough consultation of three other sources overlooked in both studies: (i) the plethora of detailed studies and texts available today for most contemporary dialect areas, especially 'peripheral' vernaculars like Maltese; (ii) Arabic grammatical tradition, including *tajwīd* literature and; (iii) descriptions of conditioned variation in other Semitic languages. An expansion of the existing data base with items collected from previously untranscribed recordings enabled the author to test and confirm a number of hypotheses about the basic stability of the different *j*-variants in the region and their interrelation.

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²⁰ The present author received KANAKRI's *Style*, a broad dissertational study of style variation in Jordan, shortly before the submission of his own licentiate thesis.

²¹ KANAKRI, *Style* 187-191.

²² The primary data source for this study is a broad phonemic transcript of 60,000 words based upon some seventeen hours of continuous speech from the internal radio broadcasts of the Jordanian Broadcasting Corporation recorded in 1981 and 1986. Roughly 75% of this material was used in the licentiate thesis. In addition, all items containing *Jim* were adduced from another thirteen hours of radio discourse recorded at the same time but not included in the 1992 study. Most programme types presented by the Jordanian Broadcasting Company during this period are proportionally represented in the corpus. For this reason, the bulk of the material consists of text-based discourse. Included are discourse types not previously studied, such as weather forecasts, timetables, official communiqués and personal messages. Interviews constitute approximately 30% and include samples from all editorial sections: culture, family affairs, news, rural affairs & agriculture, religion, social affairs and sports & youth. 140 speakers participate, about 25% of whom are female. About 80% of the speakers could be identified with regard to socio-cultural origin—rural, Bedouin, nomadic or semi-nomadic—and residence. The educational level was established for roughly half the speakers. More than 2/3 of the identified individuals have a rural background, whereas only six claim Bedouin origin.

4. Internal variation

Three different variants of *j* occur in the roughly 30 hour radio discourse: indigenous /ǧ/ and /ž/, and Cairene /g/.²³ By contrast, the variants /gʷ/, /dʷ/ and /y/ did not occur in any context, including the reading of vernacular poetry and proverbs.

Quite often /ž/ and /ǧ/ co-occur with the same individual and in the same piece of discourse. Excluding dialect levelling, exchange of basilectal variants, and marginal lexical conditioning, the following basic types of variation were found to occur:

1) with speakers of (rural and Bedouin) ǧ-dialects: (i) progressive dissimilation, for example, [ʔaʒmaʔa l-ʔulaʔma:ʔ] 'the ulema consent' and (ii) regressive assimilation, for example [šaʔzi:ʔ] 'courageous'

2) with speakers of (urban or urbanized) ž-dialects; (i) dissimilation of the first *j* in a word-medial (or in vernacular items word-initial) geminate, for example [hadʒi:] 'hajji', and (ii) retention/restitution of initial, mostly accented *Jim*, for example [dʒa:miʔat yarmu:k] 'Yarmouk University.'

Individual speakers may possess two or several grammars for *Jim*-productions, which he or she applies in different contexts, and it is not always possible to determine the basilectal variant. For this reason a basic distinction is made between ǧ-speakers and ž-speakers. Individuals who mainly or exclusively use /ǧ/ between vowels are called ǧ-speakers regardless of whether their native variety of Arabic is a ǧ-dialect or a ž-dialect. Conversely, individuals who mainly or exclusively have /ž/ in this environment are called ž-speakers. If a speaker consistently uses only one of the two variants he or she is classified as either an invariable ǧ-speaker or an invariable ž-speaker. Otherwise, this individual is called a variable ǧ-speaker or a variable ž-speaker. However, since the relative frequency of certain words or phrases may be the determinant of the phonological change occurring in them, the classification of an individual is not allowed to depend upon a few frequently occurring identical words. In such isolated cases classification refers to the native dialectal stereotype.

4.1.1. Combinatory variation — Jordan

In *Cours* CANTINEAU refers to the Syro-Palestinian dialects investigated by himself, BAUER, BERGSTRÄSSER, BARTHELÉMY and others but does not mention internal variation.²⁴ Practically the only description of combinatory *j*-variation for any dialect in the region is found in the phonological study by BANI-YASIN and OWENS of the Northern Jordanian rural dialect spoken in *Kufr al-Māʔ*. In this dialect the affricates /ǧ/ and /č/ tend 'to become simple fricatives before another consonant, particularly alveolar/dental ones.'²⁵

The aforementioned rule is regularly applied in the present corpus, but not by all rural or semi-nomadic speakers. Furthermore, the change ǧ > ž occurs regularly in the ad-

²³ An Egyptian male speaker whose predominant *j*-variant is the native dialectal stereotype /g/, but who possesses /ž/ as a marginal phoneme in non-Arabic loans, was not included in the present study.

²⁴ Studies of West Arabian dialects are generally more detailed with regard to *Jim* than studies of East Arabian dialects.

²⁵ BANI-YASIN & OWENS, *Phonology* 301.

jacency of certain consonants, but hardly ever in the adjacency of others.

Affricate pronunciation with urban speakers similarly seems linguistically structured. Since in most cases /ǧ/ occurred word-initially in accented syllables, positional conditioning of some kind seemed likely from the start, but phonemic conditioning could not be ruled out since about half of the time the preceding syllable ended in /n/ or /l/. For this reason the decision was made to isolate all occurrences of *Jīm* immediately preceding or following a consonant and analyze them separately from instances of the variable occurring in a vocalic environment or post-pausally.

4.1.1.1. Changes that affect /ǧ/

The collected data indicate that individuals who possess [ʒ] as an allophone of [dʒ] more or less consistently use the fricative before dental stops, except in deliberately slow speech. Affricates are complex sounds, since they combine initial plosion with friction, and in imported items speakers of *ǧ*-dialects may even perceive the two elements as separate but sequential consonants.²⁶ When /ǧ/ precedes /t/ or /d/ a cluster is formed which includes a dental plosive, a palato-alveolar fricative and another dental plosive. This not easily pronounceable group can be dissolved by insertion of an extra-short anaptyctic vowel. The cluster can, however, equally well be dissolved by elimination of the first, redundant plosive component of /ǧ/, or by backing of the phoneme to a palatal plosive /g/ or /gʲ/.²⁷ As will be demonstrated, the three alternatives are used in geographically diverse Arabic dialects, but only the first two changes were heard in Jordanian broadcasting. As a rule, dissimilation of /ǧ/ is accompanied by devoicing. However, whereas voice assimilation seems to be a language universal, there are strong indications that dissimilation preceding stops is not an inherent feature of all rural and Bedouin dialects, at least not in Jordan. Palva does not mention any variation between /ǧ/ and /ʒ/ in nomadic or semi-nomadic dialects in central and northern Jordan, and the poems and narratives recorded by the present author in Bedouin communities in Northern Jordan and in the semi-nomadic rural town of *Al-Fḥēṣ* in the *Balqāʾ* district similarly contain no instances of /ʒ/, either conditioned or unconditioned. By contrast, speakers of rural, semi-nomadic and nomadic dialects alike display a strong tendency to deaffricatize *j* preceding stops in the broadcasting context. Residence seems to be of little importance since at least in Northern Jordan the change is equally frequent with urban and non-urban residents. The speakers in question are, however, likely to have extensive contact with speakers of urban dialects, being reporters and civil servants. Assimilation is therefore likely to be a feature developed in contact with urban dialects and as such it constitutes the first stage of a phonemic change from /ǧ/ to /ʒ/.

Regressive assimilation is less common preceding the apico-dentals /l/ and /n/ than preceding dental stops because less similarity occurs. Preceding the apical tremulant /r/ the frequency of fricative pronunciation is considerably much lower—not even 25%. Four speakers who have /ʒ/ preceding dentals do not exhibit any change preceding alveolars. Possibly the preceding vowel exercises some constraint upon de-affricatization. One

²⁶ HEATH, Affricates 133.

²⁷ BRAVMANN, Consonant 197-198.

speaker produces /ǰ/ in *sajn* 'imprisonment' but /ž/ in two occurrences of *sijn* 'prison'. Similarly another speaker produces /ǰ/ in *tajri* 'he performs' but /ž/ in *mujrayā* 'measures'. These and a few other instances suggest a possible connection between affricate pronunciation and open vowels and between fricative pronunciation and close vowels.

The combinations *jb* and *jf* are rather rare, whereas *jm* is fairly common. Nevertheless, the frequency of assimilation is roughly 50% with all three. Here also there seems to be a tendency for /ǰ/ to be preceded by open vowels: /hagəm/ 'capacity' and /raǰfa/ 'tremor'.

When the plosive element is not eliminated preceding the aforementioned anterior consonants, a transitory high central vowel is normally inserted: [ʔədʒəmäl] 'more beautiful'.²⁸

Two newscasters and reporters display a particularly strong tendency to de-affricate *j* following the palato-alveolar fricative /s/ in the same item—*masjid* 'mosque' [mazʒid]. By contrast, a third speaker, an academic writer, manages to suppress the assimilation all but once in the same item. With another 6 speakers the combination /sǰ/ in *tasjil* 'recorded' is unaffected.

Accommodation of *j* to *š* may occur even when the two consonantal elements are not in direct contact but separated by an intervening vowel: one *ǰ*-speaker uses both variants once in *šajiš* 'valiant'.

A few well represented *ǰ*-speaking newscasters repeatedly pronounce *j* as a fricative following lateral /r/ in one particular item *al-ʔarjentiŋ* 'the Argentine', whereas all other *ǰ*-speakers retain the affricate in this and other lexemes. Since the point of articulation for /r/ is close to that of /s/ and /š/ progressive assimilation by dissimilation is possible. However, /rž/ is more likely to be associated with this particular lexical item because of its foreign origin.

Variable *ǰ*-speakers with entirely or almost entirely phonemically determined variation do not have /ž/ following /w, m, t, n or l/, but those speakers who regularly use the fricative between vowels do use it after these consonants as well. Of these environments, a preceding /w/ is the most common with /ž/. Both *j*-variants co-occur in the same utterance produced by a male rural inhabitant: /waʔaʔdūna waʔed ʔrasmi # ibʔmawžab ʔkutub # u ʔmawǰab šiʔfahi/ 'They promised us officially, with a written promise and an oral promise'. A fellow-villager, however, repeatedly uses the same lexeme with /ǰ/ despite a strong tendency to produce /ž/ preceding dental and alveolar consonants. With the first mentioned villager, the change is brought about by lax articulation — the two first segments are produced in emotional, rapid speech, whereafter the speaker pauses briefly and slows down.

Marginal variation was found to occur with both urban and rural speakers following post-palatal, pharyngeal and palatal fricatives. These environments are therefore not believed to have any direct influence upon the pronunciation of *j*. The phoneme *j* was not found *preceding* any of the phonemes /t, d, t, d, ɖ, s, š, q, k, w, y, x, ǰ or h/. Neither was it found *following* any phoneme in the series /t, d, ɖ, z, ǰ, h, h/. *J* following /y/ is a rare combination and only occurs across word boundaries.

²⁸ Cf. INGHAM, Characteristics 277.

With several speakers of rural origin the frequent occurrence of /ʒ/ seems only in part to be linguistically structured, and in a number of cases it is impossible to determine which is the main variant.

4.1.1.2. Changes that affect /ʒ/

Roughly half the *ž*-speakers dissimilate the first *Jīm* of a geminate pair by affricatization. The initial plosive element is frequently weaker than it is with *ǧ*-speakers. Pre-pausally, however, even geminated *j* is weakly articulated and partly devoiced by speakers of both categories. Dissimilation occurs marginally in words containing two instances of *j* separated by a vowel: /iḥtiǧāʒ/ 'pretext'.

Immediately following dental stops in rapid mildly formal to formal speech, /ʒ/ is most often indistinguishable from /ǧ/ since *ž*-speakers and *ǧ*-speakers alike realize the sequence as if it were a geminated affricate; hence [bid'dʒa:waz] for bitjaawaz 'it (f) exceeds' (CA yatajāwaz).²⁹ This is most common within words, but may also occur across word boundaries: for instance [tarakad'dʒurḥan] for *tarakat jurḥan* 'it left a wound'. The voicing of /t/ preceding *Jīm* was also found in Christian Aleppine texts.³⁰ The inhabitants of Šḥīm in the Lebanese Shouf mountains seems to vary—FLEISCH's texts contain both /kaanat itʒarreb/ 'she tried' and /dʒaruḥaw/ 'they received numerous wounds'. A number of urban *ž*-dialects, including Damascene, feature total regressive assimilation of /t/ to /ʒ/: /ʒʒawwiz/ 'he got married' (CA *tajawwaz*).³¹

When conducting formal interviews or reading texts most variable *ž*-speakers exhibit a strong tendency towards [dʒ] following /n/. The change is found almost exclusively word-initially after a proclitic *min* 'from', or *ʿan* 'of/about' or a nominal form with nunation. In most sedentary dialects, the occurrence of any cluster consisting of a nasal resonant and a following continuant (fricative or liquid) across word boundaries leads to a total regressive assimilation in all but the most deliberate speech. In the present corpus complete regressive assimilation only occurs in staged casual conversation: [miʒʒama:ʕa] for *min jamāʕa* 'of a community'. The rare occurrence of this change indicates that it is not accepted in higher styles. The frequent occurrence of [ndʒ] across morpheme boundaries might actually be analysed as /n+dʒ/ and not as /n+ǧ/. If this interpretation is correct, educated urban Palestinians and Jordanians possess an epenthesis rule, the specific purpose of which is to prevent perceived colloquialisms such as [miʒʒama:ʕa]. The insertion of a transitional [d] would be facilitated by the fact that it homorganic with both surrounding elements and agrees with them in voice. The latter feature would also explain why one hears [min'dʒama:ʕa] but not hypothetical pseudo-correct [min'tʃa:n] as a hybrid of vernacular /mi'šān/ 'because of' and HA /min šaʕn/ dito. Epenthesis rules of this kind operate in Cypriot Arabic, where 'underlying and historical clusters consisting of a nasal resonant and a following continuant (fricative or liquid) are subject to a rule of epenthesis introducing a transitional stop segment homorganic with the

²⁹ According to BERGSTRÄSSER, voicing of *t* is mandatory in Damascus (BERGSTRÄSSER, *Dialekt* 42).

³⁰ BEHNSTEDT, *Christlich-Aleppinische Texte* 66.

³¹ AMBROS, *Damascus 14*. Also Tripolis (ELFITOURY, *Grammar* 24).

preceding nasal, but agreeing in voicing with the following continuant', so for instance *ms* → *mps*, *nž* → *ndž* and *nš* → *ntš*.³²

Following the *l* of the article, roughly one third of the urban speakers consistently retain /ž/, one third regularly replace it with /ǰ/, and one third replace it occasionally. The cluster *lj* was also found in prepausal position but is here pronounced [lʒ]: /talž/ 'snow'. Epenthesis across morpheme boundaries could again be suspected — not only does the cluster *l+j*, which occurs in nouns defined by the prefigated article, regularly lead to total regressive assimilation in sedentary vernaculars in the area, i.e. *l+j* → *j+j*, but the lateral liquid /l/ is frequently nasalized in Arabic, especially in *tajwid*. However, distinct nasalization only occurs with two individuals, none of whom are urban speakers.

The quality of *j* was not found to be affected by a preceding bilabial nasal /m/. Hence, if the initial plosion in *j* following /n/ and /l/ is indeed an epenthetic element, and not an integral part of the phoneme, it is determined by the articulatory position of the preceding consonant, not by nasality.

No ž-speaker was observed to use the affricate in environments in which ǰ-speakers regularly produce the fricative, except for marginal occurrence of /wǰ/ with three individuals who are first or second generation migrants from rural Palestine.

4.1.2. Combinatory variation in contemporary non-Jordanian dialects

Whereas voice assimilation has been attested in most Arabic dialects on both the diachronic and synchronic levels, regressive dissimilation of affricates before other consonants is seldom mentioned. Both changes occur regularly before dental stops in the ǰ-dialects of urban centres such as Baghdad, Aleppo and Algiers, but also in the rural dialect of Cherchell (Algeria) and in dialectal Maltese.³³

Dissimilation preceding apico-dental /l/ and /n/ has been attested among the Muslims of Aleppo.³⁴ Other ǰ-dialects dissimilate the phoneme by changing the place of articulation and in the process reducing or completely eliminating the friction. Both in Meccan speech and the dialect of Qift in Upper Egypt /gʒ/ is found to occur before /l/. Whereas the inhabitants of Mecca also use this variant preceding /n/ and /z/, it is unclear if this environment triggers change in Qift.³⁵ Preceding /l, r, n and m/—liquids and nasals—the western Delta dialects in Egypt regularly reduce the fricative element, leaving /d/.³⁶

Contemporary Meccan speech is of special interest since the dialect possesses three allophones of *j* with complementary distribution—[ʒ], [dʒ], [ʃ]—and a fourth variant [y] in rapid speech. [dʒ] occurs initially in the syllable, in word-final position, and preceding the voiceless fricatives /h/, /ħ/, /s/ and /ʃ/.³⁷ It is also the pronunciation occurring before

³² Cf. BORG, Arabic 23.

³³ BRAVMANN, Change 197; SABUNI, Laut 21; COHEN, Juifs 79; GRAND'HENRY, Cherchell 39; AQUILINA/ISSERLIN, Survey 129.

³⁴ SABUNI, Laut 21.

³⁵ INGHAM, Characteristics 277-279; NISHIO, Dialect 27. The only item listed by NISHIO in which the cluster *jn* occurs, is 'ajnabi 'foreigner', a CA loan. It can therefore not be ruled out that [jn] occurs in other, more dialectal words.

³⁶ BEHNSTEDT/WOJDICH, Dialekte I 70.

³⁷ The notation [dʒ] would be more suitable since the sound is described as 'a voiced palato-alveolar

anterior voiced continuants /m/, /n/ and /w/, but the consonants are separated by a transient high central vowel. Before the plosives /b/, /d/ and /t/ either the epenthetic vowel is inserted, or *j* is dissimilated by elimination of the initial plosion leaving [ʒ]. Before the dentals /l/, /z/ and /n/, *j* is pronounced [ʒ].³⁸ In rapid or informal speech word initial [dʒ] alternates with [y].³⁹

Frequent affricative pronunciation of geminated *j* was a salient feature of rural dialects around Jerusalem at the time of BAUER's and BERGSTRÄSSER's investigations.⁴⁰ Also, geminated *j* is pronounced as a surface affricate in several Moroccan *ǰ*-dialects, for instance the urban vernaculars of Tangiers and Tetuan and the dialect of the nomadic tribes in the Jabal mountains.⁴¹

Several Arabic dialects display a distinct instability of *j* following or preceding /z/, /s/ and /š/, regardless of whether the consonants are in direct contact or not. Sequential *š* and *j* seem to be a particularly unstable combination. It is not necessarily *j* which is dissimilated—the dialects of Chad and Nigeria, for instance, sporadically replace /ǰ/ by /d/ in *šajar* 'trees'.⁴² Syrians and Egyptians frequently replace /š/ by /s/ in all derivatives of *š-j-r* and of *š-j-ʿ*, for instance *sajjaʿ* for *šajjaʿ* 'he encouraged' in Syria.⁴³ In isolated cases /ž/ may also be replaced by /z/—Grotzfeld reports that the villagers of Deyr al-Aḥmar in the Lebanese *Biqāʿ* have a curious reflex of *j- /z/* 'possibly only in words which also contain *z* or *s*'.⁴⁴ The proven instability of *j* in the vicinity of sibilants may also explain the peculiar form /masiid/ for HA *masjid* 'mosque' which was criticized as a 'vulgar' pronunciation by *Al-Jawālīqī*, and which is currently found in the Persian Gulf, the Hijaz, Sudan and North Africa.⁴⁵ It is reasonable to assume that the relative frequency of the word for mosque is the determinant of the observed changes. HA *masjid* has an exceptionally high frequency compared to other lexemes in which a radical *j* follows a radical *s*. Roots with sequential radicals *s* and *j* are fairly uncommon in all forms of Arabic, and direct contact between the two consonants is even less common, occurring mostly in HA words of the patterns *ma.....*, and *ta...../ta.....iya*. The fairly common word *tasjīl* 'recording' did not share the fate of

plosive with slight affrication'. INGHAM, *Characteristics* 277.

³⁸ INGHAM describes the sound as an unreleased voiced palatal plosive. See, however, fn. 12.

³⁹ INGHAM, *Characteristics* 277-279.

⁴⁰ BERGSTRÄSSER, *Sprachatlas* 185. See also BAUER, *Arabisch* 2.

⁴¹ ASAD, *Tanger* 7; HEATH, *Affricates* 133; LEVI-PROVENCAL, *L'Ouargha* 19.

⁴² OWENS, *Chad* 47. Compare with Zamaxšarī's report of /šiyra/ for *šajara* in vulgar Meccan: *wa-š-šiyarah bi kasr aš-šin ... yaqraʿ bi-hā barābaru Makkah wa sūdānu-hā* (Zamaxšarī, *Kaššāf ʿan haqāʿiq ǧawāmid al-tanzīl*. Ed. M. Aḥmad. Cairo 1946. Quoted in SCHUB, *Topics* 115).

⁴³ BARTHELEMY, *Dictionnaire* 334; BEHNSTEDT/JASTROW, *Ägyptisch-arabische Dialekten* IV 108-109.

⁴⁴ GROTZFELD, *Untersuchungen* 49 (translation from the German by the present author).

⁴⁵ *Al-Jawālīqī*, Mawhūb ibn Aḥmad, *Ḫaṭaʿ al-ʿawāmm*. Ed. H. Derenbourg, *Morgenländische Forschungen. Festschrift für Heinrich Leberecht Fleischer*. Leipzig 1875, 145-146. Unfortunately, this work was not available to the present author. BROCKELMANN, *Grundriß* 123; JOHNSTONE, *Sound change* 233; TOLL, *Notes* 11. FERGUSON, following M. GHUL, argues that /masiid/ derives from an old South Arabic word of the root *s-w-d*, but in that case the plural form in all dialects in question would have to be (masāyid/, not /masāǧid/ as is the *Ġāmīdi* dialect of the Hijaz. M. GHUL's Ph.D. thesis *Early South Arabian languages and Classical Arabic sources*. (Univ. of London 1962) was unfortunately not available to the present author.

masjid because of its relatively recent introduction into everyday speech.

One should be careful in assessing the influence of open and close vowels respectively upon /ǧ/, partly because a quantitative analysis has yet to be done, and partly because MITCHELL'S analysis of Kuwaiti Arabic in part contradicts the preliminary conclusions of the present study. In Kuwait the proximity of close vowels generally accompanies the dominant variant /ǧ/, while open vowels seem to attract the semi-vowel /y/, giving pairs like /yalad/ 'he whipped' and /yiǧlid/ 'he whips'. The Kuwaiti dialects also provide counter-evidence of /y/ with closed vowels, but these items all contain the labial consonants /b/, /f/ and /m/.⁴⁶

4.1.3. Combinatory variation — the grammatical tradition

Fricative pronunciation of *j* before dental stops was known to the mediaeval Arab grammarians, but clearly disapproved of. Sibawayh uses the word ^ʔ*ajdar* 'more worthy' as an example of the stigmatized *Jīm* which is like *Šīn*.⁴⁷ *Al-Jawālīqī* similarly denounces /taštarru/ for *tajtarru* 'it chews the cud'.⁴⁸ In both cases it is presumably the place of articulation in *j* which is criticized, not the elimination of the initial plosive element, nor the de-voicing. By contrast, Sibawayh does not object to assimilation of word-final *j* to a following sibilant as in ^ʔ*axriš-šabaṭan/* for ^ʔ*axrij šabaṭan* 'expel Shabath'.⁴⁹

Fronting of geminated *j* to a palato-alveolar position is one of the pitfalls about which *tajwīd* students are explicitly warned: 'Also if it is geminated, like 'al-hajj, ^ʔ*ataḥāj-jūnnī*, and *ḥāja*', especially: 'lajjī', and 'yuwajjih' because if the homogeneity of *Yāʔ* and the inaudibility (*literal translation*: hiddenness) of *Hāʔ*.⁵⁰

4.2. Non-combinatory mechanical conditioning

Even when all instances of word-initial /ǧ/ possibly conditioned by the terminating consonant of the previous word were excluded, the bulk of the remaining ǧ-occurrences with the *ž*-speakers of this corpus were found in initial position. Moreover, speakers who did exhibit positional variation hardly ever used /ǧ/ post-pausally.

Several scholars who were particularly skilled in Arabic phonology reported peculiar behaviour of dialectal *j* in initial position. BERGSTRÄSSER found that, excepting lexical loans, the villagers around Jerusalem only produced /ǧ/ initially as an allophone of /ǧ/—he also noted that *ž*-dialects frequently had double length for /ǧ/ in the same position.⁵¹ GARBELL likewise observes word-initial /ǧ/ with elderly Muslims in Jerusalem itself.⁵²

⁴⁶ MITCHELL, *Pronouncing Arabic* II 19.

⁴⁷ Sibawayh, *Kitāb* 477:21.

⁴⁸ *Al-Jawālīqī*, *Ḥaṣṣaʔ*, cited by KAYE /*ẓiim*/ 45.

⁴⁹ Sibawayh, *Kitāb* 462:5.

⁵⁰ ^ʔ*Uṣmān*, *Ḥaqq* 120.

⁵¹ »Nach Bauer ist bei den Fellachen der Umgebung von Jerusalem /ǧ/ nur im Anlaut und in der verdoppelung deutlich, (...) Neu entstandene /ǧ/ ist auch im *ž*-Gebiet erhalten geblieben, (...); vielfach scheint, daß *d* eine Spur hinterlassen zu haben in der Verdoppelung des ersten *ž* auch ohne Artikel.« (BERGSTRÄSSER, *Sprachatlas* 185). Cf. BAUER, *Arabisch* 2.

⁵² GARBELL, *Remarks* 323.

The present author has also been told that the older generation in Damascus more or less always pronounce *j* as an affricate if it is in word-initial position.⁵³ A parallel situation is found in Morocco—In LEVI-PROVENCAL's word list for the *ž*-dialect of the nomadic *Jbāla* of Morocco (collected 1918), more than half the lexemes with word-initial *j* are pronounced exclusively or variably with /ǧ/. Some 70 years later HEATH observes sporadic use of /ǧ/ in Tetuan.⁵⁴ While the occurrence of the affricate is restricted to lexical loans from European languages, it is interesting to note that all the examples given by HEATH feature *j* in initial position.⁵⁵ WETZSTEIN reports that the tribes of the Ahl aš-Šimāl confederation realize word-initial *j* as /y/ whereas between vowels they produce a dental sound, which is difficult to describe but lies between /ǧ/ and /z/.⁵⁶ The variant said to occur word-medially is probably /dʲ/. CANTINEAU does not observe any differential treatment of word-initial and word-medial *j* among the *Sirḥān*. His informants produced /y/ in all positions.⁵⁷ It should, however, be noted that at the beginning of the enquiry session, all tribe members used the Bedouin koine form /ǧ/, and only switched to /y/ after a tribal chief mentioned the existence of the latter variant.⁵⁸ Interestingly, in narrative material recorded among the *Sirḥān*, the *Sardiyye* and the *ʿIsā* by the present author in 1985, /y/ occurs in word-initial position only.⁵⁹ Elsewhere /ǧ/ is the most common variant, but /gʲ/ and occasional /dʲ/ are also heard. The two latter forms may belong to a common artistic repertoire.

4.2.1. Tonic prominence

A close examination of accentuation and syllabic structure with variable *ž*-speakers reveals a close correlation of *ǧ* with tonic prominence. Firstly, /ǧ/ in medial position, while of comparatively rare occurrence, always initiates the prominent syllable of the word, as for instance in /fi l-'qura l-mu'ǧāwira/ 'in the neighbouring villages'. By contrast, only /ž/ normally occurs following an accented syllable, e.g. /bāža t-tal'hūni/ 'Baja T-Talhouni'. Secondly, *j* is most likely to be pronounced as an affricate if it initiates the syllable which carries the significant pitch movement of the whole phrase.⁶⁰ Compare, for instance, the pronunciation of *j* in the following two strings (the tonic syllable is underlined): /maʕa wa'zīri l-xāri'žīyyati l-bakistā'niyy/ 'with the Pakistani foreign minister' and /maʕa wa'zīri xaari'ǧīyyati-ø/ 'with his foreign minister. Thirdly, with speakers who regularly use the affricate in word-initial position, exceptional /ž/ occurs in unaccented syllables. In, for instance, *jalātu l-malik* 'his Majesty, the king' affrication

⁵³ The informant was M. YAKOUBI.

⁵⁴ HEATH, *Affricates* 133.

⁵⁵ HEATH concludes that the inhabitants of Tetuan perceive initial /ǧ/ as a cluster of two sequential consonants, /d/ and /ž/.

⁵⁶ WETZSTEIN, *Sprachliches* 163.

⁵⁷ CANTINEAU, *Études* I 21.

⁵⁸ CANTINEAU, *Études* I 25.

⁵⁹ The oldest informant, viz the paramount sheykh of the *ʿIsā*, Hijhem al-Māḍi, approx. 90 years of age, consistently used /y/ in conversation with the author.

⁶⁰ For a discussion of the grammatical functions of tonic syllables, see AL-HALEESE, *Functions*.

normally does not occur. If, however, the word containing *j* stands out strongly in the phrase, affricate pronunciation is the rule. This is particularly noticeable in constructions with *jami*^f ‘all’: for instance /fi ǧa'mi^f il-ma'žällāt/ ‘in all fields’.

With variable ǧ-speakers no pattern could be discerned with regard to prominence—fricative pronunciation occurred in both accented and unaccented syllables.

4.2.2. Tempo

In formal contexts, phonetic accommodation is primarily a property of rapid speech, since rapid speech differs from the normal pace of conversation by its ‘considerable laxness of articulation, i.e. lack of mobility and tenseness in the lips and tongue, because of which a number of sounds are subject to unique changes.’⁶¹ The same laxity may be observed in relaxed normal pace conversation.⁶²

Affricates combine plosion and friction as a consequence of the slow separation of the articulating organs. In rapid speech the plosive element of [dʒ] tends to be eliminated in initial position and the sound actually produced is a fricative.⁶³ On the other hand, the elimination of the brief transitional breaks which separate words or morphemes creates consonant clusters in which /ž/ cannot be distinguished from /ǧ/. In order to determine whether tempo accounts for part of the observed *j*-variation, the gross ratio of words per minute of discourse was calculated for each recorded speech-act. The tempo varies considerably from one type of discourse to another. Whereas certain monologic programme items have a tempo of 84 words per minute, the reading of tables and weather forecasts sometimes have a tempo of 180 w/m. The regular occurrence in Jordanian broadcasting of /ž/ in *daraja* ‘degree’ and in *barnāmaj* ‘programme’ (often pronounced [barnä:miʒ]) should be seen as a typical exponent of tempo allegro with educated ǧ-speakers—the frequency of fricative pronunciation is much higher in these tabular items than with any other word.

Turn-taking in the reading of tables and anecdotes is usually associated with fluctuations in tempo, which seem to increase the frequency of variation considerably. Tempo phenomena are even more noticeable in extemporary formal speech—a typical example is *Ḥukm ad-dīn*, a weekly programme in which a high-ranking mufti of rural origin answers questions about the application of Islamic law in everyday life. All other factors equally demanding very formal and grammatically correct speech, the mufti’s constant fluctuations in tempo are clearly reflected in the linguistic output, including considerable variation between the main *j*-variant /ǧ/ and the secondary variant /ž/.

By contrast, those speakers who used /ž/ consistently or almost consistently regardless of potentially constraining linguistic environments in general had a very low and even tempo of 90–110 words per minute. The same observation was made for the ǧ-speakers

⁶¹ JOHNSTONE, Dōsiri dialect 252.

⁶² INGHAM, Characteristics 279.

⁶³ Should the speaker further reduce the physical effort of speech, the sound produced would probably be the palatal glide /y/. This is exactly what happens with INGHAM’s Meccan informant—initial [dʒ] alternates with [y] in rapid or informal speech, *loc.cit.* In Egyptian Delta dialects [dʒ] is frequently backed to palatal [j] in rapid speech.

with the lowest rate of /ž/. Tempo constrains variation even in the environments most favourable to change—all items containing /ǧt/ are, for instance, produced in tempo lento, as are the few occurrences of /tž/.

In some phonemic and morpho-phonemic variables the reduction of tempo to expressive, slow speech may restore forms which are regularly reduced in the normal pace of conversation. FLEISCH, for instance, observes the systematic introduction of etymological long vowels in the dialect of the Shiite Metoali community in southern Lebanon.⁶⁴ In the broadcasting context, the occurrence of initial /ǧ/ in the speech of certain urban newscasters seems to constitute such a restoration.

4.3. Context

The collected data indicate that four contextual factors pertaining to the discourse type strongly influence the choice of *j*-variant with speakers who variably use both the fricative and the affricate. The parameters are: (i) *medium* (reading/recitation vs. extemporization); (ii) *participation* (monologue vs. dialogue/turntaking); (iii) *message forms* and (iv) *topic* (the Islamo-Arabic heritage vs. all other topics).

With regard to urban speakers, regular occurrence of word-initial /ǧ/, with or without a preceding /d/, /n/ or /l/, by urban speakers is found mainly in news broadcasts and official communiqués. These two types of discourse differ significantly from other discourse types mainly on the supra-segmental level—not only do the patterns of syllabic prominence differ on a few points, but tonic prominence and pausation have important grammatical functions. Affricate pronunciation which cannot be explained by position or phonemic conditioning may occur in any form of speech which involves turn-taking, i.e. spontaneous conversation, drama dialogue and alternating reading of tables or anecdotes, given that the co-locutor's speech is distinctly non-urban and features /ǧ/ as the predominant variant of *Jīm*. Most items containing /ǧ/ are vernacular and constitute lexical loans. Regardless of position, affricate pronunciation is of rare occurrence when the speaker sits alone in the studio and reads a coherent longish text of a formal character. It is noteworthy that narratives pertaining to the Islamo-Arabic or national heritage are not read by urban speakers. By contrast, non-mechanical variation with non-urban speakers is not associated with any particular type of discourse or topic.

4.4. Socio-cultural background

Socio-cultural background, i.e. the distinction between urban, rural, Bedouin or semi-Bedouin origin, was found to be the only statistically relevant social parameter. Regardless of educational level and sex, native speakers of urban dialects generally retain /ž/ in all styles, but for limited phonetic conditioning. By contrast, a majority of the rural speakers, whether resident in urban areas or not, exhibit some kind of variation, and in the speech of many native rural Jordanians fricative pronunciation was found to dominate. Phonemically conditioned and un-conditioned /ž/ also occurs in the speech of the few Bedouin speakers but remains marginal.

⁶⁴ FLEISCH, *Études* 315-316.

5. Summary and Conclusions

The collected data and the evidence from other dialects confirm that urban speakers are remarkably loyal to their dialectal stereotype in all contexts. By contrast, rural /ǧ/ is found to be receding in favour of /ʒ/ in all styles. This change occurs partly in response to strong external pressure from urban dialects, partly because of the basic instability of the affricate. Situational dialect levelling is more or less unidirectional. Although /gʷ/ is the prescribed variant for Koran recitations, the sound the broadcasters actually produce when reciting or quoting the Koran texts is /ǧ/ and sporadic /ʒ/.

The tendency to eliminate the plosive element of /ǧ/ is strongest preceding dental stops. Certain individuals display a strong tendency to assimilate *Jīm* by de-affricatization to preceding palato-alveolar fricatives with or without an intermediary vowel. The pronunciation of *Jīm* is not influenced by contact with post-palatal consonants. In rapid speech the initial plosive is frequently eliminated between any vowels, or between semi-vowel and vowel. The possibly constraining influence of the vocalic environment needs to be further investigated. With urban speakers the use of /ǧ/ does not seem to be determined by the consonantal environment but by position and stress.

With respect to the pronunciation of *j*, the inhabitants of the area are thus divided into six basic groups:

- 1) individuals who do not have /ʒ/ in any environment,
- 2) individuals who only have /ʒ/ preceding labial, dento-alveolar and palato-alveolar consonants,
- 3) individuals who produce /ʒ/ preceding the aforementioned consonants and following palato-alveolar fricatives,
- 4) individuals in whose speech /ʒ/ is in apparent free variation with /ǧ/,
- 5) individuals in whose speech /ǧ/ co-occurs with /ʒ/ in initial position, and
- 6) individuals who only use /ʒ/.

The division cuts across sex, education, residence and occupation, but apparently not age—the three oldest rural speakers, all well over 65, invariably used /ǧ/. Groups 1 to 4 clearly represent different stages in the response of rural dialects to external pressure from urban communities, a pressure which is exerted by many means, including mass communications. The regression of /ǧ/ among the non-urban population occurs independently of the phoneme /g/ (CA /q/), which is still firmly rooted in all individual basilects. This situation is comparable with the state of Bedouin dialects in northern Israel as described by Rosenhouse.⁶⁵ Groups 5 and 6 represent ‘urbanized’ or totally urban grammars. A documentation of the claim that the older (Muslim?) generation of Damascus retain affricate pronunciation of word-initial *Jīm* would prove that the linguistic state represented by group 5 can be maintained for a very long time, perhaps for several hundred years.

The discovery that the palatal affricate (or released plosive) /gʷ/ remains the only officially sanctioned pronunciation of *Jīm* in all major *tajwīd* traditions in the Middle East and North Africa and the Sudan is of paramount importance for the historic linguistics of the region, regardless of how many speakers are actually aware of its existence and manage to produce it. The occurrence of /gʷ/ represents a continuous tradition, which con-

⁶⁵ ROSENHOUSE, Analysis 17.

nects present-day *tajwīd* instructors with Sibawayh. Much as is the case today, the palatal affricate is likely to have been an acquired pronunciation, though not totally foreign to the citizens of the Abbasid caliphate. Numerous features current today in modern Arabic vernaculars are attested in papyri from before A.H. 300/A.D. 912, which suggests that after the politically and demographically turbulent first century the different variants of spoken Arabic were more or less static. It is, therefore, reasonable to believe that the main dialectal variant of *j* in Baghdad, Basra and Kufa in the eighth century is identical with the variant used in most Mesopotamian dialects today, viz. the palato-alveolar affricative /ǧ/. At any rate, the historical change *ǰ* > *ǧ*, postulated by KAYE, seems extremely unlikely in the light of the current state of *j* in Jordan.⁶⁶ If, as is assumed, HA did not possess any other affricate-type phoneme than palatal /gʲ/, there was no need for Sibawayh to differentiate an affricate palato-alveolar from a fricative one, whence the description '*Jīm* that is like *Šīm*'. If this is the case, /gʲ/ 'the *Jīm* that is like *Qāf*' is likely to be a hyper-correction. Since /gʲ/ is not a pure affricate, untrained mediaeval speakers may have perceived it as the voiced counterpart of /q/, which would explain the unique spelling جسطال 'treasurer (90/91 A.H) for the more usual قسطال, as well as the fluctuation between سرقس and سرجه *n. pr. hom.*, and between جرى and قري ditto.⁶⁷ It is, however, equally possible that the variation described by Sibawayh reflects an intermediary stage in a historical change gʲ > ǧ, which was completed some generations later. This hypothetical stage is comparable with allophonic variation in contemporary Meccan speech, in which /gʲ/ occurs before alveo-dental *l, n* and *z*, /ǧ/ occurs before dental stops, and /ǧ/ elsewhere. By the mid-tenth century, when Ibn Sīna wrote *ʿasbāb ḥudūṭ al-ḥurūf*, /gʲ/ would definitely have disappeared from the dialect. For unknown reasons, the phoneme did not undergo further change in the Mesopotamian and peninsular dialects, whereas in North Africa and most sedentary dialects in Greater Syria /ǧ/ eventually replaced /ǧ/ altogether.

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⁶⁶ KAYE, /ǧiim/ 63.

⁶⁷ Cf. HOPKINS, *Studies* 35 & 32.

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ABBREVIATIONS

<i>AL</i>	Anthropological Linguistics.
<i>AO</i>	Acta Orientalia.
<i>BASOR</i>	Bulletin of the American Schools of Oriental Research.
<i>BSOAS</i>	Bulletin of the School of Oriental and African Studies.
<i>OS</i>	Orientalia Suecana.
<i>StO</i>	Studia Orientalia, Helsinki.
<i>ZAL</i>	Zeitschrift für arabische Linguistik.
<i>ZDMG</i>	Zeitschrift der Deutschen Morgenländischen Gesellschaft.