Chapter 26

Dialect contact and phonological change

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This chapter examines phonological and phonetic changes that have been documented and analyzed in spoken Arabic varieties, occurring as a result of dialect contact. The factors contributing to dialect contact in Arabic-speaking communities vary, from economic migration which has encouraged individuals to move into new dialect areas seeking work, to migration that stems from political violence and upheaval. These diverse factors have contributed to the large-scale migration of Arabic speakers to other parts of the Arabic speaking world. As a result, dialect contact is rampant, and decades of Arabic sociolinguistic research have shown that the phonological and phonetic effects of these contact situations have been quite profound.

1 Introduction

In this chapter, I discuss research that has examined the outcomes of Arabic dialect contact and the influence of contact on phonological change in spoken Arabic varieties. This chapter also discusses the interface between phonology and phonetics, and the effect of contact on these areas of the linguistic system. Given space constraints, I discuss only a portion of the published work in these areas, giving some priority to recent doctoral dissertations that have contributed to this body of research. Further, I exclude work that has investigated the effects of contact on the morphology and syntax of Arabic (e.g. Al-Wer et al. 2015; Gafter & Horesh 2015; Leddy-Cecere, this volume; Lucas, this volume; Manfredi, this volume).

Although Arabic sociolinguistics is an increasingly robust area of linguistic research, limiting my discussion to cases of contact-induced phonological and phonetic change is perhaps unsurprising, given the scholarly history of dialect-contact research and its place within sociolinguistics. Sociolinguistics has made

great progress towards the goal of analyzing the full scope of variation in languages around the world. However, historically, and to some extent still today, examinations of variation and change in the realms of phonology and phonetics have been the meat and potatoes of sociolinguistic work. I would argue that this is true of Arabic sociolinguistic work as well.

From Labov's (1963) early work on Martha's Vineyard, phonetics and phonology have been at the heart of analyses of dialect contact. As a result, much of what we know about Arabic dialect contact has stemmed from earlier foundational research on dialect contact in the English-speaking world. Within this work on English, research by Milroy (1987), Trudgill (1986; 2004), Britain (2002), and Britain & Trudgill (2009), among many others, has shown how dialect contact often plays out, and how that contact influences language variation and change.

However, research on Arabic has moved beyond simply testing the hypotheses put forward by scholars of English dialect contact, playing its own role in refining sociolinguistic theory. Notably, Arabic sociolinguistics has refined our understanding of diglossia (Ferguson 1959). Ibrahim (1986) and Haeri (2000) have reoriented our understanding of Arabic diglossia from Ferguson's High–Low dichotomy to one that draws on locally meaningful understandings of linguistic prestige. In doing so, this work has moved our discussion away from analyzing Arabic through the lens of "standard" or "nonstandard" varieties or variants, setting the stage for decades of research that has examined contact-induced change in Arabic varieties.

Before moving on to a discussion of a number of specific cases of Arabic dialect contact, I briefly address the potential limitations of Van Coetsem's (1988; 2000) framework for discussions of dialect contact, as opposed to language contact. After discussing Van Coetsem's approach, I shift my focus to discuss Arabic dialect contact through a theoretical lens that has proven productive in earlier sociolinguistic work (Trudgill 1986; 2004).

In analyzing phonological change as a result of dialect contact, Van Coetsem's framework presents a number of possible challenges. One specific issue is that in many cases, a clear distinction between the borrowing or imposition of linguistic forms is challenging to establish in cases of Arabic dialect contact. Scholars may encounter challenges in attempting to assert the agentivity of the recipient language in making a case for the borrowing of, for example, aspects of a dialect's phonology into the phonology of another dialect. Asserting the agentivity of the source language in making the case for imposition is similarly challenging. These challenges stem from the cognitive orientation of Van Coetsem's

framework, which, as Lucas (2015: 521) notes, is not based on social realities or variation in the power and prestige that a given dialect or language may hold.

The approach that many scholars within sociolinguistics and allied fields like linguistic anthropology have taken is, in contrast, inherently social. We concern ourselves with the social life of language, and although we do not discredit cognitive approaches to language acquisition and use, in much of the work on dialect contact, we have foregrounded social factors in our analyses of language change. However, it is worth noting that within sociolinguistic research on second dialect acquisition, researchers have highlighted the role of social factors, as well as the constraints placed on acquisition by the linguistic system (e.g. Nycz 2013; 2016).

With the above discussion in mind, I argue that Van Coetsem's framework is less readily applicable to the cases that I describe in this chapter. Instead, I suggest that outcomes of Arabic dialect contact are better analyzed through the framework advocated for within sociolinguistics. It is to that framework that I now turn.

As Trudgill (2004) notes in discussing new dialect formation, dialect contact often progresses in stages. One of the earliest stages in this process is LEVELING (Trudgill 2004: 83), which results in the reduction of forms from a given dialect. These forms may be, but do not have to be, socially marked, e.g. affrication of /k/ to [č] in certain Arabic dialects. Most importantly for Trudgill, during leveling certain variants of a given feature will supplant others (Trudgill 2004: 85). As a result, forms that are socially marked may be leveled out, while unmarked forms may survive even if they were not a majority variant. In those cases where socially marked forms are present, they are often reduced across generations. Trudgill also describes processes of interdialect development, where forms arise out of the interaction between dialects, such as reallocation, where surviving forms are reallocated in some way, and focusing, whereby a new variety born out of contact begins to stabilize (Trudgill 2004).

What I feel that this framework offers in discussions of Arabic dialect contact is an acknowledgement of the social issues that may influence linguistic change, especially in situations of contact. In the remainder of this chapter I discuss cases of contact-induced change in Arabic varieties. In doing so, I draw on sociolinguistic understandings of how contact-induced changes take hold and progress.

2 Contact-induced changes in the phonology of Arabic dialects

When discussing Arabic dialect contact, a brief discussion of the typology of Arabic is useful, as it provides a shared lexicon for discussing the outcomes of contact. Cadora (1992) offers an ecolinguistic taxonomy of Arabic, describing a continuum of Arabic varieties containing linguistic features ranging from what he describes as Bedouin in provenance, to those that can be considered sedentary. In presenting a related contrast, Cadora describes features that situate dialects as being urban versus those that are rural.

However, what Cadora offers is not a hard and fast classification of Arabic varieties. Instead, his typology highlights linguistic features that typically group together within dialect types, providing a way to conceptualize the similarities and differences across these varieties. Importantly for this chapter, sites of contact between Arabic dialects are also often sites of contact between *types* of dialects as well.

In my own work on Palestinian Arabic this has been the case, with Gaza City offering one example of contact between different Palestinian Arabic dialects. Today, the dialect of Gaza City has both Bedouin and urban sedentary features, dialect types that likely came into contact in Gaza as a result of Palestinian refugee migration (see de Jong's 2000 discussion of Gaza City). This contact is undeniable given Gaza's current demographic reality, which suggests that its population is roughly 70% refugee.[1] It is also unsurprising given that Gaza has long been a site of contact. This history of contact has resulted in a city dialect that looks different than other urban Palestinian varieties spoken in major cities like Jerusalem or Nablus.

The above example serves as a way of framing the linguistic discussion of contact-induced phonological change provided below. I begin by covering documented consonantal changes that have grown out of contact, before moving on to vocalic changes and the need for additional research in this area as studies of Arabic contact move forward.

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[1]This figure has been reported by the United Nations Relief Works Agency for Palestinian Refugees but only reflects refugees that have actually registered with the U.N. (https://www.unrwa.org/where-we-work/gaza-strip, accessed 07/01/2020). Other estimates place the percentage of Gaza's population that are refugees as closer to 80%.

2.1 Consonantal changes

One of the most widely discussed linguistic features within work on Arabic dialect contact has been the variable realization of the voiceless uvular stop /q/. Motivation for the scholarly interest in /q/ likely stems from a number of factors. First, the phoneme has a wide range of dialectal variation, with dialectal realizations including a true voiceless uvular [q], as well as [k, g, ʔ] and an additional [k] variant articulated between a velar and uvular (Shahin 2011). Second, interest in /q/ is also likely due to the high social salience of its variation in many Arabic-speaking communities (see Hachimi 2012; Cotter & Horesh 2015).

The result is that /q/ has been one of the most heavily studied features in Arabic sociolinguistics. Variation and change in /q/ has been discussed in a number of different communities throughout the Arabic speaking world, including: Palestine (Abd El-Jawad 1987; Al-Shareef 2002; Cotter & Horesh 2015; Cotter 2016); Egypt (Haeri 1997); Iraq (Blanc 1964; Abu-Haidar 1991);[2] Jordan (Abd El-Jawad 1981; Al-Wer 2007; Al-Wer & Herin 2011); Morocco (Hachimi 2007; 2012); and Bahrain (Holes 1987), among others.

What these cases suggest are robust processes of linguistic change in the realization of /q/ coming as a result of factors such as migration and dialect contact. While the social patterning of these changes (e.g. stratified along age, gender, or sectarian lines) has been as diverse as the communities in which /q/ has been analyzed, across these contexts we see regular patterns of change in /q/ over time.

Taking the case investigated by Cotter (2016) as an example, we can see how patterns of change in /q/ may progress over time. In the speech of Jaffa Palestinian refugees in the Gaza Strip, Cotter (2016) showed that across three generations Jaffa refugees in Gaza showed progressively lower use of their traditional [ʔ] realization of /q/, instead beginning to favor the voiced velar [g] variant that is common in Gaza City Arabic. Within the oldest generation of this community, Jaffa refugees showed near categorical retention of the glottal variant, and little rudimentary leveling. However, the second generation of Jaffa refugees showed substantial variability between [ʔ] and [g], while in the third generation in the study, speakers showed higher rates of usage of the [g] variant that is native to the Gaza City dialect.

However, as Cotter & Horesh (2015) discuss, variability in /q/ is often situated within broader identity projects that speakers and communities have under-

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[2]Both Abu-Haidar and Blanc's analyses are dialectological and descriptive in scope, however both ultimately discuss what appear to be processes of change taking place for /q/ within what Blanc termed "communal" (i.e. religio-sectarian) varieties of Arabic in Baghdad.

taken. It is important then that analyses of Arabic dialect contact also consider the broader ethnographic context in which this contact takes place.

Another area of interest for researchers examining dialect contact has been the interdental fricatives /θ, ð, ð̣/. Across Arabic varieties, these phonemes quite often vary between realizations as true interdental fricatives [θ, ð, ð̣] and their stop counterparts [t, d, ḍ] (Al-Wer 1997; 2003; 2011). In addition to descriptive work that has documented the realization of the interdentals across Arabic varieties, they have also been examined as sociolinguistic variables in cases of dialect contact.

For example, Holes (1987; 1995) investigated sociolinguistic variation in the realization of /θ, ð, ð̣/ roughly split along sectarian lines in the speech of Arab and Baḥārna speakers in Bahrain. In Bahrain, in the dialect of Sunni Arabs these phonemes are traditionally pronounced as [θ, ð, ð̣], whereas in the dialect of Shi'i speakers they are pronounced as [f, d, ḍ]. Holes (1995: 275) details that in the speech of young literate speakers in Manama, intercommunal dialect realizations of the interdentals have emerged that are generally centered on the Sunni Arab realizations of these phonemes. More recently, Al-Essa (2008) examined the interdentals in the speech of Najdi Arabic speakers living in Jeddah, Saudi Arabia, an Urban Hijazi Arabic dialect area. Although Najdi Arabic typically retains the interdental realization of these phonemes, Al-Essa concluded that degree of contact with Urban Hijazi speakers was a significant factor influencing whether Najdi speakers adopted the stop realizations common in Urban Hijazi Arabic.

Additionally, Alghamdi (2014) investigated the interdentals through the lens of migration and contact in the Saudi Arabian city of Mecca. Alghamdi describes what may be the beginning of a change from the traditional interdental realization of these phonemes in the direction of their stop counterparts. As Alghamdi (2014: 112) notes, if it is the case that an incipient change in the interdentals exists in Mecca, the results of her study suggest that female speakers may be leading this change. This finding supports earlier sociolinguistic work, which has highlighted that female speakers are often at the vanguard of linguistic change.

Change in the interdentals has also been examined as part of new dialect formation in the Jordanian capital of Amman. As Al-Wer (2007) describes (see also Al-Wer, this volume), Amman Arabic has grown out of contact between speakers of two different dialect types: urban Palestinian and traditional Jordanian varieties, which differ in their realizations of the interdentals. Urban Palestinian dialects typically favor non-interdental realizations [t, d, ḍ], while, in contrast, traditional Jordanian dialects retain the interdentals [θ, ð, ð̣]. Al-Wer describes the case of the interdentals in Amman as a process of focusing (Trudgill 2004) that has arisen out of contact. In Trudgill's terms (drawing on Le Page

& Tabouret-Keller 1985), focusing is one part of the process of new-dialect formation, whereby features of input dialects are leveled and stability emerges, resulting in new shared linguistic norms. Al-Wer describes that, in Amman, focusing of the interdentals in the direction of their stop counterparts [t, d, ḍ] has taken place (Al-Wer 2007: 66). In addition, Al-Wer notes that, as a result of contact, Amman Arabic has also focused towards the common Palestinian [ž] realization of /ǧ/ at the expense of the traditional Jordanian [ǧ] (Al-Wer 2007: 66).

In addition to the work by Al-Essa (2008) and Alghamdi (2014) discussed above, a more recent case of contact-induced change in Saudi Arabia has been identified: the voiced lateral fricative [ɮˤ] realization of ⟨ض⟩. Al-Wer & Al-Qahtani (2016) investigate /ɮˤ/ as a variable in the dialect of Tihāmat Qaḥṭān. What this work shows is that in the Tihāmat Qaḥṭān variety, the lateral [ɮˤ] represents a conservative, traditional variant of the phoneme, whereas the voiced interdental fricative [ð] represents the innovative variant. As a result of dialect contact, Al-Wer & Al-Qahtani (2016) describe an intergenerational process of change towards the voiced emphatic interdental [ḏ̣], with use of the historic [ɮˤ] variant receding over time.

Another area of interest in dialect contact research has been affrication. As descriptive work has shown, affrication of certain phonemes, notably /k/ in the direction of [č], is common in Arabic dialects. As an example of this process, Shahin (2011) notes that in rural varieties of Palestinian Arabic, /k/ palatalizes to become an affricate [č] (e.g. *čīfak* 'how are you (SG.M)?' < *kīfak*). While typologically this affrication is common, processes of affrication or de-affrication have also been noted as the outcome of contact.

Al-Essa (2008) investigated affrication of /k/ and /g/ in the speech of Najdi Arabic migrants in Jeddah, and found that the affrication that is a common feature of this variety had been almost completely undone in this migrant community. Examining this change in light of dialect contact, Al-Essa concludes that this de-affrication represents the leveling out of marked regional dialect forms as a result of contact (Trudgill 1986; Kerswill & Williams 2000). More recently, Al-Wer et al. (2015) note that the conditional, root-based distribution of the affricate [č] for /k/ in the Sult variety of Arabic in Jordan, which, although it has receded (Al-Wer 1991), now interacts with other innovative features in Sult that show potential stratification along religious lines.

Elsewhere in Jordan, notably in Amman, Al-Wer (2007) describes the leveling of the affricate [č] across generations. The city dialect that has emerged in Amman, which has Sulti Arabic as one of its input varieties, underwent rudimentary leveling (Trudgill 2004) within the first generation. This leveling resulted in the loss of this affricate variant of /k/ in the speech of Sulti migrants. In this case,

Al-Wer describes the deaffrication of [č] as stemming from its status as a marked feature of Horani Arabic varieties like that of Sult. This marked status makes it a primary candidate for the kinds of leveling that sociolinguists have identified in other cases of contact.

2.2 Vocalic changes

In general, the Arabic vocalic system remains understudied within research on Arabic varieties. However, multiple cases of change linked to dialect contact have been identified. One of the most well studied cases of contact-induced vocalic change in Arabic is perhaps better thought of as a morphophonological change: the Arabic feminine gender marker. The feminine gender marker is a word final vocalic morpheme that is realized variably across Arabic varieties. The realization of this vowel varies from an unraised [a] to [æ, ɛ, e], or even as high as [i] (e.g. Al-Wer 2007; Naïm 2011; Shahin 2011; Woidich 2011).

Even within one region, the full range of variation in this morpheme can be seen. Taking the Levant as an example, the Lebanese capital, Beirut, is known for raising this vowel to [e] or even [i] (Naïm 2011). The Syrian capital, Damascus, is known to raise to [e] (Lentin 2011). Urban Palestinian (Rosenhouse 2011; Shahin 2011) is also often described as raising to [e], while Amman (Al-Wer 2007) raises this vowel to [ɛ]. These city varieties can be contrasted with, for instance, the variety of Cairo (Woidich 2011), which does not raise this vowel, leaving it as [a].

This morpheme is particularly interesting within a discussion of dialect contact because raising of this vowel is phonologically conditioned. The phonological factors that constrain raising vary across dialects, with urban Levantine Arabic (e.g. Syria, Palestine, Lebanon) providing one example of these factors. In urban Levantine, the following rules constrain the raising of this vowel (Grotzfeld 1980: 181; Levin 1994: 44–45; Al-Wer 2007: 68):

1. The default realization of the vowel is raised: [e]

2. The vowel is unraised, realized as [a], when:
    a) it occurs after back consonants (i.e. pharyngeal, glottal, post-velar, emphatic/pharyngealized): /ḥ, ʕ, ʔ, h, ṣ, ḍ/ḍ̣, ḫ, ɣ, q/;
    b) it occurs after /r/, but only when preceding /r/ there is no high front vowel. In cases where a high front vowel does precede /r/, raising is allowed, e.g. [kbi:re] 'big (F)'.

Below I provide two specific documented examples of contact and change in the feminine gender marker. First, Cotter & Horesh (2015) investigated change in

the feminine gender marker in the speech of refugees originally from the Palestinian city of Jaffa who now live as refugees in the Gaza Strip. This sample included both speakers who were expelled from Jaffa after the creation of the state of Israel in 1948 and their descendants. Their traditional urban Palestinian dialect (Horesh 2000; Shahin 2011) is one that raises the feminine gender marker to [e], subject to the phonological conditioning mentioned above. In contrast, based on the available dialectological information, the dialect of Gaza City does not raise this vowel (Bergsträßer 1915).

Cotter & Horesh (2015) highlight a process of contact-induced change that has taken place in this community. Across generations, the realization of this vowel appears to be lowering and backing, moving from [e] in the direction of [a]. The result is that younger Jaffa refugee speakers realize the vowel closer to the [a] common in Gaza City. This type of change is perhaps unsurprising in a city like Gaza, given that the population of Gaza is overwhelmingly comprised of refugees, including large communities who are of [a] dialect types for this feature. This diversity and the high numbers of refugees in Gaza means that the city, and the territory generally, is a site where many dialects of Palestinian Arabic are in intimate contact. What remains to be determined is whether or not new linguistic norms are emerging in the dialect of Gaza City more generally as a result of this contact.

One other case, which is discussed in more detail by Al-Wer (this volume), provides a succinct example of the intersection between phonetics, phonology, and Arabic dialect contact. In discussing the formation of Amman Arabic, Al-Wer (2007) notes the centrality of vocalic change to the formation of the dialect. The feminine gender marker represents one feature that has helped to define the variety of Amman.

As Al-Wer (2007) describes, through contact between Palestinian and Jordanian Arabic dialects in Amman, the realization of the feminine gender marker has focused on [ɛ], the indigenous Jordanian realization (as in e.g. the Horani dialect of Sult, see Herin 2014). However, although Amman Arabic has focused on the Jordanian phonetic realization of this vowel, it has retained urban Palestinian phonology, which blocks raising in the environment of back consonants as defined above (Al-Wer 2007: 69). This is less restrictive than in Horani Arabic, where raising is also blocked in the environment of velar consonants such as /k/ and the labiovelar /w/ (Al-Wer et al. 2015: 77).

Finally, I mention one other case of vocalic change that has been documented as an outcome of dialect contact: the diphthongs [ay] and [aw]. Alghamdi (2014) investigated monopthongization of the traditional Arabic diphthongs /ay/ and

/aw/ in the speech of Ghamdi migrants in Mecca. Alghamdi found that the diphthongs common in the dialect spoken by this migrant community were monophthongizing, reflecting a change towards the norms of Mecca Arabic, which lacks diphthongs. Alghamdi's analysis of the diphthongs provides an example of dialect leveling borne out of contact, noting two additional aspects of this variable in the speech of this migrant community: i) Alghamdi describes the high degree of social salience that the diphthongs have in this community and their possible stigmatization in Mecca, and ii) that retention of the diphthongs is uncommon in Saudi Arabic, making the Ghamdi realization a minority realization in Saudi Arabia generally. These two facts create an environment conducive to change.

3 Conclusion

In examining Arabic dialect contact, a growing body of research highlights that the phonology and phonetics of Arabic represent rich sites for linguistic change. As the examples that I have provided throughout this chapter, and those discussed elsewhere throughout this volume suggest, we can identify a number of cases where dialect contact has influenced the directionality and extent of change in Arabic dialects. With the findings of this selection of work in mind, a number of areas remain open for future investigation.

Perhaps the most pressing of these is the reality that, although I have highlighted work here that investigates vocalic change, the vocalic system of Arabic varieties remains drastically understudied. Although phonetic research on the vocalic system of Arabic varieties continues to grow (see e.g. Hassan & Heselwood 2011; Khattab & Al-Tamimi 2014; Al-Tamimi & Khattab 2015), we know little about sociophonetic changes that may take place in cases of contact like those discussed in this chapter. Given the scope of dialect contact in the Arabic-speaking world, much of which has come as a result of mass migration throughout the region, investigating the potential for processes such as vocalic chain-shifting (Al-Wer 2007) represents an important next step for research on language variation and change in Arabic. I would argue that more robust investigation of vocalic change in Arabic dialects represents a pressing area of concern for Arabic sociolinguistics.

In addition, examples like the feminine gender marker in Amman (Al-Wer 2007) open the door for future work that investigates the potential for blending of the phonetics and phonology of different Arabic varieties as a result of contact. Although Amman is a somewhat different case, given that it represents an example of new dialect formation, a close examination of phonetics and phonology

together in contact situations will provide us with an opportunity to examine how dialect focusing and leveling takes place, and how the linguistic systems of multiple different Arabic varieties interact and regularize through contact.

Additional research that looks more closely at change in the vocalic system of Arabic dialects will go a long way towards enriching the depth of Arabic sociolinguistic research. This is especially true of work that examines cases of dialect contact. However, beyond sociolinguistics, a closer examination of the vocalic system will contribute to the description and documentation of Arabic dialects, which will further enrich linguistic research that investigates the varieties of Arabic spoken around the world.

Further reading

➤ As I have discussed throughout this chapter, Al-Wer's (2007) work details a number of aspects of how the dialect of Jordan's capital, Amman, emerged as a result of contact between Jordanian and Palestinian dialects. It offers a clear picture of how contact has played out in Amman with respect to a number of linguistic features, and how the city's dialect emerged over successive generations.

➤ Cotter & Horesh's (2015) article examines contact in the Gaza Strip, one of the more understudied areas within Arabic linguistic research. The article draws on sociolinguistic fieldwork conducted in Gaza City, as well Jaffa and the West Bank, to analyze change in three specific features of Palestinian Arabic.

➤ Holes' (1987) work on Bahrain provided one of the early accounts of sociolinguistic variation and change in Arabic. In addition, this work provides a clear example of variation in Arabic that has been stratified on sectarian, or religious, lines.

Acknowledgements

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