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# *Assessing contact-induced change in Palestinian Arabic: Evidence from Beirut*

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***Abstract***

We investigate whether Palestinian Arabic (PA), as spoken by the local Palestinian refugee population in Beirut, is converging with Lebanese Arabic (LA), the majority variety. Using a sociolinguistic framework, we target three variables considered to be susceptible to convergent change. We find evidence of contact-induced change in PA in the variable raising of word-medial /a:/ to [e:], as well as in the attrition of socially marked exponents of verbal negation. By contrast, in the case of the third variable, the future temporal reference system, the evidence for convergence is less compelling on account of key differences between the contact varieties, including the vertiginous rise of the proclitic future marker *ħa-* in PA. We implicate the respective social salience of the targeted variables in their differential susceptibility to convergence. Our results afford new insights into dialect contact and elucidate under-studied patterns of grammatical variation and change in Levantine Arabic.

**Keywords:** dialect contact, comparative sociolinguistics, Arabic

***Résumé***

Nous cherchons à savoir si l'arabe palestinien (AP), tel que parlé par la population locale de réfugiés palestiniens à Beyrouth, est en train de converger avec l'arabe libanais (AL), la variété majoritaire. En employant une méthodologie sociolinguistique, nous ciblons trois variables considérées comme étant propices à la convergence linguistique. Les preuves du changement causé par le contact en AP se dégagent de l'analyse de la voyelle /a:/ qui s'élève de manière variable en [e:] à l'intérieur d'un mot, ainsi que de la réduction des expressions de la négation verbale dotées d'une évaluation sociale négative. Par contre, en ce qui concerne la troisième variable étudiée, la référence temporelle au futur, les preuves en faveur de la convergence linguistique sont moins convaincantes en raison des différences essentielles affichées par les variétés en contact, telles que l'augmentation spectaculaire du proclitique *ħa-* comme indicateur du futur en AP. Nous proposons que la susceptibilité différentielle des variables cibles à la convergence linguistique est étroitement liée à leur évaluation sur le plan social. Nos résultats offrent de nouvelles perspectives sur le contact entre dialectes en mettant en lumière des schémas de variation et de changement grammaticaux sous-étudiés en arabe levantin.

**Mots-clés:** contact entre dialectes, sociolinguistique comparative, l'arabe

## 1. Introduction

Protracted conflict triggering large-scale population displacement and movement, together with internal migration catalyzed by increasing urbanization, are key developments that have prompted multiple investigations into the dynamics of dialect contact, koinéization, and new dialect formation in the Arabic-speaking world (see e.g. Al-Wer 2007, Lucas and Manfredi 2020).

Against the backdrop of this scholarly activity, relatively little attention has been paid to the sociolinguistic situation in Lebanon, where Palestinian Arabic (PA), spoken by the local refugee population, has been in sustained contact with Lebanese Arabic (LA), the majority variety, for over 70 years following the Arab-Israeli War of 1948. Though research on PA and LA in Lebanon is limited (Horesh 2020), the prevailing consensus is that Palestinians have either accommodated to the speech patterns of LA, the majority variety, or continue to speak some variety of PA, especially in the more socially isolated refugee camps (Horesh 2020). One of the few detailed treatments of this contact setting can be found in Hennessey's (2011) pioneering investigation of PA in Beirut. Hennessey observed that many Lebanese-based Palestinians, deprived of basic employment rights and routinely exposed to social discrimination, have apparently limited the distinctiveness of their speech patterns so that these are now superficially indistinguishable from those of their Lebanese counterparts.

It is well known, however, that the ability of minority groups to participate in and replicate the linguistic patterns of majority varieties is compromised when minority speakers experience some degree of residential segregation from the urban mainstream (Labov 2014). The refugee camps in Beirut, home to a substantial proportion of the Palestinian refugee population (Hennessey 2011), are a notable case in point. Though the camps are not spatially isolated from the larger urban sprawl, they are routinely stereotyped as under-developed slum areas and frequently depicted by the Lebanese political class as security threats or "spaces of exception" (Knudsen and Hanafi 2011: 6). Within a socio-politically hostile milieu characterized by institutionalized discrimination against Palestinian refugees, the communal insularity of the camps has played an instrumental role in fostering the development of dense, multiplex social networks where close-knit ties between residents help to reaffirm Palestinian identity as well as allegiance to vernacular norms. The comments of one of the Palestinians recorded in the camps (as detailed in section 2) are illustrative in this regard:[1]

(1) ah, ah, ʕanna lakne mʃajjane, bas uh ʔetʔaw— btetʔawwa bi l— bi l-ʒuzu:r m— tˤabʕan maʃ l-ʔahel, ʔoke? w bi-tawa:sˤol ma- fi ma bajn n-na:s bi l-moxajjama:t (…) [56/P/M/45/02:07:58][2]
'Yes, yes, we have a specific accent, but it is strengthened through the— through family ties of course, okay? And through communication among people in the camps (…)'

[1]Examples are reproduced verbatim from the audio recordings. IPA is used for Arabic transliteration, with the exception of the negative suffix [ʃ], which is represented here as [š].

[2]Codes in parentheses refer to: unique speaker identifier; P=Palestinian, L=Lebanese; speaker sex (M/F); age; and the time stamp of the utterance in the recording.

Palestinians based in the camps are reported to make routine use of vernacular features that are emblematic of "traditional" or "conservative" PA (Hennessey 2011: 12–13). Drawing on assessments of social network strength in Palestinian communities located both within and outside the camps, Hennessey (2011) found that camp-dwellers used substantially fewer stereotypical vernacular features of LA and concluded that there was no compelling evidence of a wholesale shift by Palestinians towards Lebanese speech norms.

The present investigation seeks to build on Hennessey's (2011) foundational study of dialect contact in a number of ways. A key methodological refinement involves the inclusion of an actual benchmark variety of contemporary Beirut LA with which the local variety of PA can be systematically compared. Another innovative component of our study concerns the importance we attach not only to investigating phonological variation, the staple component of sociolinguistic research on spoken Arabic, but also to examining morphosyntactic variation. One of the ancillary aims of our study is to breach the gap between traditional dialectology and variationist sociolinguistics by exploring under-studied patterns of grammatical variation and change in Levantine Arabic, as spoken in a contact setting (see Horesh and Cotter 2016).

Extending the purview of our study beyond phonology to morphosyntax is crucial to investigating the outcomes of dialect contact in Beirut. Thomason (2001) remarks that a solid case for convergent change cannot be made on the basis of an *isolated* structural feature, as contact likely affects multiple linguistic components. Indeed, as LA and PA are closely related dialects of Levantine Arabic, we would expect the potential for contact-induced change to be relatively uninhibited because both varieties share a large number of structurally equivalent elements. Putting that hypothesis to the test, we first target a socially conspicuous phonological variable involving the raising of /a:/ to [e:] in word-medial position, a stereotypical feature of LA as spoken in Beirut, claimed to be infiltrating the speech of the local Palestinian community, from which it is traditionally absent (Hennessey 2011). Following Trudgill (1986), we reason that socially salient aspects of segmental phonology are particularly susceptible to convergent change because speaker awareness may enhance the adoption of such features.

The two morphosyntactic features we additionally target include the variable expression of verbal negation and future temporal reference. Given that the systems of verbal negation and future temporal reference in PA and LA host a set of (partially) corresponding variant forms (see (5)–(8) and (10)–(13)), we would expect the existence of structural congruence between the two varieties to enhance the possibility of convergent change (Thomason 2001).

From an analytical perspective, what most distinguishes our study from recent related investigations of contact-induced change involving Arabic (e.g., Leddy-Cecere 2018, 2020) is the importance we attach to characterizing the *structure* of the variation in each targeted linguistic subsystem (Poplack and Levey 2010). By comparing this structure in apparent- and real-time datasets representing PA and LA respectively, we can not only determine the existence of linguistic change, but also ascertain its *directionality*, allowing us to address the contentious issue of whether change is the product of contact or internal evolution (Poplack 2021).

## 2. THE DATA

The synchronic data were collected between 2016 and 2019 in Beirut by the first author, a native Arabic speaker of Palestinian heritage, who was born and raised in Lebanon. These data are based on 45 hours of sociolinguistic interviews digitally recorded from 27 Lebanese and 39 Palestinians. Fifteen of the Palestinians were recorded in three refugee camps, Burj El Barajneh, Shatila, and Mar Elias, located in the south of Beirut, with a view to exploring the influence of the relative social insularity of the camps on speakers' speech patterns. In addition to place of residence (i.e., inside or outside the camps), speakers were stratified by age (and, for Palestinians only, refugee generation), as well as speaker sex and level of education, as summarized in Table 1. Following Al-Wer (2002a), we capitalize on level of education as a "proxy" variable that gauges the amount of contact Palestinians have with individuals outside their local communities. As higher education is virtually only accessible to Palestinians attending Lebanese institutions (Hennessey 2011), we use post-secondary educational attainment as an informal measure of Palestinians' degree of face-to-face interaction with speakers of LA. Information gleaned from language background questionnaires administered to the speakers that we recorded reinforces our contention that Palestinians' level of educational attainment correlates positively with their frequency of contact with the local Lebanese population. Of the Palestinians who provided self-reports of their personal interactions with the local Lebanese community, 94% (15/16) of those with post-secondary education estimated their contact to be "quite or very often", contrasting with 78% (7/9) of speakers educated only to primary level, who described their contact as merely "occasional".

| Lebanese | | Palestinians | |
|---|---|---|---|
| **Age** | N | **Age/Generation** | N |
| Older (72–89) | 5 | Older (73–92)/1st Generation | 9 |
| Middle-aged (40–58) | 5 | Middle-aged (40–66)/2nd Generation | 19 |
| Younger (19–34) | 17 | Younger (20–39)/3rd Generation | 11 |
| **Speaker sex** | | **Speaker sex** | |
| Female | 16 | Female | 20 |
| Male | 11 | Male | 19 |
| **Education** | | **Education** | |
| Post-secondary | 22 | Post-secondary | 21 |
| Primary/Secondary | 5 | Primary/Secondary | 18 |
| **Place of residence** | | **Place of residence** | |
| Outside refugee camp | 27 | Outside refugee camp | 24 |
| Inside refugee camp | 0 | Inside refugee camp | 15 |
| **Total** | **27** | **Total** | **39** |

**Table 1:** Distribution of Lebanese and Palestinian sample members according to age/generation, speaker sex, education and place of residence

As an adequate understanding of linguistic change, convergent or otherwise, cannot be achieved without a diachronic component, we supplement our synchronic datasets with real-time sources. For PA, we make use of a subset of the *Palestinian Oral History Archive* (POHA), housed at the American University of Beirut, comprising an audio-visual collection of interviews recorded in Lebanon between 1995 and 2006 from 80 first-generation Palestinian refugees born between 1897 and 1948. Many of these interviews address life before the Palestinian exodus in 1948, and include general narratives of personal experience, rendering them broadly comparable in terms of content to the sociolinguistic interviews constituting our synchronic datasets. Table 2 provides an overview of the POHA subsample, showing the distribution of speakers according to sex, education as well as place of residence (i.e., inside or outside of refugee camps).

| Palestinian Oral History Archive | |
|---|---|
| **Sex** | **N** |
| Male | 40 |
| Female | 40 |
| **Education** | |
| Secondary (and below) | 74 |
| Post-Secondary | 6 |
| **Residence** | |
| Inside Camp | 40 |
| Outside Camp | 40 |
| **Total** | **80** |

**Table 2:** Speaker sample based on a subset of the *Palestinian Oral History Archive* (POHA)

Our second real-time source is based on 34 televised plays performed in LA and broadcast in Lebanon between the early 1960s and 1983. Though based on scripted discourse, the plays were meant for popular consumption and were performed with a view to approximating, at least in part, the speech of their intended Lebanese audience, as gauged from the prevalence of colloquial features within them. We refer to this compendium of plays as the *Lebanese Popular Theatre Corpus* (LPTC), details of which are summarized in Table 3 below.

As is the case with any diachronic surrogate of orality, the use of the LPTC as a window on earlier vernacular LA comes with a number of caveats attached. A chief concern is that plays, as fictional representations, cannot be uncritically equated with actual renditions of authentic speech. Still, the fact that plays "strive […] to be mimetic of spoken interaction" (Culpeper and Kytö 2010: 17) qualifies them as a valuable resource with which to investigate the speech of the past, especially in a context where suitable recordings representing earlier stages of dialectal Arabic are notably scarce (Lucas and Manfredi 2020).

| Lebanese Popular Theatre Corpus | |
|---|---|
| **Period when televised** | **N** |
| 1960s (1960–1969) | 9 |
| 1970s (1970–1978) | 23 |
| 1980s (1980 and 1983) | 2 |
| **Total** | **34** |
| **Distrib. of characters by sex** | |
| Male | 282 |
| Female | 115 |
| **Distrib. of characters by approx. age** | |
| Older | 24 |
| Middle-aged | 192 |
| Younger | 181 |
| **Total** | **397** |

**Table 3:** Characteristics of the *Lebanese Popular Theatre Corpus* (LPTC)

Another problem concerns the range of speech styles found in the plays. The diversity of characters populating the plays, including high-ranking individuals such as pashas, mayors and kings, in addition to lower-status personages such as beggars, thieves, hitmen, etc., entails that loftier characters occasionally use more formal, highly stylized registers, at some remove from vernacular speech. Accordingly, in order to control for potential stylistic effects, we display, where relevant, separate variant distributions for the speech of high- and low-status characters in the LPTC.

## 3. Method

### 3.1 Using the variationist framework to gauge (contact-induced) change

A key working principle of variationist sociolinguistics is that the patterned organization of variants in discourse, as revealed by quantitative analysis, provides a window on the internal structure of variable systems hosting competing variants (Poplack 2021). Comparisons of the internal structure of each of the three variables we target in PA and LA, supplemented by apparent- and real-time evidence, enable us to assess the extent to which the distribution and conditioning of competing variants in each variable system support (or refute) a convergence analysis (see Poplack 2021). In the following sections, we briefly characterize the variables that form the cornerstone of our comparative investigation and explain how each was coded to explore contact-induced change.

### 3.2 The variable raising of /a:/ to [e:]

The variable raising of word-medial long /a:/ (e.g., [ka:n] vs. [ke:n] 'he/it was') and word-final short /a/ in the suffix marking the feminine on nouns and adjectives (e.g., [ħilwa] vs. [ħilwe] 'pretty') is generally referred to in the Arabic grammatical

tradition as *imala* (literally 'inclining/bending to'; see Owens 2006). Focusing primarily on word-medial contexts, previous studies of metropolitan LA (e.g., Naïm 2006, Hennessey 2011) suggest that the raised vowel, illustrated in (2), is the default option, and the non-raised vowel, illustrated in (3), is the derived option in everyday speech (see also Al-Wer et al. 2020). Within the broader Levantine region, "raising" dialects are equated with socially dominant varieties, whereas their "non-raising" counterparts are characterized, for the most part, as localized, peripheral, and non-urban (Al-Wer 2002b).

Among the linguistic environments that reportedly inhibit raising are those where the word-medial vowel is in the vicinity of neighbouring emphatics, uvulars, gutturals, and the secondary pharyngeal [r] (see e.g. Owens 2006, Habib 2012).

(2) kenna nʕallim **wle:d**[3] [05/L/F/31/07:28]
'We used to teach kids.'

(3) ana maʃ inno **l-ʕa:lam** teħdʕar musalsale:t libne:nijje w ʔafle:m libne:nijje
'I am in favour of people watching Lebanese series and movies.'
[14/L/M/32/34:35]

In word-medial contexts favourable to raising, it has previously been claimed that either [æ:], [ɛ:], or [e:] may be found in Palestinian varieties (Al-Wer 2007), with extreme raising reported to be characteristic of dialects spoken in Jerusalem (Al-Wer 2020). All the diachronic and synchronic evidence at our disposal, however, indicates that PA, as spoken in Beirut, is not typically subject to the same degree of word-medial vowel raising as that found in modern metropolitan LA, in which /a:/ is typically realized as [e:]. There is general agreement that the equivalent vowel in Beirut PA is realized as lower and backer [æ:] (Naïm 2006, Hennessey 2011). Such is the strength of the popular association of word-medial raised [e:] with LA that its use by Palestinians may occasionally elicit negative reactions from fellow community members, possibly because it is perceived by some Palestinians as a Lebanese affectation or even as an act of vernacular disloyalty. This is graphically illustrated in (4) where, tellingly, the Palestinian camp-based interviewee reproaches the interviewer (the first author, a Palestinian) for using the word-medial raised vowel in the Arabic word for 'travelling' in place of, in his view, the preferred local Palestinian (non-raised) variant.[4]

(4) laʔ, hallaʔ ma beddek tʔu:le **mse:fra**, bitʔu:le **msa:fra msa:fra msa:fre msa:fre msa:fre** [56/P/M/45/02:30]
'No, now you don't want to say *mse:fra* [the local Lebanese pronunciation of the word 'travelling'], you say *msa:fra*, *msa:fra*, *msa:fre*, *msa:fre*, *msa:fre* [Palestinian pronunciation of the word 'travelling'].'

[3]Lexical items of importance are bolded and phonological segments of interest within them are underlined.

[4]Although the interviewee objects to word-medial vowel raising in (4), he alternates between a non-raised and raised vowel (e.g., *msa:fra* vs. *msa:fre*) in word-final position. We are grateful to a reviewer for pointing out that whereas raising of word-final /a/ is a feature of urban PA, raising in this environment is not characteristic of LA.

It is the explicit association of word-medial raised [e:] with Lebanese speech patterns, as gauged from overt commentary and stereotyping, as well as informal observations of its use by predominantly younger members of the local Palestinian community, that initially led us to hypothesize that this feature constitutes a target for convergence. Further support for this hypothesis comes from Hennessey's (2011) finding that Palestinians living outside refugee camps used higher rates of word-medial [e:] than camp-dwellers, in line with the assumption that the former have greater exposure to the metropolitan majority variety.

To pursue the hypothesis of contact-induced change, we extracted all instances of word-medial raised and non-raised /a:/ from the synchronic and diachronic materials representing PA and LA. As the raised variant in LA is typically realized as [e:], our auditory coding protocol identified tokens as "raised" in PA only if speakers produced the same vowel characteristic of the Lebanese control variety. As a check on our auditory coding procedure, spectrographic measurements (using Praat; Boersma and Weenink 2016) of a random set of tokens produced by different speakers were calculated in order to compare the formant frequencies (F1 and F2) of the word-medial vowel in PA with their corresponding acoustic properties in the LA control variety.

Each token retained for analysis was coded according to its Lebanese or Palestinian source as well as speaker age (and refugee generation in the case of Palestinians), speaker sex and level of education, in addition to place of residence for Palestinians, distinguishing camp from non-camp residence.

In terms of linguistic predictors, we explored the contributions of the preceding and following phonological environments to variant choice, tailoring our coding protocol so as to target the putative inhibiting influence of pharyngealized segments on vowel raising, reported to impose backing and lowering effects on neighbouring vowels (see e.g. Mustafawi 2017).[5]

### 3.3 The variable expression of verbal negation

There is general agreement that the preverbal negative particle, *ma,* as seen below in (5), is common to spoken varieties of Arabic (Lucas 2020). A second strategy, illustrated in (6), involves the circumfixal negation marker comprising preverbal *ma* and the post-verbal enclitic *-š*. This strategy has been documented in coastal North Africa, Upper Egypt, Palestine, southern Lebanon and parts of Jordan, but it is not claimed to be productive in metropolitan LA (see Behnstedt and Woidich 2005, Khairallah 2014).

Enclitic *-š* may be used without preverbal *ma* to negate verbal predicates, as in (7). This variant is reportedly emblematic of Palestinian varieties (Lucas 2010,

[5]A reviewer notes that PA varieties do not behave identically with regard to word-medial and word-final raising, necessitating some consideration of which PA dialects were brought to Lebanon by the Palestinian diaspora. We are unable to address that issue in any detail. In our synchronic data, the oldest (first-generation) Palestinians came from a mix of urban areas (e.g., Acre, Haifa, Jaffa, Gaza, Jerusalem) whereas other first-generation speakers originated from rural locales (e.g., Al-Kabri, Kweikat).

Wilmsen 2014), although it is also found in southern and northern Lebanese dialects (see Khairallah and Wilmsen 2019), but it is apparently uncommon in Beirut LA. Negative enclitic *-š* is said to occur without *ma* when the verb to which it is cliticized begins with a labial obstruent (Hoyt 2010). Conversely, it is claimed to be prohibited as the sole verbal negator with perfective verbs (e.g., Lucas 2010). When tested against actual speech data, however, neither proposed constraint has been found to operate categorically (Wilmsen 2014).

Yet another variant involves the use of the preverbal particle *miš,* as in (8). More commonly employed to negate non-verbal predicates (e.g., *huwwe* ***miš*** *metʕallam* 'he is not educated'), its use as a verbal negator is qualified as rare (Khairallah 2014), although there are reports that it is undergoing functional expansion in varieties such as Egyptian Arabic (e.g., in its use with the *bi*-imperfect as well as with verbs in the perfect form; see e.g., Woidich 2006, Doss 2008).

(5) halla? **ma** ʕam nestafi:d min majt l-šerke [38/P/M/59/52:59]
now NEG PROG benefit.1p from water the-company
'We are not benefiting from the company's water now.'

(6) **ma** ntabaht- **š** ʕa s-se:ʕa [41/L/F/72/05:53]
NEG paid attention.1s.NEG on the-hour
'I didn't pay attention to the time.'

(7) batˤtˤallaʕ**-š** ʕa l-mumassili:n [23/P/M/54/06:14]
look.1s.NEG on the-actors
'I don't look at the actors'

(8) **miš** raħ teʔdar tfu:t ʕala l-AUB [10/L/M/19/38:55]
NEG FUT can.2sm enter.2sm on the-AUB
'You will not be able to be admitted to AUB [American University of Beirut].'

The range of structural options in the expression of negation in LA and PA, involving pre- and postverbal strategies, is reminiscent of the cyclical development of sentential negation (i.e., preverbal *ma* > bipartite *ma…-š* > postverbal *-š*) originally adumbrated by Jespersen (1917) for English and other languages. This raises the possibility that different varieties of spoken Arabic may be situated at different points on a cline of change affecting the expression of negation (see e.g. Alluhaybi 2019). We revisit this issue briefly in the results section below.

To explore contact-induced change in this grammatical system, we extracted all instances of verbal negation from each dataset at our disposal. Tokens retained for analysis were coded for the same social parameters that we examined in the case of the variable raising of /a:/ to [e:]. We stress that our investigation of the extra-linguistic conditioning of verbal negation in both contact varieties is necessarily exploratory, as social constraints on the choice of negator have elicited minimal commentary in the research literature. When used alone or in combination with preverbal *ma, -š* tends to be associated with rural varieties and evokes folk-linguistic stereotypes of "hillbilly" speech (Khairallah 2014, Wilmsen 2014). Its association with rural and peasant varieties is foregrounded in the observations of one of our Palestinian speakers, reproduced below:

(9) kul balad fi ila lahʒe xa:sˤsˤa … hallaʔ ʔahelna iħna falla:ħi:n … kullo- masalan baʕrefiš, ma ruħtiš, ma ʒi:tiš. da:jman š-ši:n la:zem tku:n mertebtˤa bi l– bi l– kelme … hallaʔ iħna masalan, mni:ʒe minʔu:l ma baʕref … hallaʔ betʔarrbe inte ʕala l-mudun. [58/P/M/45/1:09:49]
'Every area [in Palestine/Israel] has its own dialect […] Now our parents are peasants […] all of them – for example, *baʕrefiš* 'I don't know,' ***ma*** *ruħtiš* 'I didn't go,' ***ma*** *ʒi:tiš* 'I didn't come'. The *-š* always has to be attached to the – to the word […] Now for us for example, we say ***ma*** *baʕref* 'I don't know'[…] *Now you are close to the cities/urban areas.*' (emphasis ours)

Extrapolating from claims that socially marked variants are especially vulnerable to attrition in dialect contact scenarios (e.g., Britain and Grossenbacher 2021), we hypothesize that exposure to the (educated) metropolitan norms of LA, reported to eschew *-š* on account of its provincial and unrefined connotations, may lead educated Palestinians to reduce their use of variants that carry negative social freight.

To explore linguistic constraints on the variable expression of verbal negation, we operationalized a series of measures. These probe the putative aversion of perfective verbs to negative enclitic *-š*, as well as the reported favouring effect on its selection contributed by verbs beginning with a labial consonant. Also factored into the analysis is an exploratory constraint examining the effect on variant choice of any parenthetical (e.g., discourse markers, adverbs) or syntactically related material (e.g., direct and indirect object clitics) intervening between a negative marker and the verb. Incorporation of this constraint is motivated by our informal observations that the presence of such material in PA tends to promote the use of the discontinuous *ma -š* construction or preverbal *miš*.

### 3.4 The variable expression of future temporal reference

The fact that Levantine varieties of Arabic apparently share a similar inventory of variants to express future temporal reference should render this grammatical sector hospitable to convergent change. In fact, Leddy-Cecere (2018) goes so far as to claim that the broadly contiguous distribution of the same markers of future temporal reference across a vast geographical area of the Arabic-speaking world, including the Levant, is consistent with diffusion via areal contact. This claim, rooted in form-based correspondences, is not unproblematic. Poplack et al. (2012) counsel against the equation of form-based similarities shared by contact varieties with the grammatical or functional *equivalence* of those forms, arguing that superficial parallels may conceal underlying grammatical divergence. This caveat motivated our adoption of an analytical approach capable of revealing variable *structure*. It is this fine-grained structural information that we exploit for the purposes of detecting convergence, rather than relying exclusively on surface-based parallels.

As in other languages, the lexico-grammatical material associated with the variable expression of futurity in Levantine Arabic has its roots in a relatively well-defined set of source domains and conceptual pathways (see Bybee et al. 1994). Two markers of future time have their origins in a verb of movement, reported to figure among the most prominent lexical sources of future morphemes cross-

linguistically (Bybee et al. 1994). The variants *raħ* and *ħa-*, as in (10) and (11), are claimed to derive from the active participle of the verb 'go,' *ra:yiħ,* via a series of developments purportedly related to well-documented grammaticalization pathways (Leddy-Cecere 2020), involving, inter alia, the metaphorical extension of a temporal meaning from an original spatial meaning, as well as the morphophonological reduction of source lexemes (e.g., *ra:yiħ* > *raħ*; see also Jarad 2014).[6]

Among the future readings commonly ascribed to both *raħ* and *ħa-* in the descriptive literature are those associated with proximity, imminence, and immediacy (e.g., Mitchell and El-Hassan 1994, Cowell 2005). Recent scholarship additionally indicates that the future temporal reference system in PA is undergoing longitudinal reorganization, with the use of the proclitic future marker, *ħa-*, expanding over time, possibly at the expense of other exponents of futurity. AbuAmsha (2016), for example, observes that in Gaza, middle-aged and younger Gazans as well as Jaffans primarily express future temporal reference by prefixing *ħa-* to the nonpast stem (see also Leddy-Cecere 2018).

Other markers involved in the expression of futurity in Levantine Arabic include *bidd-* 'want', illustrated in (12), as well as the *b-* prefix, exemplified in (13), also employed in spoken Arabic for additional functions such as expressing continuity and habituality (Farwaneh 2021). The case of *bidd-* illustrates another well-attested source domain of future marking, whereby a lexical item with the meaning of 'desire' or 'want' is conscripted as an expression of future temporal reference (Bybee et al. 1994). The use of the *b*-prefix as a marker of futurity in various Arabic dialects is also reported to derive from a source construction expressing volition/intention, although tracing the precise origins and evolutionary trajectory of this functionally polyvalent morpheme has proven challenging (see Owens 2018). According to Mitchell and El-Hassan (1994), both *bidd-* and the *b*-prefix are used in Levantine varieties as straightforward future markers, without any dedicated semantic or pragmatic import. Other scholars, however, have suggested that these variants may retain modal or attitudinal nuances (see e.g. Brustad 2000 on the *b*-prefix), though their claims are largely based on isolated, decontextualized utterances.

(10) w **raħ** ʔerʒaʕ anyways [03/L/M/25/24:18]
and FUT return.1s anyways
'and I will return anyways'

(11) kti:r **ħa-** ʔombositˤ [15/P/F/20/14:33]
very FUT.be happy.1s
'I will be very happy.'

(12) l-qadˤa:ʔ **bidd-o** ysˤi:r nazi:h w ʕa:del [07/L/M/43/09:37]
the-judiciary FUT.3sm become impartial and fair
'The judiciary will become impartial and fair.'

[6]Jarad (2014:111) provides a schematic representation of the development of *raħ* from its putative source, *ra:yiħ,* but we caution that, to the best of our knowledge, the relevant textual evidence supporting the proposed stages of change is not yet comprehensively documented anywhere.

(13) bukra **b-**sˁi:r beit-ek mitil beit mama [21/P/F/57/15:30]
tomorrow FUT.become.3sm house-your.f like house (my) mother
'Tomorrow your house will become like my mother's.'

Our focus here is not on isolated forms, nor on the semantic-pragmatic functions that individual variants are said to embody. Instead, our goal is to compare the future temporal reference system as a whole in both LA and PA, in accordance with the principle of accountability (Labov 1972). We limit the variable context to all tokens making predictions about states or events occurring after speech time (Poplack and Tagliamonte 2001). Eligible tokens were extracted from each of our datasets and coded for the same extra-linguistic parameters that we imposed on the two previous variables. Additionally, we explored the potential contribution of a number of linguistic factors to variant choice, including clause polarity, clause type, adverbial specification, and grammatical person. A fundamental constraint examined concerns the potential effect on variant choice of the temporal distance of the future predication, drawing, where available, on additional contextual clues in the ambient discourse (e.g., temporal adverbial specification). To our knowledge, the multiple constraints on the expression of futurity that we have operationalized here have not previously been investigated in spoken Arabic, at least when considered simultaneously.

## 4. Results

### 4.1 The variable raising of /a:/ to [e:]

We first capitalize on apparent- and real-time evidence to detect any indications of change. Figure 1 shows rates of word-medial raised [e:] associated with each age group in the LA and PA synchronic datasets, as well as in the real-time sources we described in section 2. As a first observation, we see that, as expected, the word-medial raised vowel is the default option in LA in all three age groups, accounting, in the aggregate, for 63.5% of the variable context. The corresponding rate in the LPTC, representing an earlier stage of LA, is virtually identical at 64%, indicating relative stability in usage rates over time.[7]

Of particular note in the Palestinian synchronic data is the comparatively elevated rate of word-medial raised [e:] in the speech of the younger (third-generation) cohort, in stark contrast with its sporadic occurrence in the discourse of middle-aged and older Palestinians. In fact, closer inspection of the middle-aged (second-generation) Palestinians reveals that even their low rate of 6% is disproportionally inflated by two women who produced 75% (N = 45/60) of the tokens of word-medial raised [e:]. The social and employment circumstances of those two speakers cast light on their exceptional behaviour vis-à-vis the rest of their generational cohort. Employed outside of the refugee camp where she lived with her family, one of the women worked as a chef in the private residence of a prominent Lebanese politician.

[7]Further detailed inspection of variant distributions in the LPTC revealed no appreciable differences in the use of word-medial raised [e:] according to the (approximate) age, sex or social status of characters.

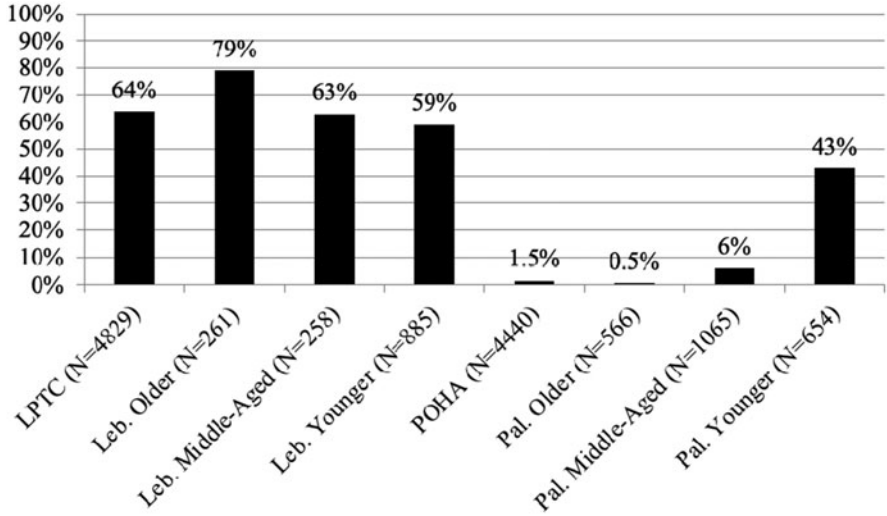


**Figure 1:** Distribution of word-medial raised [e:] in the *Lebanese Popular Theatre Corpus* (LPTC), the *Palestinian Oral History Archive* (POHA), and by age in contemporary corpora of Lebanese and Palestinian Arabic. (Note: Total Ns [raised + non-raised vowel] are indicated in parentheses.)

The other woman was married to a Lebanese citizen and worked as a teacher in a private Lebanese school. These two speakers' elevated use of raised [e:] likely reflects their accommodation to metropolitan LA norms in contexts where they would not only have extensive exposure to LA, but where there would also presumably be a premium to "sounding" Lebanese and limiting the distinctiveness of Palestinian speech patterns. Indeed, evidence of such an accommodative orientation was offered by the chef we recorded, who commented on her line manager's astonishment at discovering that she was Palestinian on account of the perceived authenticity of her "[Lebanese] dialect".

Turning to the oldest Palestinians whose speech we have access to, inspection of the POHA indicates that word-medial raised [e:] is barely attested. Its infinitesimal rate of occurrence (1.5%) in that corpus turns out, once again, to be largely the product of idiosyncratic effects. Two thirds (N = 43/66) of the tokens of the raised variant were produced by two women originating from Qadas and Saliha, two villages that were part of Lebanon until the early twentieth century, prior to their absorption into Palestine under the British administration of Palestinian territories.

Summarizing, once we account for exceptional distributions of word-medial raised [e:] in the discourse of first- and second-generation speakers, we find little compelling evidence indicating that this variant is the product of an internal development incrementally transmitted from one generation to the next. Though word-medial raised [e:] is not the majority option in the speech of younger Palestinians, contrasting with its default status in the Lebanese benchmark variety, it is essentially only productive in the third generation, as assessed by its overall rate of occurrence and its

dispersion across individual speakers. Only three third-generation Palestinians in our sample behave (quasi-)invariantly in refraining from, or rarely producing, word-medial [e:] in their recorded speech. Two of these speakers are based in refugee camps in Beirut, whereas the third speaker, currently working and residing outside the camps, completed part of his childhood education in a school run by the United Nations Relief and Works Agency in Rashidieh refugee camp located in Tyre, southern Lebanon.

The distributional evidence we have reviewed so far would seem to militate strongly in favour of convergent change. A more exacting demonstration of convergence, as dictated by our analytical approach, requires us to move beyond overall usage rates in order to consider the extent to which sociolinguistic constraints on word-medial [e:] in PA resemble those operating in LA. To effect systematic comparisons across varieties, we conducted mixed-effects logistic regression analyses using Rbrul (version 3.1.3; Johnson 2009), focusing on younger speakers only and running individual speaker as a random effect to control for any individual biases that may arise as the result of idiosyncratic patterns of variation (Johnson 2009). Table 4 reproduces the results of the regression analyses, generating two principal lines of evidence that inform our interpretation of the results: statistical significance at the .05 level and the hierarchy of constraints. Here – and in ensuing analyses employing logistic regression – we attach particular importance to the hierarchy of constraints conditioning variant choice and their direction of effect in order to determine whether PA and LA speakers share the same constraints on word-medial vowel raising.

In Table 4, the numerical formalisms are to be interpreted as follows. The input probability can be interpreted as a measure of the overall probability that the dependent variable will occur in the dataset in question. The $R^2$ value, or coefficient of determination, represents the proportion of variation explained by the model. The hierarchy of constraints is represented by the log odds (LO) and the (centred) factor weights (FW).[8] Ranging from negative to positive infinity, log odds with a positive value indicate that the factor listed in the left-hand side of the table has a favouring effect on variant choice, whereas those with a negative value indicate a disfavouring effect. The larger the number, the bigger the effect size; the smaller the number, the lesser the effect size. The (centred) factor weights have a similar interpretation: the higher the number, the greater the effect on variant choice and the lower the number, the lesser the effect.

We first consider the contribution of social factors to variant selection (excluding level of education on account of the preponderance of younger speakers of both varieties educated to post-secondary level). An initial finding in the Lebanese control variety is that speaker sex is statistically non-significant, with both male and female speakers using word-medial raised [e:] to a similar extent. Because speaker sex and place of residence interact extensively in the Palestinian data, we collapse both predictors into a single cross-product factor group to facilitate statistical

[8]The output of the regression analyses is shown in the form of (centred) factor weights as well as log odds so that the results are equally accessible to sociolinguists and researchers in other disciplines, where log odds are more commonly displayed.

| Younger Lebanese | | | | | Younger (third-generation) Palestinians | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Input prob. | .830 | | | | Input prob. | .284 | | | |
| Total N | 885 | | | | Total N | 654 | | | |
| Deviance | 504.300 | | | | Deviance | 425.938 | | | |
| $R^2$ | .736 | | | | $R^2$ | .826 | | | |
| | LO | N | Proportion App. Value | FW centred | | LO | N | Proportion App. Value | FW centred |
| **Sex** | | | | | **Sex / Camp Residence** | | | | |
| Male | .080 | 258 | .624 | .519 | Female / Outside camp | 1.146 | 331 | .595 | .759 |
| Female | -.080 | 627 | .576 | .481 | Male / Outside camp | -.320 | 154 | .325 | .421 |
| | | | | | Male / Inside camp | -.826 | 104 | .337 | .304 |
| | | | | | Female / Inside camp | K.O. | 65 | .000 | K.O. |
| **Preceding Phonological Context** | | | | | **Preceding Phonological Context** | | | | |
| Palatal | 2.355 | 86 | .953 | .913 | Dental-Alveolar | 2.001 | 162 | .667 | .881 |
| Dental-Alveolar | 1.576 | 248 | .883 | .829 | Palatal | 1.202 | 80 | .625 | .769 |
| Labial | .337 | 122 | .779 | .583 | Labial | .370 | 97 | .680 | .591 |
| Velar | .112 | 137 | .796 | .528 | Velar | -.333 | 88 | .420 | .418 |
| Pharyngeals | -4.380 | 292 | .058 | .012 | Pharyngeals | -3.240 | 227 | .093 | .038 |
| **Following Phonological Context** | | | | | **Following Phonological Context** | | | | |
| Velar | 1.819 | 12 | .667 | .860 | Palatal | .993 | 37 | .432 | .730 |
| Dental-Alveolar | .295 | 456 | .711 | .573 | Dental-Alveolar | .444 | 334 | .482 | .609 |
| Palatal | .104 | 73 | .466 | .526 | Labial | .164 | 70 | .429 | .541 |
| Labial | -.163 | 109 | .578 | .459 | Velar | -.134 | 29 | .517 | .467 |
| Pharyngeals | -2.055 | 235 | .396 | .114 | Pharyngeals | -1.467 | 184 | .326 | .187 |

**Table 4:** Contribution of social and linguistic factors to the selection of word-medial raised [e:] in younger Lebanese and younger (third-generation) Palestinians. (Note: shaded areas indicate statistically significant factor groups; K.O.= invariant context.)

analysis. Though also non-significant, the direction of effect for the cross-product factor group indicates that [e:] is positively correlated with women outside the camps. By contrast, inspection of the log odds/factor weights associated with speakers in the camps reveals that both men and women disfavour raised [e:]. We interpret their lack of raised [e:] to be a logical consequence of the relative socio-spatial isolation of the refugee camps from mainstream Lebanese society and its attendant linguistic norms.

To summarize, the social embedding of variant choice in the speech of third-generation Palestinians leads us to tentatively infer that the adoption of word-medial raised [e:] is being advanced by women outside the camps. If this interpretation is correct, it would support previous reports that younger women, especially those with higher levels of mobility and contact, tend to favour supralocal variants in their speech (see e.g. Milroy et al. 1994).

We next consider the linguistic conditioning of variant choice. As per our initial hypothesis, preceding and following consonants with a primary or secondary pharyngealized articulation (grouped under *pharyngeals* in Table 4) strongly inhibit word-medial [e:] in both contact varieties (see Mustafawi 2017). Apart from minor discrepancies across varieties in the rankings of dental-alveolar and palatal consonants, as well as the disfavouring effect on [e:] exerted by velars in PA, the constraint hierarchies associated with the preceding phonological context are largely parallel in both contact varieties. More noticeable disparities emerge from the effects associated with the following phonological context. Among such differences, we note that [e:] is strongly favoured by a following velar in LA but is disfavoured in the same context in PA. We provisionally ascribe the inhibiting effect of a following (and preceding) velar on variant choice in PA to the possibility that phonetically velar sounds in that variety behave phonologically as uvulars, reported to inhibit vowel raising (see also Herzallah 1990).

Subtle distinctions between the two varieties in the linguistic conditioning of variant choice suggest that PA does not exhibit *identical* constraints on word-medial vowel raising when compared with the local Lebanese baseline. But for all intents and purposes, the systematic correspondences that obtain across the two varieties in the constraint rankings far outweigh the minor discrepancies. These structural affinities, taken together with substantial rate differences in the use of word-medial vowel raising across the three Palestinian generations we examined, lead us to conclude that the most convincing explanation for the marked increase in the use of word-medial vowel raising by third-generation Palestinians lies in their convergence on Lebanese norms.

### 4.2 The variable expression of verbal negation

Table 5 provides a breakdown of variant forms in the data. As a first observation, we see that *ma* is the primary exponent of verbal negation, achieving rates in excess of 90% in the speech of the middle-aged and younger Lebanese as well as the younger (third-generation) Palestinians. None of those speaker groups shows evidence of a strong quantitative preference for negation strategies that would militate in favour

| | Lebanese Theatre Corpus (higher-status characters only) | | Lebanese Theatre Corpus (lower-status characters only) | | Lebanese | | | | | | Palestinian Oral History Archives | | Palestinian | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Older | | Mid. Aged | | Younger | | | | Older (1st Gen.) | | Mid. Aged (2nd Gen.) | | Younger (3rd Gen.) | |
| **Variant** | **N** | **%** | **N** | **%** | **N** | **%** | **N** | **%** | **N** | **%** | **N** | **%** | **N** | **%** | **N** | **%** | **N** | **%** |
| ***ma*** | 452 | 93% | 270 | 65% | 88 | 67% | 311 | 94% | 883 | 95% | 2451 | 61% | 259 | 74% | 631 | 84% | 440 | 95% |
| ***ma -š*** | 0 | 0% | 39 | 9% | 29 | 22% | 0 | 0% | 0 | 0% | 895 | 22% | 32 | 9% | 34 | 5% | 1 | 0% |
| ***a -š*** | 0 | 0% | 48 | 12% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| ***-š*** | 0 | 0% | 8 | 2% | 9 | 7% | 0 | 0% | 0 | 0% | 505 | 13% | 42 | 12% | 40 | 5% | 9 | 2% |
| ***miš*** | 34 | 7% | 51 | 12% | 5 | 4% | 21 | 6% | 48 | 5% | 163 | 4% | 18 | 5% | 49 | 6% | 15 | 3% |
| **Total** | **486** | | **416** | | **131** | | **332** | | **931** | | **4014** | | **351** | | **754** | | **465** | |

**Table 5:** Distribution of verbal negation strategies in the *Lebanese Popular Theatre Corpus* (LPTC), the *Palestinian Oral History Archive* (POHA), and by age in contemporary corpora of Lebanese and Palestinian Arabic.

of their advanced progression to later stages of the Jespersen Cycle (see also Lucas and Lash 2010).

Across datasets, rates of the minority variant, *miš,* fluctuate within a narrow range of 3% to 7%. In the LPTC, a comparatively higher rate (at 12%) is only found in the dialogue of lower-status characters (e.g., beggar, thief, hitman, cobbler, farmer, etc.).

Of particular interest in the speech of older Lebanese and Palestinians represented in the synchronic datasets is the proportionally higher rate of the negative circumfix *ma -š* as well as instances of the negative enclitic *-š* used alone, without the preverbal negator. As noted earlier, both variants are reportedly uncharacteristic of metropolitan LA. It is somewhat unexpected, then, that the combined rate of these two variants should account for 29% of the variable context in the speech of the older Lebanese. One possible explanation for this unusual finding lies in the geographical provenance of those speakers. Several were born in villages outside Beirut, suggesting that their usage reflects the retention of non-urban patterns. By contrast, as shown in Table 5, *ma -š,* as well as instances of negative enclitic *-š* used alone, are entirely absent from the discourse of middle-aged and younger Lebanese, who overwhelmingly select preverbal *ma.* Additional evidence that *(ma) -š* is socially marked emerges from variant distributions in the LPTC. Though the rate of negative enclitic *-š* accounts for only a tiny proportion (2%) of verbal negation strategies used by lower-status characters, the rate of *ma -š*, together with the related *a -š* construction (instantiated only in the LPTC, but also documented in southern and central Lebanese dialects; see Khairallah 2014), make up 21% of the variable context used by the lower-status cohort. In contrast, none of the aforementioned variants occurs in the dialogue of high-status characters (e.g., pashas, mayors, and kings), further suggesting that their use is socially indexical.

Turning to the corresponding Palestinian data, both *ma -š* and negative enclitic *-š* used as the sole negator account for over a third of the variable context in the POHA, and also surface, albeit less frequently, in the speech of the older (first-generation) Palestinians in our synchronic data. As age decreases, the overall rates of both variants diminish, to the extent that they are rarely used by the younger (third-generation) Palestinians. A first generalization that we can draw from the distributions shown in Table 5 is that the system of verbal negation in PA is becoming progressively streamlined, as suggested by the tendency, visible in apparent-time, for one variant, *ma,* to colonize the variable system. This homogenizing trend aligns the system of verbal negation in PA with its counterpart in LA, where *ma* is the majority variant used by middle-aged and younger speakers.

Further inspection of the Palestinian data reveals that the age-differentiated patterns we have uncovered mask the effect of level of educational attainment on variant choice. As shown in Figure 2, once we factor education into the analysis, we observe that speakers with a post-secondary education are more likely than those with lower levels of education to avoid (*ma*) *-š.* On the basis of this finding, we infer that younger, educated Palestinians are strategically avoiding the use of socially marked variants that are possibly at odds with personal aspirations of upward social mobility and "educatedness", as well as individual orientations to urban modernity (see also Fityan 1981).

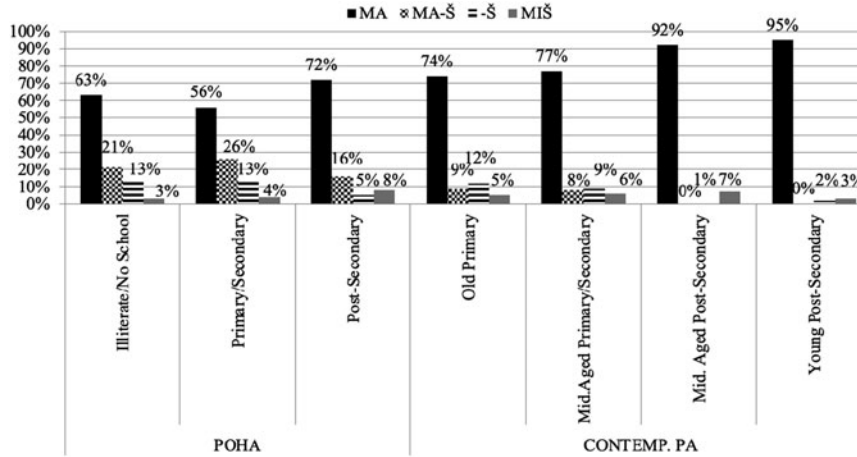


**Figure 2:** Distribution of verbal negation strategies according to level of educational achievement in the *Palestinian Oral History Archive* (POHA; N=4014) and the contemporary corpus of Palestinian Arabic (N=1570). (Note: percentage values may not add up to 100 due to rounding.)

If the general trend manifested by younger, educated Palestinians in their choice of verbal negator reflects their accommodation to metropolitan LA norms, then we would reasonably expect to find additional evidence of convergence in the linguistic constraints governing variant selection. Accordingly, in line with our analytical approach, we investigate the contextual factors which affect variant choice. Table 6 shows the results of a distributional analysis comparing the variable system of verbal negation used by younger, educated speakers of PA with its counterpart used by their Lebanese peers. The quantitative predominance of *ma* in both varieties precludes the application of multivariate statistical techniques to the data, but we can still leverage what little variation there is to identify key similarities and differences between the contact varieties.

We first address the very limited occurrence of negative enclitic *-š* in the Palestinian data. We observe that on the rare occasions that this variant is used, it is more likely to surface in the refugee camps, identified earlier as the bastion of conservative PA vernacular norms. In line with previous claims, it is confined to verbs beginning with a labial consonant and avoided with perfective verbs (see Khairallah 2014). Pseudo-verbs also favour the use of negative enclitic *-š* (see Wilmsen 2014), as does the presence of syntactic material intervening between the negative clitic and the lexical verb to which it is attached, in line with our earlier hypothesis (see also Soltan 2021).[9] We nonetheless caution that the overall paucity

[9]Pseudo-verbs, such as *fi* 'there is', are a set of irregular verbs that have their origins in non-verbal constructions (e.g., prepositional phrases) as well as verbs that have lost some of their characteristic verbal attributes.

| | Younger Lebanese | | | | | Younger (third-generation) Palestinians | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | MA | | MIŠ | | | MA | | -Š | | MIŠ | |
| | % | N | % | N | | % | N | % | N | % | N |
| Total N | 95% | 883/931 | 5% | 48/931 | Total N | 95% | 440/465 | 2% | 9/465 | 3% | 15/465 |
| **Speaker Sex** | | | | | **Speaker Sex** | | | | | | |
| Male | 93% | 228/246 | 7% | 18/246 | Male | 92% | 83/90 | 3% | 3/90 | 4% | 4/90 |
| Female | 96% | 655/685 | 4% | 30/685 | Female | 95% | 357/375 | 2% | 6/375 | 3% | 11/375 |
| | | | | | **Residence** | | | | | | |
| | | | | | Outside camp | 95% | 385/404 | 1.5% | 6/404 | 3% | 12/404 |
| | | | | | Inside camp | 90% | 55/61 | 5% | 3/61 | 5% | 3/61 |
| **Verb type** | | | | | **Verb type** | | | | | | |
| Imperfective | 98% | 511/522 | 2% | 11/522 | Imperfective | 97% | 231/238 | 2% | 5/238 | 1% | 2/238 |
| Perfective | 96% | 175/182 | 4% | 7/182 | Perfective | 100% | 105/105 | 0% | 0/105 | 0% | 0/105 |
| Pseudo-verb | 100% | 155/155 | 0% | 0/155 | Pseudo-verb | 94% | 74/79 | 5% | 4/79 | 0% | 0/79 |
| Future or participle | 58% | 42/72 | 42% | 30/72 | Future or participle | 70% | 30/43 | 0% | 0/43 | 30% | 13/43 |
| **Initial consonant of verb** | | | | | **Initial consonant of verb** | | | | | | |
| Labial | 97.5% | 575/590 | 2.5% | 15/590 | Labial | 96% | 260/272 | 3% | 9/272 | 1% | 3/272 |
| Non-labial | 90% | 308/341 | 10% | 33/341 | Non-labial | 93% | 180/193 | 0% | 0/193 | 6% | 12/193 |
| **Intervening material** | | | | | **Intervening material** | | | | | | |
| None | 96% | 804/836 | 4% | 32/836 | None | 97% | 395/408 | 1.5% | 6/408 | 2% | 7/408 |
| Present | 83% | 79/95 | 17% | 16/95 | Present | 79% | 45/57 | 5% | 3/57 | 14% | 8/57 |

**Table 6:** Contribution of social and linguistic factors to the selection of verbal negation strategies in younger Lebanese and younger (third-generation) Palestinians (Note: *ma -š* is omitted from the Palestinian data on account of there being only one token).

of negative enclitic *-š* in the data necessarily tempers the strength of any claims that we can make about its patterning.

In both LA and PA, the preferred functional niche of the other minority variant, *miš,* is to negate future markers and participles. It occurs marginally with the imperfective in both varieties, but only in LA does it surface (rarely) with perfective verbs, as in (14), exhibiting an unusual pattern also documented in Egyptian Arabic (Soltan 2021). We also observe that the presence of intervening material promotes the use of *miš* in both contact varieties.

(14) ħadˁdˁar-na l-akel ke– miš- **miš** tˁabax-na bas inno zabbatˁ-na.
prepared.1p the-food NEG NEG cooked.1p but DM organized
'We prepared the food, not– we didn't cook, but we organized [the food].'
[12/L/F/28/09:31]

Turning finally to the pre-eminent exponent of negation, *ma,* there is nothing in the details of its linguistic conditioning in either LA or PA, aside from trivial distinctions, to suggest that it behaves in fundamentally different ways in either variety.

In brief, the highly structured parallels in the patterning of *ma* and *miš* in both varieties, coupled with the scant occurrence of socially-marked variants in the speech of third-generation Palestinians, reinforce our conviction that the system of verbal negation used by younger, educated Palestinians largely mirrors its Lebanese counterpart. Contrasted with the more heterogenous system of verbal negation used by older (first-generation) Palestinians, we submit that our findings for third-generation Palestinians are consistent with convergent change, as inferred from commensurate usage rates and similar variant repertoires in the relevant comparison groups. Our results for verbal negation are specifically reminiscent of dialect levelling, involving the reduction or attrition of socially (and regionally) marked features, and the retention of variants with wider socio-spatial currency (Trudgill 1986, Britain 2010).

### 4.3 The variable expression of future temporal reference

Table 7 provides a distributional breakdown of future variants in the data. We exclude older Lebanese speakers from these results because they produced too few tokens (N = 19) to allow any meaningful quantitative comparisons to be drawn with other age groups.

In both LA and PA, we find the same four unevenly distributed markers of futurity. At the outset, we acknowledge that the higher- and lower-status characters in the LPTC stand out from the other datasets in showing a disproportionate preference for *raħ*. Further analysis (not shown) of characters' social attributes (i.e., approximate age, speaker sex) provides no clear explanation for this effect, although we cannot rule out that it is the product of as-yet unidentified functional motivations. In the synchronic data at our disposal, we observe that the frequency of *raħ* diminishes across the three generations of PA speakers, but remains relatively stable in the speech of middle-aged and younger Lebanese.

In the contemporary Lebanese data, the major exponent of futurity is the *b*-prefix, which also accounts for almost one third of the variable context in the

| Variant | Lebanese Theatre Corpus (higher-status characters only) | | Lebanese Theatre Corpus (lower-status characters only) | | Lebanese | | | | Palestinian Oral History Archives | | Palestinian | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Mid. Aged | | Younger | | | | Older (1st Gen.) | | Mid. Aged (2nd Gen.) | | Younger (3rd Gen.) | |
| | N | % | N | % | N | % | N | % | N | % | N | % | N | % | N | % |
| ***raħ*** | 281 | 61% | 186 | 53% | 35 | 19% | 46 | 18% | 83 | 13% | 18 | 21% | 34 | 10% | 10 | 7% |
| ***ħa-*** | 7 | 2% | 7 | 2% | 34 | 18% | 60 | 23% | 26 | 4% | 5 | 6% | 68 | 20% | 75 | 53% |
| ***bidd-*** | 23 | 5% | 42 | 12% | 50 | 27% | 48 | 19% | 176 | 28% | 25 | 29% | 85 | 25% | 27 | 19% |
| ***b-*** | 148 | 32% | 118 | 33% | 69 | 37% | 105 | 41% | 349 | 55% | 37 | 44% | 158 | 46% | 29 | 21% |
| **Total** | **459** | | **353** | | **188** | | **259** | | **634** | | **85** | | **345** | | **141** | |

**Table 7:** Distribution of future variants in the *Lebanese Popular Theatre Corpus* (LPTC), the *Palestinian Oral History Archive* (POHA), and by age in contemporary corpora of Lebanese and Palestinian Arabic (Note: percentages do not add up to 100 due to rounding.)

LPTC. In the Palestinian data, the same variant accounts for over half (55%) of the variable context in the POHA and persists as the majority option in the speech of first- and second-generation Palestinians, but its rate declines sharply in the speech of the third generation. With decreasing age, we also observe a steady reduction in the use of *bidd-* in PA. Of particular interest in PA is the accelerated rise, visible in apparent time, of the proclitic future marker *ħa-,* consistent with reports of a similar development in other varieties of PA spoken outside Lebanon (AbuAmsha 2016). We also observe that the ascendancy of *ħa-* is paralleled in LA, albeit less dramatically so, especially when variant distributions in the LPTC are considered together with those representing the synchronic Lebanese data.

In brief, the broad distributional trends abstracted from Table 7 provisionally suggest that the future temporal reference system in the two contact varieties is the locus of longitudinal reorganization. To determine whether the observed developments are attributable to contact or internal evolution, we next turn to a detailed assessment of the quantitative conditioning of variant choice in the speech of the younger Lebanese and Palestinians. To explore this conditioning, we draw once again on mixed-effects logistic regression analysis, running individual speaker as a random effect. We exclude extra-linguistic variables from our comparative results, as repeated analyses generated no evidence of any social constraints on variant selection, in line with our initial observations that choice of future marker is not subject to prescriptive commentary or overt social evaluation in either variety.

Tables 8 and 9 reproduce the results of the regression analyses showing the contribution of linguistic factors to the selection of future variants in the speech of younger, educated Lebanese and Palestinians respectively. To what extent are the results consistent with the influence of LA on the expression of futurity in PA? Focusing on the direction of effects, we first observe that LA and PA share a number of commonalities in variant patterning. In both varieties, *ħa-* exhibits a strong and statistically significant association with negative polarity. In LA and PA, *ħa-* is also significantly correlated with main clauses. Further affinities include the propensity for *ħa-* to surface in environments where no additional temporal adverbial specification is present, returning a significant effect in LA, but not in PA. In both varieties, we also observe a statistically non-significant tendency for *ħa-* to occur in non-first-person contexts, contra claims that it is used to express the speaker's own intentions (e.g., Mitchell and El-Hassan 1994). We further note that proximate future contexts (operationalized here as future events/states inferred to occur within the same day) exhibit a propensity to co-occur with *raħ* in both PA and LA, although this association is not statistically significant in either variety, and is based on a low token count.

Turning to other variants in the system, *bidd-* exhibits an inverse polarity effect to that of *ħa-* as it categorically occurs in affirmative contexts in both varieties. Furthermore, it is very weakly correlated with subordinate clauses in both LA and PA. The favouring effect of subordinate clauses is even clearer in the case of the *b-*prefix, reaching statistical significance in both varieties and pointing to a contextual preference that is reportedly characteristic of future markers with considerable time-depth (see Bybee et al. 1994).

| | Younger Lebanese | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Input prob. .140<br>Total N 259<br>Deviance 181.241<br>$R^2$ .520 | | | | Input prob. .139<br>Total N 259<br>Deviance 215.042<br>$R^2$ .481 | | | | Input prob. .158<br>Total N 259<br>Deviance 236.419<br>$R^2$ .141 | | | | Input prob. .252<br>Total N 259<br>Deviance 310.339<br>$R^2$ .272 | | | |
| | **RAH** | | | | **HA-** | | | | **BIDD-** | | | | **B-** | | | |
| **Factor Groups** | LO | N | Prop. App. Value | FW | LO | N | Prop. App. Value | FW | LO | N | Prop. App. Value | FW | LO | N | Prop. App. Value | FW |
| **Polarity** | | | | | | | | | | | | | | | | |
| Negative | .053 | 40 | .225 | .513 | .800 | 40 | .500 | .690 | K.O. | 40 | .000 | K.O. | -.229 | 40 | .275 | .443 |
| Affirmative | -.053 | 219 | .169 | .487 | -.800 | 219 | .183 | .310 | | 219 | .219 | | .229 | 219 | .429 | .557 |
| **Clause Type** | | | | | | | | | | | | | | | | |
| Main | .165 | 123 | .203 | .541 | .464 | 123 | .325 | .614 | -.161 | 123 | .154 | .460 | -.318 | 123 | .317 | .421 |
| Subordinate | -.165 | 136 | .154 | .459 | -.464 | 136 | .147 | .386 | .161 | 136 | .213 | .540 | .318 | 136 | .485 | .579 |
| **Temporal Distance** | | | | | | | | | | | | | | | | |
| Proximate | 1.012 | 11 | .273 | .733 | .904 | 11 | .455 | .712 | .085 | 11 | .182 | .521 | -1.638 | 11 | .091 | .163 |
| Distal | -1.173 | 40 | .125 | .236 | -.666 | 40 | .075 | .339 | -.099 | 40 | .200 | .475 | 1.217 | 40 | .600 | .772 |
| Indeterminate | .161 | 208 | .183 | .540 | -.238 | 208 | .250 | .441 | .014 | 208 | .183 | .504 | .421 | 208 | .385 | .604 |
| **Temporal Adverb** | | | | | | | | | | | | | | | | |
| Adverb | -.473 | 68 | .118 | .384 | -.997 | 68 | .059 | .270 | .292 | 68 | .250 | .572 | .514 | 68 | .574 | .626 |
| No adverb | .473 | 191 | .199 | .616 | .997 | 191 | .293 | .730 | -.292 | 191 | .162 | .428 | -.514 | 191 | .346 | .374 |
| **Grammatical Person** | | | | | | | | | | | | | | | | |
| First-person | .083 | 101 | .188 | .521 | -.406 | 101 | .158 | .400 | .351 | 101 | .248 | .587 | -.078 | 101 | .406 | .480 |
| Other | -.083 | 158 | .171 | .479 | .406 | 158 | .278 | .600 | -.351 | 158 | .146 | .413 | .078 | 158 | .405 | .520 |

**Table 8:** Contribution of linguistic factors to the selection of variant expressions of future temporal reference in the speech of younger Lebanese. (Note: shaded areas indicate statistically significant factor groups; K.O.= invariant context.)

| | Younger (third-generation) Palestinians | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Input prob. .051<br>Total N 141<br>Deviance 55.875<br>$R^2$ .439 | | | | Input prob. .752<br>Total N 141<br>Deviance 154.752<br>$R^2$ .419 | | | | Input prob. .119<br>Total N 141<br>Deviance 131.503<br>$R^2$ .212 | | | | Input prob. .245<br>Total N 141<br>Deviance 119.824<br>$R^2$ .276 | | | |
| | **RAĦ** | | | | **ĦA-** | | | | **BIDD-** | | | | **B-** | | | |
| **Factor Groups** | LO | N | Prop. App. Value | FW | LO | N | Prop. App. Value | FW | LO | N | Prop. App. Value | FW | LO | N | Prop. App. Value | FW |
| **Polarity** | | | | | | | | | | | | | | | | |
| Negative | K.O. | 20 | .000 | K.O. | 1.532 | 20 | .950 | .822 | K.O. | 20 | .000 | K.O. | -.538 | 20 | .050 | .369 |
| Affirmative | | 121 | .083 | | -1.532 | 121 | .463 | .178 | | 121 | .223 | | .538 | 121 | .231 | .631 |
| **Clause Type** | | | | | | | | | | | | | | | | |
| Main | .318 | 82 | .085 | .579 | .483 | 82 | .610 | .618 | -.120 | 82 | .171 | .470 | -.584 | 82 | .134 | .358 |
| Subordinate | -.318 | 59 | .051 | .421 | -.483 | 59 | .424 | .382 | .120 | 59 | .220 | .530 | .584 | 59 | .305 | .642 |
| **Temporal Distance** | | | | | | | | | | | | | | | | |
| Proximate | .640 | 6 | .167 | .655 | -1.379 | 6 | .333 | .201 | -.187 | 6 | .167 | .453 | .856 | 6 | .333 | .702 |
| Distal | -.140 | 37 | .135 | .465 | .501 | 37 | .324 | .623 | -.112 | 37 | .135 | .472 | .146 | 37 | .405 | .536 |
| Indeterminate | -.500 | 98 | .041 | .378 | .878 | 98 | .622 | .706 | .299 | 98 | .214 | .574 | -1.002 | 98 | .122 | .269 |
| **Temporal Adverbs** | | | | | | | | | | | | | | | | |
| Adverb | .741 | 32 | .188 | .677 | -.361 | 32 | .281 | .411 | -.280 | 32 | .125 | .430 | .392 | 32 | .406 | .597 |
| No adverb | -.741 | 109 | .037 | .323 | .361 | 109 | .606 | .589 | .280 | 109 | .211 | .570 | -.392 | 109 | .147 | .403 |
| **Grammatical Person** | | | | | | | | | | | | | | | | |
| First-person | .922 | 69 | .130 | .715 | -.267 | 69 | .435 | .434 | .157 | 69 | .188 | .539 | .027 | 69 | .246 | .507 |
| Other | -.922 | 72 | .014 | .285 | .267 | 72 | .625 | .566 | -.157 | 72 | .194 | .461 | -.027 | 72 | .167 | .493 |

**Table 9:** Contribution of linguistic factors to the selection of variant expressions of future temporal reference in the speech of younger (third-generation) Palestinians. (Note: shaded areas indicate statistically significant factor groups; K.O.= invariant context.)

Notwithstanding the existence of parallel effects across both varieties, there are several key differences. Factor weights associated with the contribution of polarity to the selection of *raḥ* gravitate towards the median in LA, indicating the absence of any discernible effect, whereas *raḥ* is exclusively confined to affirmative contexts in PA. The constraint hierarchy also reveals a significant correlation between *raḥ* and the presence of a temporal adverbial in PA, but this effect patterns in the reverse direction in LA, where *raḥ* is preferred without additional temporal specification. The reading of an immediate or proximate future is positively correlated with *ħa-* in LA, although we caution that this result is based on a very low token count (N = 11). Conversely, in PA, *ħa-* is disfavoured as a marker of the proximate future; instead, it is preferentially associated with distal futures, as well as indeterminate future predications (i.e., ones lacking specific temporal reference), an environment that has previously been linked with the advancing grammaticalization of temporal markers in discourse (see Schwenter and Torres Cacoullos 2008).

Viewed in the aggregate, the most conspicuous differences between LA and PA in variant rates lie in the vertiginous rise of *ħa-* as the default exponent of futurity in the speech of educated, third-generation Palestinians, coupled with inter-varietal distinctions in the conditioning of variant choice. These findings lead us to infer that out of the three variables we have examined, the case for convergence is least compelling for the future temporal reference system.

## 5. Discussion

What has our comparative exercise revealed about the outcomes of dialect contact in Beirut? Arguably, the clearest evidence in favour of convergent change in PA lies in the phonologically conditioned process of word-medial vowel raising and the variable expression of verbal negation. Quantitative analysis revealed the variable raising of word-medial /a:/ to [e:] in the speech of first- and second-generation Palestinians to be largely restricted to a few exceptional individuals, rather than reflecting a continuous and regular process of inter-generational change (see also Hennessey 2011). Rejecting the possibility of a system-internal motivation for change, we ascribed the relative productivity of word-medial raised [e:] in the speech of third-generation, post-secondary educated Palestinians to accommodation to the norms of their educated Lebanese peers.

We further observed that despite their spatial interconnectedness with the contiguous urban landscape, the communal insularity of Palestinian refugee camps in Beirut continues to play a pivotal role in shoring up vernacular allegiances to PA. It comes as little surprise that three third-generation Palestinians who produced few or no occurrences of word-medial raised [e:] were either based in refugee camps at the time the data were recorded, or had spent time in them during childhood. The fact that one of those speakers (living outside the camps at the time of the recordings) expressed pride in his Palestinian heritage, explicitly commenting on the importance of PA to his identity, suggests that convergence is subject to some degree of reflective control. Linguistic features that possess extra-strong salience,

by virtue of their iconic association with specific varieties, may be consciously deployed by speakers wishing to maintain sharp boundaries between in-group and out-group speech varieties (see Trudgill 1986).

We suggest that *non-raising* in the Palestinian community in Beirut is a locally available resource for social identity marking and for signalling integration into, and solidarity with, local Palestinian community networks. Although non-raising is potentially available for accentuating in-group identity, and raising of /a:/ to word-medial [e:] can be used to indicate accommodation to the urban majority variety, we do not rule out the possibility that Palestinians may exploit this variable as a stylistic resource to affirm allegiances to their local community, or to project a more supralocal orientation, depending on context, speaker intentions or interactional goals. These are issues that necessarily await further investigation. In the interim, we note that while current influential approaches emphasize the largely mechanical and unconscious nature of accommodative processes in dialect contact scenarios (e.g., Trudgill 2008), the idiosyncratic patterns in the adoption of word-medial raised [e:] that we have detected in a subset of Palestinians would suggest that convergence does not entirely proceed independently of ideological orientations or attitudinal factors.

Turning to the variable expression of verbal negation, the major development foregrounded by our results relates to the reduction in the use of socially marked variants in the discourse of educated third-generation Palestinians. We interpreted this finding as a consequence of speakers' accommodation to the educated urban norms of their Lebanese peers. The fact that the variants in question are socially indexical suggests that they are prone to attrition precisely because speakers are aware of their attendant social connotations. Our results for verbal negation strategies, together with those relating to word-medial vowel raising, implicate the social salience of linguistic features as a key factor influencing their susceptibility to convergence.

In terms of the social dynamics of convergent change, we suggested that education, as a proxy measure of Palestinians' social mobility, is a key driving force. Our results are broadly in line with observations that in contemporary Arabic-speaking urban settings, education is the major vector through which community members have expanded opportunities of contact with, and influence from, speakers of other dialects (Al-Wer 2002b).

What has our comparative exercise taught us about the permeability of the future temporal reference system to convergent change? Similarities in surface form between PA and LA as well as – according to the descriptive literature – contexts of use should ostensibly render the expression of future temporal reference hospitable to contact-induced change. Indeed, form-based correspondences in the expression of futurity in Levantine (and other) varieties of Arabic are central to recent claims that the development of future tense markers in spoken Arabic is the product of "continued processes of replication whereby a grammaticalization process in one Arabic variety is transferred to another (variety)" (Leddy-Cecere 2020: 616).

Our analysis did detect evidence of *change* in the variable expression of futurity in PA, notably in relation to the exponential rise of the proclitic future marker *ħa-*.

But the possibility that this change is solely motivated by contact with LA is weakened by the reported ascendancy of *ħa-* in varieties of PA spoken *outside* Lebanon (AbuAmsha 2016).[10] The most damaging evidence militating against contact-induced change, however, resides in the linguistic conditioning of exponents of future temporal reference in PA and LA. Extrapolating from the tenets of grammaticalization theory (e.g., Bybee et al. 1994), exponents of futurity derived from the same source material (e.g., motion verbs, volitive verbs, etc.) should theoretically follow "parallel if not identical grammaticalization paths" (Poplack 2011: 220). Underlying structural divergence in the expression of futurity in PA and LA (as inferred from inter-varietal differences in the constraint hierarchies conditioning variant selection shown in Tables 8 and 9) is detrimental to any claim that the variable expression of futurity in both varieties is the product of parallel trajectories of development.[11] Our results serve as a cautionary reminder that surface similarities in typologically related varieties should not be uncritically equated with functional isomorphy.

We can only speculate on why we find little compelling evidence of convergence in the variable expression of futurity, in spite of the existence of social and linguistic factors rendering the structural influence of LA on PA a reasonable prospect, as evidenced by the results for the other two variables we examined.[12] The expression of futurity in spoken Arabic is not typically subject to normative commentary or overt correction, implicating the absence of metalinguistic awareness of variable usage and concomitant lack of social salience as possible explanations. Some (as yet unspecified) degree of salience may be necessary for speakers to become aware of variable patterns and their cross-varietal similarities, rendering them possible candidates for contact-induced change. It is nevertheless clear that salience is not a precondition for a linguistic feature to be affected by convergence (Auer et al. 1998). And there is no set of conditions that must necessarily be fulfilled for a linguistic feature to qualify as salient (Kerswill and Williams 2002). In spite of recurrent appeals to salience in dialect contact research, inspired by Trudgill's (1986) seminal publication, a linguistically principled and objectively quantifiable characterization of this notion remains elusive. Central to the notion of salience is the role of extra-linguistic factors in motivating speaker behaviour (Kerswill and Williams 2002), suggesting that a clearer understanding of salience would benefit from the incorporation of more speaker- and context-based information into future analyses.

In concluding, we stress the importance of acknowledging the limitations of the present study. The research we have reported on here, confined as it is to three variables, cannot do full justice to the myriad possibilities for contact-induced change in

[10]Absent any sustained face-to-face contact between speakers of PA in Beirut and those living in Gaza (AbuAmsha 2016), we infer that the increase in the use of *ħa-* detected in the current study constitutes an independent parallel development.

[11]See Abou Taha (2022) for further diachronic evidence in support of this conclusion.

[12]We note that our findings are not entirely consistent with the oft-cited generalization that phonology is receptive to contact-induced change, whereas morphosyntax tends to be stable in language/dialect contact.

the contact varieties we have targeted. Future investigations would benefit from extending the analysis to additional variables and other diagnostic measures of convergence, provided that these lend themselves to empirical investigation. We also recognize that our sampling procedures have privileged educated speakers within the younger generations we examined, in line with our working hypothesis that such speakers would be the prime agents of contact-induced change. We reserve judgment on the results we would have obtained had we considered more marginalized, socially isolated and less mobile speakers of PA, typically located in the refugee camps. Whatever future research reveals on that front, we submit that the application of a multifaceted comparative methodology to community-based speech data constitutes an indispensable tool with which to achieve a fuller understanding of the sociolinguistic complexities of dialect contact in Beirut and elsewhere in the Arabic-speaking world.

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