



رواق العربية

2nd Arabic Linguistics Forum

Abstracts

12-14th December 2016

Humanities Research Centre, University of York

Sam Hellmuth (University of York) & Rana Almbark (University of Huddersfield)

Plenary (1)

Verb Form II of Arabic: causativisation, pluractionality and semantically vacuous gemination

Jamal Ouhalla

University College, Dublin

Form II of the verb (KaTTaB), characterised by median consonant gemination, is said to have two derivational denotations in Classical Arabic: causativisation (e.g. 'allam 'teach') and event plurality/pluractionality (kassar 'cause.break a great many times'). Moroccan Arabic has a substantial number of Form II verbs (neologisms) that have neither denotation, where median consonant gemination appears to be semantically vacuous. This is trivially true of intransitive activity verbs such as xəlləf 'walk' and nəqqəz 'jump' but turns out to be equally true of transitive causative verbs without a Form I variant such as hərrəs 'cause.break (trans.)'. The latter's causative meaning is associated with the root rather than median consonant gemination, as for kasar 'cause.break (trans.)' in other varieties. Instances of vacuous median consonant gemination are also found in agent nominals seemingly based on Form II verbs such as bəkkay 'crybaby' and kəddab 'liar' which have non-causative denotations rather than the causative ones expected on the basis of the Form II causative verbs bəkki 'cause.cry' and kəddəb 'disbelieve.

Semantically vacuous median consonant gemination turns out to throw significant light on the role of categorisation in morphosyntactic derivation and the root-and-pattern basis of verb derivation in (Moroccan) Arabic. The requisite theoretical framework is the approach to verb derivation in Arabic outlined in Guerssel and Lowenstamm (1990) and further developed in various other publications since. The approach treats vowel lengthening and consonant gemination as the externalisation of an internal morpheme that functions as the head of the verb and therefore is the locus of derivational features, including semantic features such as [CAUSE] and [PLURAL] as well as the category feature [V]. The presence of the semantic features may vary across varieties, resulting in patterns of variation whereby Form II, for example, can denote both causativisation and pluractionality, causativisation but not pluractionality, and neither. In contrast, the category feature [V] is not subject to variation by virtue of being necessary for categorisation and convergence.

Plenary (2)

Trajectory of language change and the power of social factors

Enam Al-Wer

University of Essex

Research on present-day Arabic dialects shows that a considerable number of linguistic features are undergoing change, constrained by social (mainly, age, gender, contact and sect) and linguistic factors. Some of these ongoing changes appear to reverse historical processes of change within the same dialect, while others give rise to new features, triggered by dialect contact. The features that are undergoing change include the following:

- depalatalisation of affricates (originating in velar stops) and spirantization of /dʒ/ in some Peninsula and Levantine varieties
- lowering of pausal feminine ending /a/, and unrounding of /ɔ:/ in some central and east Arabian dialects
- syncope and resyllabification in Medini
- restructuring of the phonology of feminine ending /a/ raising in Amman
- conjugation of the imperfect of *ʔakal* and *ʔaxaḏ* in Amman
- feature loss (dark /l/) in Horani Jordanian dialects

The change affecting these features sometimes aligns with universal tendencies, e.g. lenition of /dʒ/, and in such cases we also find areal and social factors motivating the change in the same direction. In other cases, however, the development reverses a historical change that was itself internally motivated (system-based), most notable in the depalatalisation of velar stops in front vowel environment. The actuation of such developments must therefore lie in the realm of the community, i.e. they are speaker-based, which can take the form of an abrupt replacement without intermediate stages. This can be seen as a ‘change from above’ and the incoming form is a borrowing from neighbouring dialects.

On the basis of empirical findings from research conducted over the past few years, I aim to present a general account of the changes taking place in dialects of the Peninsula and Jordan, followed by a closer examination of the social factors that govern progression of the change across social groups.

Plenary (3)

Some stylistic features of spoken Arabic

Clive Holes

University of Oxford

It is at first sight surprising to discover that the everyday conversational Arabic of illiterate Gulf Arabs of 40 years ago routinely contained stylistic features generally thought of as characteristic of the Arabian oral narrative as described by Sawayan, Ingham, Palva and others, but also, more paradoxically, of artistic Arabic prose of the mediaeval and even much earlier periods. This paper provides a wealth of exemplary illustrative material -- phonological, morphological, syntactic and ratiocinative -- drawn from these conversational texts in an attempt to show how they are constitutive of a natural state of Arabic 'orality' as opposed to a more recently acquired one of 'literacy' (see Ong, W.J.: *Orality and Literacy: the Technologizing of the Word*, Methuen, 1982).

Oral presentations

(in alphabetical order, by last name of first author)

What Reading Errors can Tell us about Reading Egyptian Arabic in Two Different Scripts

Mariam Aboelezz

The British Library

With regional varieties of Arabic becoming more visible in written form than ever before, how Arabic speakers encode and decode these written varieties – that they have not been formally taught at school – poses an intriguing question for researchers. In an attempt to shed some light on this question, I revisit data from an earlier experiment where I compared the reading fluency and accuracy of 19 readers when reading Egyptian Arabic (EA) in Arabic script and Latin script. The participants were Egyptians who had attended English-medium schools and were literate in both Arabic and English. The study found that while they had read EA in Arabic script more fluently, EA in Latin script was read more accurately.

In this supplementary study, I carry out a qualitative analysis of the reading errors which were used to calculate the accuracy index. By classifying the errors into 8 different types I make a distinction between errors which may be attributed to orthography, and those which are clearly linked to the morphology of EA. The analysis draws on and confirms some of the findings of cross-linguistic reading experiments. It demonstrates that errors in both forms were influenced by the root and pattern morphological structure of Arabic, and provides some insights into the decoding strategies employed. There is near-consensus in the psycholinguistic literature that reading Arabic without diacritics (aka unvoiced Arabic) initiates lexical decoding: because the phonological information contained in unvoiced Arabic is not sufficient to give the reader full access to phonology after consulting the mental lexicon, pre-lexical phonological processing becomes virtually impossible (see for example, Abu-Rabia 2002; Hansen 2008; Saiegh-Haddad 2003). Strikingly, this study provides evidence of non-sequential reading (lexical decoding) not only in Arabic script, but also in Latin script where vowels were spelled out, making sequential reading (phonological decoding) possible. This suggests the transfer of a decoding strategy which relies on root consonants when reading Arabic in Latin script.

Abu-Rabia, S. (2002). Reading in a root-based-morphology language: The case of Arabic. *Journal of Research in Reading* 25: 299-309.

Hansen, G. F. (2008). Visual word recognition in Arabic: Towards a language specific reading model. *Working Paper Series* 13. Centre for Contemporary Middle East Studies, University of Southern Denmark.

Saiegh-Haddad, E. (2003). Linguistic distance and initial reading acquisition: The case of Arabic. *Applied Psycholinguistics* 24(30): 431-451.

The /ɑ:/ Variable of Al-Ahsa in Saudi Arabia: A Sociolinguistic Analysis of Rounding/Unrounding

Moayyad Al Bohnayyah

University of Essex

Rounding of /ɑ:/ in word medial position is one of the most salient features of the traditional dialect of Al-Ahsa, a dialect that belongs to the Najdi type of dialects in the Arabian Peninsula. It is defined as: rounding of long back vowel /ɑ:/ to /ɒ:/. Unrounding of the /ɑ:/ in word medial position is the innovative form. The unrounded form is the norm in most dialects of Arabic, especially the supra-local variety spoken in central Saudi Arabia.

The rounded variant in Al-Ahsa dialect occurs in all linguistic environments, including when preceded by back sounds. This is in line with some Syrian dialects (see Arnold and Behnsted 1993), and contrasts with other Arabic dialects that round this vowel conditionally (see Fleisch 1974; Arnold and Behnsted 1993; Behnsted 1997; Al-Wer 2007).

The aim of this paper is to investigate the correlation between the use of the current variable (unconditioned /ɑ:/ rounding/unrounding) and the linguistic and social factors. Data were collected through sociolinguistic interviews with 36 adult native speakers, distributed over two age groups and with almost equal representation from both genders. Beside age and gender, variation in the use of this feature is also measured in relation to the speakers' sectarian affiliation (see Al-Wer et al 2015). Data were analyzed using (Rbrul). The results show that the traditional rounding is undergoing change in the speech of Al-Ahsa people, and that there is a tendency to unround this vowel in their speech in general. Rbrul returned age, gender, sect, preceding sound and type of syllabification as significant factors.

With respect to age, the youngest speakers are the most innovative group (85%), while the oldest group disfavours unrounding at factor weight (FW) 0.27, which is a strong indication that change is taking place.

Regarding gender, males favour unrounding at FW 0.645. However, younger females lead the course of change using the unrounded variant at all times (100%).

Sunnis use the innovative variant more (68%) than Shias (65%) at FW 0.551 and 0.449 respectively.

With respect to linguistic constrains, there seems to be a tendency to use the rounded variant in the environments of bilabial, coronal, dental, and dorsal sounds, while the vicinity of emphatic sounds favours rounding least. i.e. Unrounding is favoured after emphatics only. Also, while the unrounded /ɑ:/ is more likely to occur in a monosyllabic word at FW 0.565, it is disfavoured when it occurs in a disyllabic word at FW 0.469, or in a polysyllabic word at FW 0.466.

These results are interpreted with reference to social identity-related issues, and the pressure applied by the emergence of a supra-local variety in the central region of Saudi Arabia, in which no rounding is found.

Al-Nassir, A.A. (1993). *Sibawayh the phonologist: A critical study of the phonetic and phonological theory of Sibawayh as presented in his treatise Al-Kitab*.

Al-Wer, E. (2007). The formation of the dialect of Amman: from chaos to order, in Miller, C., Caubet, D., Watson, J. and Al-Wer, E. (eds) *Arabic in The City: Issues in Dialect Contact and Language Variation*. London: Routledge. pp.55-76.

Al-Wer, E., Horesh, U., Herin, B. and Fanis, M. (2015). How Arabic regional features become sectarian features? Jordan as a case study. *Zeitschrift für Arabische Linguistik (ZAL)*.

Holes, C. (2009). *Colloquial Arabic of the Gulf and Saudi Arabia*. London: Routledge Taylor and Francis Group. [1984]

Ibn Jinni., O. (c. 933-1001). *sirr šina:fat al-ʔiʕra:b*. [The secret of making case system]. In. Hindāwī (Ed.). (1993). (Vol. 1). Damascus: Dār al-Qalam.

Johnstone, T. M. (1967). *Eastern Arabian dialect studies*. London: Oxford University.

Prochazka, T. J. (1988), *Saudi Arabian dialects*, Kegan Paul International, London, Distributed by Routledge, Chapman and Hall, London, New York.

Sībawayh, A. (c. 760–796). *Al-Kitāb* [the book]. In Harūn, A. M. (ed.). (1982). (Vol. 4). Cairo: Maktabat al-Xānji. [al-Xānji library].

Arabic Diglossia and Code-Switching/Code-Mixing in Religious Discourse in Najd with Special Reference to Negations in Arabic

Majedah Alaiyed

Durham University

In the Islamic world, Standard Arabic (SA), in particular Classical Arabic (CA), is widely used in the context of religious speech. As a result, in the religious domain of Islamic countries, speakers are expected to use Classical Arabic rather than any other variety of Arabic, as it is the language of the Qur'ān and literary works.

According to extensive research by Mejdell (2006), Muysken (2000), and Myers-Scotton (1993), speakers in a given language tend to shift from a standard to a dialect variety in many situations, in particular in emotional situations, in situations of conflict, and when speakers need to be persuasive.

This paper investigates the code-mixing or code-switching between Standard Arabic, the high variety of Arabic, and *'āmmiyyah*, the low variety or colloquial Arabic, in the highest form of formal discourse, namely religious-oriented discourse, with a primary focus on negations. The study reported in this paper attempts to show how Muslim religious preachers exploit the diglossic situation in Saudi Arabia in their religious speeches in order to convey social messages more effectively to their target audience; the focus of the paper is on their use of negatives.

The data were collected from six well-known male and female preachers (three males and three females) in Najd. The paper investigates whether the preachers included in the study use Standard Arabic negation in their speeches or the type of negation found in Najdi Arabic (NA), which is one of the dialects spoken in Saudi Arabia, or whether there is a mixture of negation from both varieties. Two individual recordings for each male and female preacher have been analysed to obtain the data.

Although the study mainly investigates the nature and extent of code-switching/code-mixing of negations in religious discourse, one important issue that is discussed is whether there is any evident difference in code-switching/code-mixing between Saudi male and female speakers in my sample. The data obtained were analysed quantitatively and qualitatively.

The following examples show the kind of switching to NA negations found in the data:

- (1) *fa-'innā naṣbir-u* 'alā l-jū' ^N//*maḥī* *muṣkilāh*
as-that endure-IPR-1pl. Prep the-hunger NEG problem
al-yōm ma nitgādā
today NEG have lunch-IPR-1pl.
"as we endure the hunger. It is not a problem not to have lunch today"

In example (1), the male preacher switches from SA to NA. Two negations could be seen in this example and they are both in NA. The first negation is in his use of the NA *maḥī* (3sg.fem) instead of the SA negative verb *laysat* to negate the noun *muṣkilāh* (the problem) which could be both SA and NA noun. The second negation is in his use of the NA negative particle *ma* to negate the verb *nitgādā* (to have lunch) which is also in NA.

(2) *ammā* *al-xādimāt* *yā 'ixwān-ī* *al-mawjūdāt fī l-buyūt*
on the other hand the-maids O brothers-my the-found Prep the-houses
fa-hunā ḥarā'ir ^N//***mahimb*** // *'imā* '
as-they free NEG female slaves
"on the other hand, O brothers! The maids (who work in the houses) are free women
and not slaves"

In example (2), diglossic switching is clear in the use of the NA non-verbal negative form *mahimb* (3pl.fem.) instead of the SA negative verb *lasna* followed by the SA noun *'imā* (female slaves).

The study concludes that all the male and female preachers tend to use SA and NA in their formal speeches given to the public. However, despite the preachers' switching to NA negatives SA still has the highest percentage use. This is contrary to Ferguson's (1959) assumption that in religious speech, which is a very formal context, the preachers would only use the highest variety of the language, which in this case would be CA and MSA, or as referred to in this study, SA.

Ferguson, C. (1959) "Myths about Arabic", in *Languages and Linguistic Monographs Series, Georgetown University*, 12, pp. 75–82 (Repr. J. Fishman ed., *Readings in the Sociology of Language*, The Hague: Mouton, 1968, pp. 375–81.

Mejdell, G. (2006) *Mixed Styles in Spoken Arabic in Egypt*, Leiden: E.J. Brill.

Muysken, P. (2000) *Bilingual Speech: A Typology of Code-Mixing*. Cambridge: Cambridge University Press.

Myers-Scotton, C. (1993). *Duelling Languages: Grammatical Structure in Codeswitching*. Oxford: Clarendon Press.

Phonological Development, Processes and Patterns in Arabic: A Study Conducted on Typically Developing Arabic Speaking Children Aged 1;10 – 5;02 Years in the Central Region of Saudi Arabia

Noura A. AlAjroush, Cristina McKean and Ghada Khattab

Newcastle University

This study aims to explore patterns of Najdi Arabic speech sound acquisition in typically developing Saudi children between the ages of 1;10 and 5;02 years. Eighty-four children were recruited mainly from nursery schools and kindergartens in the capital city of Riyadh and divided into seven age groups with 6-month intervals in a combination of a cross-sectional design with an additional longitudinal sub-group of 12 participants (Table-1). All participants were audio recorded, and more than 60% were video recorded (when permitted by their parents) while performing two different speech tasks: picture naming (PN) and elicited connected speech (ECS). All Arabic consonants, excluding the voiced alveolar-emphatic plosive, were targeted at least once in each position. The picture naming task contained 70 utterances and was designed to elicit each phoneme in SIWI (Syllable-Initial-Word-Initial), SFWW (Syllable-Final-Within-Word), SIWW (Syllable-Initial-Within-Word) and SFWF (Syllable-Final-Word-Final) positions. Twelve consonant clusters were also targeted in the WISI (not permissible in Standard Arabic) and WFSF positions. Connected speech sampling was elicited via a combination storytelling and the use of age appropriate toys. All participants' speech was phonetically transcribed and analysed using PHON. The analysis is currently underway, and this paper will present some of its preliminary findings.

We predict that Najdi-Arabic speaking children will exhibit similar phonological patterns to those found in the speech of English speaking children, yet with a different rate of occurrence and timeline. We predict that – unlike English development - fronting will not be a frequent process, potentially due to the rich inventory of Arabic back consonants (nine back phonemes as opposed to four in English). Another anticipated difference relates to fricatives which are known for their articulation complexity and their delayed mastery age across languages. The high number of Arabic fricatives (14 in total) may be responsible for the earlier acquisition of this class of sounds in Arabic, with an initial higher occurrence of stopping but earlier mastery than typically reported for English. Furthermore, our results are expected to diverge slightly from but most importantly, provide additional insight into the findings of previous research on other Arabic dialects (Jordanian, Kuwaiti, Qatari, Egyptian and Lebanese), not only due to dialectal differences but predominantly for using two methodological approaches that have not been combined before. The comparison between both data sets in the cross-sectional groups is projected to highlight discrepancies between articulation ability in a peculiar picture naming task and true phonological milestones in a more naturalistic conversational speech task. Moreover, data from the longitudinal subgroups will allow faithful comparison between developmental changes occurring within the same participants over an extended period of 12 months to changes observed amongst participants across the CSGs. This study is expected to contribute significantly to both the knowledge of the typical development of the Arabic language and consequently to the differential diagnosis of speech delays and disorders, and its findings may serve as the foundation of the first standardised articulation/phonological assessment tool in Arabic.

Groups age range in years	1;10 - 2;02	2;04 - 2;08	2;10- 3;02	3;04- 3;08	3;10 - 4;02	4;04- 4;08	4;10- 5;02	Total
Groups' mean age	2;00	2;06	3;00	3;06	4;00	4;06	5;00	7 groups
no. of participants in CSGs	CSG1 (12)	CSG2 (12)	CSG3 (12)	CSG4 (12)	CSG5 (12)	CSG6 (12)	CSG7 (12)	84 participants
Total recordings used only in CSG	8	12	8	12	8	12	12	72 picture naming 72 elicited speech
Total recordings used in both CSG & LGs	4	/	4	/	4	/	/	12 picture naming 12 elicited speech
Total recordings in phase-II LGs	/	LG1 (4)	/	LG2 (4)	/	LG3 (4)	/	12 picture naming 12 elicited speech
Total recordings in phase-III LGs	/	/	LG1 (4)	/	LG2 (4)	/	LG3 (4)	12 picture naming 12 elicited speech
Total recordings in CSG & LGs	12	16	16	16	16	16	16	108 picture naming 108 elicited speech

Table-1: Study design. CSG: Cross-Sectional Group, LG: Longitudinal Group

Patterns of sociolinguistic change in Abha Arabic: The use of conjunctions

Munira A. Al-Azraqi

Department of English, College of Arts, University of Dammam, Saudi Arabia.

The usage of particles in Abha dialect, which is spoken in southwest Saudi Arabia, is changing rapidly perhaps because of the greater access of the new generation to education and communication. Many conjunctions seem to be in danger of being lost forever. As part of an investigation into the presence of conjunctions in Abha dialect, a total of 80 native speakers of the dialect, randomly selected, have been asked to complete a questionnaire with the objective of tracing shifts and patterns in the usage of conjunctions. The questionnaire consisted of two sections covering the use of conjunction in sentences based on scenarios. The participants were asked to choose the sentence they use regularly. The results showed that there is a kind of levelling of usage which is shown in the low rate of using some conjunctions for others. The use of conjunctions in Abha dialect varies between the older and younger generations and also between educated and uneducated speakers. This variation implies that the conjunctions preferred by the older generation will fall into disuse and may be lost completely in the coming years. This is particularly evident where there is more than one particle with the same sense and function.

Conditional Sentences in Standard Arabic: An Analysis of the Relationship between the Two Clauses

Tareq Alfraidi

University of Exeter

Conditional sentence consists of two clauses; the first clause is initiated by a conditional particle and called the protasis and the second one is called the apodosis (Huddleston and Pullum, 2002). In some Western linguistic analyses, it has been claimed by some researchers that the semantic and the pragmatic connections between the two clauses is an important aspect of conditional sentences. Dancygier (1998), for example, considers this aspect as a central parameter that should be considered while analysing conditionals, and she states that there can be several ways in which the protasis and the apodosis are connected. On the other hand, by exploring Arabic literature, it appears that this relational aspect between the two clauses has not been given particular attention, except for some general comments that are not sufficient to provide a clear exposition of this specific semantic aspect. This, consequently, has led to overlooking various possible (sub-)categorisations for Arabic conditionals. This lack of attention has probably emerged due to the dominance of the syntactical analysis discussed in previous studies (Al-Shamsān, 1981).

In this paper, I attempt to identify the semantic and pragmatic categories that can be obtained through analysing the relation between the two clauses in Modern Standard Arabic (MSA) conditionals. I will specifically focus on the written discourse genres (e.g. novels, plays, non-fiction and newspapers). The framework adopted is mainly influenced by some Western linguistic empirical studies which have been employed in the context of English conditionals (Quirk *et al.*, 1985; Sweester, 1990; Dancygier, 1998 and Athanasiadou and Dirven, 2000). I argue that Arabic conditional sentences can present a variety of different relations between the two clauses, namely: Content, Inferential, Speech act, Metalinguistic and Identifying as in the following examples respectively:

- 1- *idhā dhahabtu waḥdī fa-sa-tabqā waḥdaka.*
If I go alone, you will stay on your own.
- 2- *idhā kāna dhālika tafkīrahu fa-huwa sādhijun*
If that is what he thinks, (then) he is naive.
- 3- *idhā aradti ra'yī al-ḥaqīqiyya fa-yajibu an taṣmudī wa tuḥāribī li-l-nihāyati.*
If you want my real advice, you must stand up and fight until the end.
- 4- *wa in shi'ta al-diqqata fa-hiya rub 'u qaranin.*
If you wish to be precise, it (the journey) was a quarter of century.
- 5- *wa idhā kānat Miṣru al-Qadīmatu hiya hibatu al-Nīli – kamā qīla – fa-inna mīzatahā al-asāsiyyata nashi'at min khilāli qudratihā 'alā al-taḥakkumi bi-miyāhi al-Nīli.*
If Ancient Egypt was the gift of the Nile – as it has been said, its central feature lied in its capability to control the waters of the Nile.

The distinctive features for each type are examined against a number of criteria, such as causality, sequentiality and degree of dependency. However, it has been observed that overlaps between these types can occur in some contexts.

Variable productivity of residual ‘imala in Arabic loanwords into Turkish

Shadiya Al-Hashmi

University of York

Loanwords of Arabic origin in Modern Standard Turkish display patterns similar to ‘imala observed in present day Arabic dialects and Arabic loanwords in Spanish. In Arabic, ‘imala is a form of vowel harmony where /a:/ or /a/ raise to /e/, /ε/ or /ie/ word medially or finally in the presence of /i/ or /i:/ in a neighbouring syllable (Torreblanca, 1994; Levin, 1998; Owens, 2005). Some scholars contend that the ‘imala rule is more productive for the long vowel /a:/ than /a/ (e.g. Torreblanca, 1994), however, in the present study we show: i) ‘imala is found more frequently for the short vowel /a/ (>/e/) in a 1118 word corpus of Arabic loanwords into Turkish (ALT, henceforth); and ii) a variable picture depending on listeners’ linguistic experience, in a perception study.

In the ALT corpus, /a/ and /e/ are in complementary distribution word-internally/-medially vs. word-finally. Their alternation is further conditioned by the presence of a pharyngeal, uvular or an emphatic sound (and not necessarily an /i/ sound) in the Arabic source words: in 1 -2 (below), the default vowel is /e/ (N= 485; cf. /a/: N= 351); in contrast, /a:/ is primarily mapped to /a/ (N= 483; cf. /e/: N= 2), as in (3-4) below.

	/a/>/e/ word internally			/a/>/e/ word finally		
	A. word	T. word	glossary	A. word	T. word	glossary
(1)	rasim	resim	picture	dʒals-ah	dʒelse	session; hearing
	dawa:	deva	remedy	nukt-ah	nykte	wit
	ʔadi:b	edip	man of letters	ʃubh-ah	ʃyphe	doubt
	No /a/>/e/ word internally			No /a/>/e/ word finally		
(2)	ḥakam	hakem	referee	nuqt ^ʕ -ah	nokta	full stop
	t ^ʕ abi:b	tabip	doctor	fa:dʒiʕ-ah	fadʒia	calamity
	jaʕni:	jani	that is to say	ʔala:q-ah	alaka	relationship
	/a:/>/e/ word internally			/a:/>/e/ word finally		
(3)	No examples found			ʔilzā:m	elzem	most necessary
				ʔaqa:rat	akaret	rental property
	/a:/>/a/ word internally			/a:/>/a/ word finally		
(4)	ta:biʕ	tabi	dependent	bina:ʔ	bina	building
	ḥāmil	hamile	pregnant	dʒawāb	dʒevap	answer
	sākin	sakin	calm; serene	yiḍā:ʔ	guda	nourishment

Source: Arabic loanwords into Turkish corpus (al-Hashmi, 2016/2017- in preparation)

In the present paper, I compare the manifestations of residual ‘imala in ALT corpus data with those derived from a Simulated Borrowing experiment which explores the productive perceptual mapping of Arabic vowels (including ±‘emphatic’ allophones) to the vowels of modern Turkish, in real and nonsense monosyllabic word stimuli, by: i) 18 Turkish monolinguals with no knowledge of written Arabic (T), ii) 11 Turkish-Arabic bilinguals (mostly from eastern Turkey) who are also proficient in reading Arabic (TA) and iii) 22 Turkish monolinguals who know Arabic through reading/reciting the Qur’an (TQ). The

listeners heard recordings of vowels embedded in real and nonsense word stimuli, in either audio-only condition or audio+written condition (words also present in Arabic script).

All three Turkish groups map the short vowel /a/ > /e/, matching the ALT corpus facts, in both conditions. However, the listeners diverge in their perception of /a:/ in the two conditions: whereas all three groups map long /a:/ > /e/ in audio-only condition, the T and TQ groups map long /a:/ > /a/ in audio+written condition, and TA listeners fall into two groups (half map /a:/ > /a/, half map /a:/ > /e/). The TA group results are interpreted as reflecting: 1) influence of the L1 Turkish *perceptual* filter (Boersma and Hamann, 2009) with a > e as overgeneralization of a > e mapping and 2) influence of Arabic orthography and L1 Turkish *phonology* for a > a, since they are faithful to the written representation of the source vowel but also to the Turkish grammar requirement of shortening long vowels. Thus, I argue that modern day Turkish residual ‘imala in ALT is best explained in a hybrid model which models loanword adaptation in terms of both perception and phonological knowledge (cf. Kenstowicz & Atiwong 2006).

Velarization of /l/ in Sūf, Jordan

Dr Areej Al-Hawamdeh

University of Essex

In *Sprachatlas von Syrien* feature number 17, Behnstedt (1997: 35) proposes that the emphatic /l/ is available with different derivations in different dialects in Syria. For instance, in some of the coastal cities of Syria, derivations of dark /l/ occur in *wallāhi* ‘by the name of God’. Meanwhile, derivations of dark /l/ also exist in certain lexical items as *galb* ‘heart’, *gāl* ‘he said’, *baḡal* ‘mule’, and *nxala* ‘palm tree’ in all Hōrān, Behnstedt (1997: 35).

Herin (2013) uses the feature of ‘secondary emphasis’ as a criterion to define Hōrāni in comparison with Salti (the dialect of the Jordanian city of Salt) and Ġalbun (a rural Palestinian dialect), and maintains that among these three types of dialects Hōrāni shows secondary emphasis most consistently, as shown in the following examples (Herin 2013:104):

Hōrān:	<i>galb</i> ‘heart’	<i>xa:la</i> ‘aunt’	<i>ga:l</i> ‘he said’	<i>baḡal</i> ‘mule’
Salt:	<i>galb</i>	<i>xa:la</i>	<i>ga:l</i>	<i>baḡal</i>
Ġalbu:n:	<i>kalb</i>	<i>xa:le</i>	<i>ka:l</i>	<i>baḡal</i>

The analysis presented in this paper comes from research in Sūf, a Hōrāni town in northern Jordan, which aims to investigate variation and change in the town’s traditional dialect.

The variable /l/ is examined according to internal linguistic constraints and two external social factors: namely age and sex. The sample of the study is 24 native speakers. The presence of a dark allophone of /l/ is one of the most salient phonological features of the dialects of Hōrān in general. The study provides a quantitative analysis within the framework of Variationist Theory, using the multiple logistic regression program Rbrul.

Rbrul modelling returned preceding and following sounds, and gender as significant factors. The usage of the traditional feature, dark /l/, is only 11%, which is a strong indication that this feature is undergoing change in progress although age was not returned as a significant factor. The most favouring linguistic environment is preceding and following back vowel, and preceding consonant. The women of Sūf are more conservative than the men; they use dark /l/ at a rate of 13%, and favour its use at FW 0.59, compared with 9%, and disfavour dark /l/ at FW 0.40 in the case of men.

Overall, the results show that women are more conservative with respect to the usage of the traditional feature, thus indicating that women preserve the local way of speech more consistently, which is interpreted in relation to local issues, including the social structure of the community, space, the local mode of production and gender roles.

Variation in quantity & quality of Arabic vowels: comparison of 8 dialects

Rana Almbark and Sam Hellmuth

University of Huddersfield/University of York

Arabic dialects are often claimed to share the basic short-long vowel contrasts /i(:)/, /u(:)/ and /a(:)/ with variable quantitative and qualitative properties (Al-Ani 1970, Mitchell 1993, Newman and Verhoeven 2002). Some Arabic dialects are reported to have mid long vowels /eː/ and /oː/ (Mitchell 1993, Al-Tamimi 2007, Youssef 2010, Almbark and Hellmuth 2015), and some are reported to have a central vowel either in the inventory or as an allophone of other short vowels, as in Syrian Arabic (Cowell 1964, Almbark and Hellmuth 2015) and Moroccan Arabic (Mitchell 1993, Al-Tamimi 2007). Since there is potential variation in the size of the vowel inventory across dialects, this study explores the possibility that differences in overall dispersion of the vowel system across dialects result in differences in the temporal and/or spectral properties of the shared vowels (cf. Liljencrants & Lindblom 1972).

Few studies have compared the temporal and spectral characteristics of Arabic vowels across dialects, usually with limited numbers of speakers and dialects and/or in an L2 context (Mitleb 1984b, Munro 1993, Newman and Verhoeven 2002). The present study examines acoustic properties of the basic Arabic short-long vowels thought to be shared by all dialects. Parallel data was collected in eight Arabic urban dialects covering a broad geographical span of Arabic-speaking countries including the Levant, Egypt, Iraq, Gulf, and North Africa.

Twelve speakers (6m/6f) were recorded in each dialect; average speaker age was 23 years and none reported speech or hearing difficulties. Recordings were made by a native speaker of the same dialect on location in the Middle East. For study 1, the Arabic target vowels i(:), u(:) and a(:) were placed in a /hVd/ context embedded in a carrier phrase “Write ___ twice” (12 speakers x 8 dialects x 6 vowels = 576 tokens; 72 per dialect). For study 2, tokens containing each of the vowels were identified in semi-spontaneous data (a folk story retold from memory) for a subset of the dialects (2 speakers x 3 dialects x 6 vowels = 226 tokens).

Target vowels were manually labelled and acoustic measures extracted with a Praat script. Vowel duration and midpoint F1/F2 measurements were manually checked for outliers. Temporal and spectral measurements were normalised (Adank, Smits et al. 2004, Fabricius, Watt et al. 2009) for analysis in a Linear Mixed Model in R, with Euclidean Distance (study 1) and/or normalized F1, F2 (study 2), alongside vowel duration, as dependent variables.

The main descriptive findings of study 1 are: i) that the overall shape of the vowel space does vary across dialects, as shown in Fig.1, and, ii) that the short-long vowel contrasts differ in both quality and quantity, in all of the dialects under investigation. The largest V:VV ratio is in Moroccan, which also has the most centralized short vowels, supporting phonological analyses with a reduced inventory (Boudlal 2002). Some shared properties emerge, however, with Egypt/Tunisia sharing raising of long /aː/, and overall vowel dispersion appears similar in Kuwait/Iraq/Gulf/Jordan. In order to test the generalisability of this claim beyond laboratory speech, Egypt/Tunisia/Morocco were selected for further study, and we will show preliminary results of analysis of sample vowels in these dialects (study 2).

In general, dialects seem to vary most in short vowels shape, which could serve as a useful tool for dialect comparison, with applications in forensic and computational linguistics.

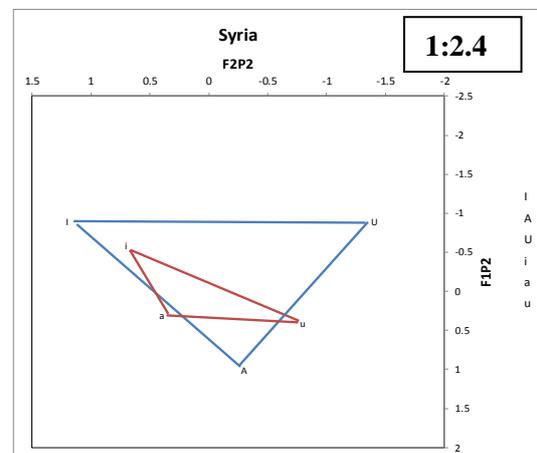
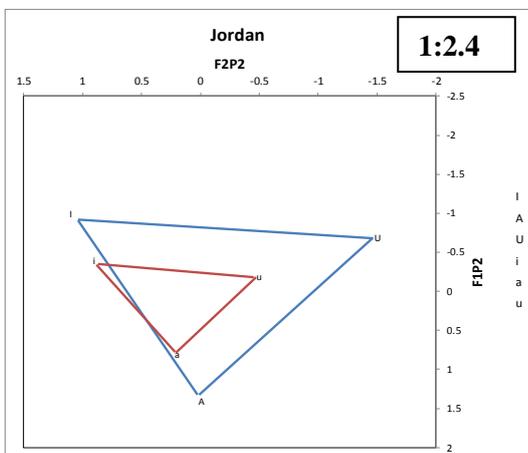
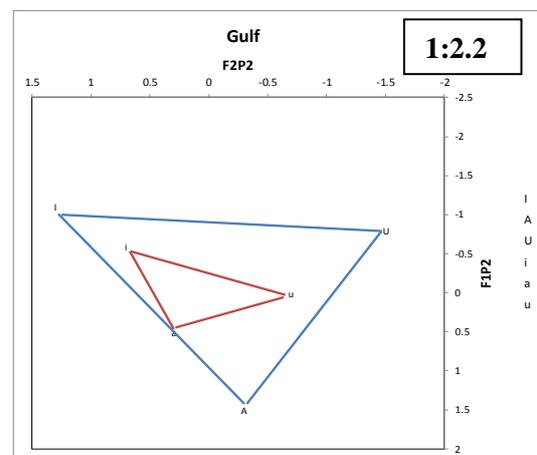
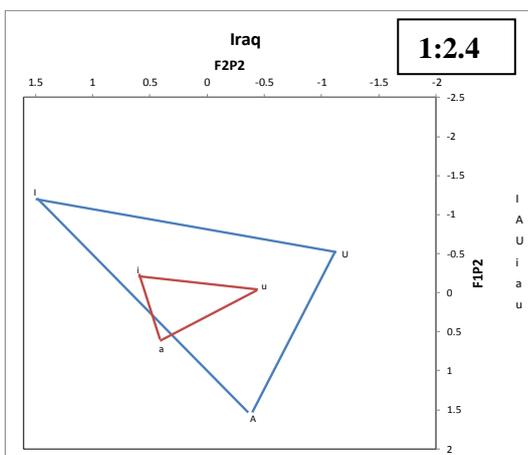
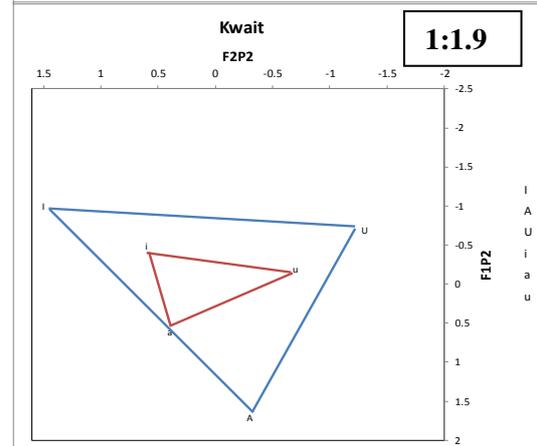
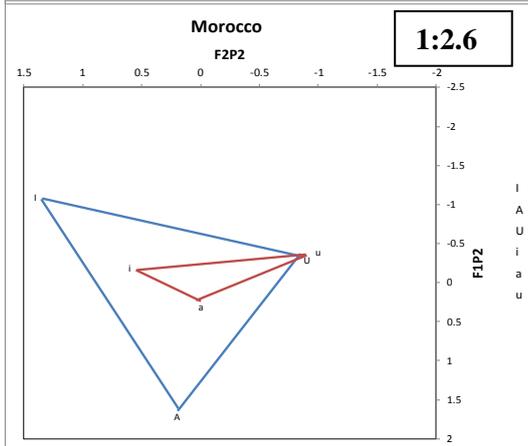
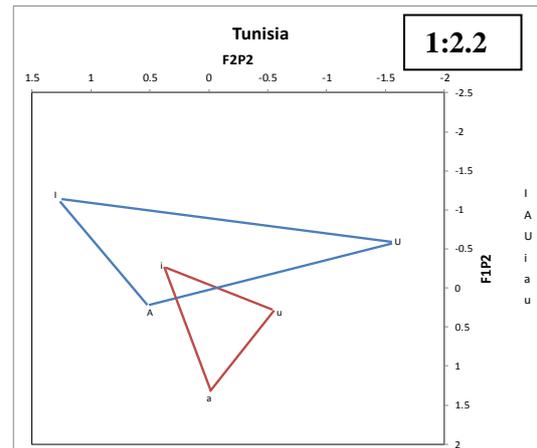
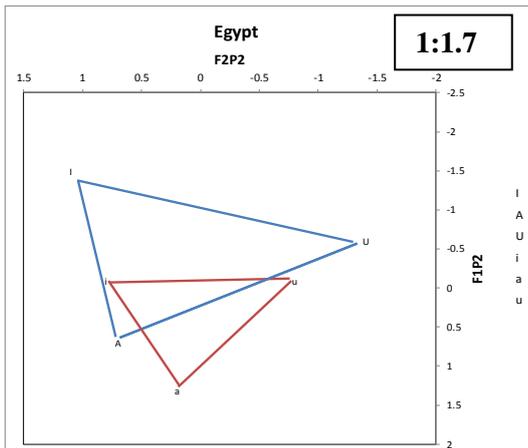


Fig.1: Mean values of normalised F1 and F2 at vowel midpoint for Arabic (/i:/), /u:/, /a:/) vowels in eight Arabic dialects. V:VV ratio (calculated using normalised vowel duration) at top right corner for each dialect.

On the morphology of Kuwaiti surnames

Amin Almuhanha and Jean-Francois Prunet

Kuwait University

This presentation explores the morphological paradigms of Kuwaiti surnames. In medieval times, Arab names were composed of five elements: *ism* (given name), *kunya* (teknonym, i.e. 'father/mother of'), *nasab* (lineage, e.g., patronym, matronym, i.e. 'son/daughter of'), *nisba* (relation), and *laqab* (nickname). In the Middle East (as in Western countries), surnames are a modern innovation introduced by governments for the purpose of issuing personal IDs. There are over six hundred Kuwaiti surnames and they may come from any of the aforementioned five elements. For instance, they may come from *ism* (e.g., *bilaal*; *saalim*), *kunya* (e.g., *buxaḏ'uur*; *bureslii*), *nasab* (e.g., *bin naas'ir*; *aal-Ḥalii*), *nisba* (e.g., *il-hasaawiy*; *li-bluuḥiy*), or *laqab* (e.g., *il-yaḥguut*; *il-haddaad*).

Some surnames have distinct singular and plural forms (e.g., *il-gallaaf* vs. *il-galaaliif*) because they have a lexicalized plural, as in *ʔams fiḥ xams galaaliif* 'yesterday, I saw five members of the *il-galaaf* family'. It seems that the existence of lexicalized plural forms does not depend on the morphology of the etymological source but further investigation is needed. For instance, the surname *it-tammaar* has no lexicalized plural form even though its etymological source has one (cf. *it-tammaar* 'the dates seller' vs. *it-tammaariin* 'the dates sellers'). Some surnames also have a lexicalized collective form, as in *if-fihbaan yihibuun il-gahwa* '(the members of) the *li-shaab* family love coffee' (contrasting with lexicalized plural *fahaabiin*). Some surnames also exhibit a contrast between masculine and feminine plural forms and/or a contrast between masculine and feminine collective forms. Some surnames have richer morphological paradigms than others and we will try to identify the extent and the cause of this variation.

When asking whether the source word of the surname is relevant to the existence of lexicalized plural and collective forms we will consider the five original elements separately: *ism*, *kunya*, *nasab*, *nisba*, and *laqab*. In addition we will look at the *laqab* subcategory and divide it into subcategories based on etymological parts of speech because this may be a relevant factor. We write "etymological" because proper names are always nouns, whichever part of speech they may come from etymologically. As is known from the so-called *Baker-baker paradox* in the cognitive sciences, a proper name is semantically and morphologically distinct from the word from which it comes.

Some surnames, such as *il-jassaar*, have neither plural forms nor collective forms and, as a result, various circumlocutions may be used, as in plural *ʔams fiḥ xamsah min il-jassaar* (vs. homophonous collective *il-jassaar yihibuun il-gahwa*). We will ask why some surnames favor one circumlocution while other surnames favor other circumlocutions.

We will also ask whether singular and dual forms (masculine and feminine) exist. We will mention some methodological issues that arose in the collection of our data. We hope to propose an overall picture of surname morphological paradigms that will eventually be tested on several hundred surnames.

Multi-functional Verbs *gaam* & *gaʕad* in Kuwaiti Arabic: Between Serialization and Auxiliation

Bashayer Alotaibi

Newcastle University

It is believed, when looking at the historical development of auxiliaries that auxiliaries develop from main verbs when they acquire functional properties (Seiss, 2009). Motion and posture verbs are considered a source for auxiliary verbs cross-linguistically (Juge, 2006). Furthermore, there seems to be a consensus that serial verbs can be an immediate stage on the grammaticalization cline for auxiliaries (Seiss, 2009; Anderson, 2006; Heine, 1993; amongst others).

In Kuwaiti Arabic (Henceforth KA), there are two interesting posture verbs that show both lexical and functional behaviours, relevant to the introduction above. Verbs *gaam* ‘get up’ & *gaʕad* ‘sit’ can combine with other verbs without the use of an overt linking element, i.e. a coordination or subordination marker. In such combinations they either show a lexical meaning or a less lexical -more functional- meaning. For example, verb *gaam* is ambiguous in the following construction:

- (1) Muna **gaam.t** dʕhaka.a.t lamma ʃaaf.t-ni
Muna **V.3SF** laughed.3SF when saw.3SF-1S
- a. ‘Muna stood up (and) laughed when she saw me’
b. ‘Muna started laughing when she saw me’

Verb *gaam.t* can mean literally standing and laughing as expressed in the translation in (1a), or it can have a functional meaning, marking inceptive aspect, i.e. the initiation of an event in relation to another event. This sort of ambiguity is also shown in the use of verb *gaʕad* in KA:

- (2) Talal **y.gʕad** y.ilʕab riyadʕa b-il-bait
Talal **3SM.V** 3SM.play sports in-DEF-house
- a. ‘Talal sits (and) plays sports in the house’
b. ‘Talal keeps playing sports in the house’

In example (2), the first reading is a lexical one, meaning that Talal must be in a seated position in order to play his sport. The second possible reading is functional; it marks continuous/progressive aspect hence the lexical meaning of being in seated position is not necessary for the interpretation of the sentence.

The ambiguous constructions are not structurally equivalent to one another. There are a number of structural clues that disambiguate the lexical uses from the functional ones in addition to semantics. The main hypothesis is that there is one lexical entry for verbs ‘*gaam/gaʕad*’, and depending on the position where they are merged, they acquire these different interpretations. When these verbs are merged in the VP domain they get the lexical reading. On the other hand, when they are merged in the functional domain – anywhere above VP – they acquire the functional reading. The ambiguous readings are possible due to the availability of two different positions for these verbs to be merged, especially when there is another lexical verb in the clause.

(Note on glossing: Imperfective verbs are glossed with all features before the verb, for example 3SM.V, while perfective verbs are glossed with all features after the verb V.3SM, using the distinction between suffixal form vs. prefixal form borrowed from Fassi Fehri, 2012).

- Anderson, G. D. (2006). *Auxiliary verb constructions*. Oxford University Press.
- Fehri, A. F. (2012). *Key features and parameters in Arabic grammar* (Vol. 182). John Benjamins Publishing.
- Heine, B. (1993). *Auxiliaries: Cognitive forces and grammaticalization*. Oxford University Press.
- Juge, M. L. (2006). Morphological factors in the grammaticalization of the Catalan “go” past. *Diachronica*, 23(2), 313-339.
- Seiss, M. 2009. On the difference between auxiliaries, serial verbs and light verbs. In *Proceedings of the LFG09 Conference*, ed. by M. Butt and T. H. King (pp. 501-519). Stanford, CA: CSLI Publications.

Geographic Location and Linguistic Diversity: The Use of Intensifiers in Egyptian and Saudi Arabic

Mansour Alotaibi and Abdulfattah Omar

Department of Arabic, Prince Sattam bin Abdulaziz University/

Department of English, Faculty of Arts, Port Said University

Numerous studies have indicated that geographic location plays an essential role in language variation and the emergence of dialects. That is, when speakers of the same group are geographically apart, it is more likely that they use language differently. The unprecedented widespread of communication channels in what is referred to now as the global age, however, has raised many doubts in relation to the connection between space and geographic location on the one hand and language variation on the other hand. In other words, many linguists have come to question the rationality of geographic location in language variation. In the face of this controversial issue, this article investigates whether there are differences between Egyptian and Saudi spoken Arabic concerning the use of intensifiers. The rationale is that intensifiers are very frequent in everyday communication and occur naturally without much thinking on the part of speakers. In order to achieve this objective, the study is based on a corpus of selections from the Egyptian radio show *Ish Sabahak* (Live Your Morning) on Nogoum FM Radio Channel and the Saudi radio show *Caffeine* on Mix FM. Results indicate clearly that there are linguistic differences between Egyptian and Saudi speakers in the use of intensifiers in terms of frequency, type, and the linguistic structure.

Variation between [g] and [gʲ] in the Ḥarbi dialect of Medina

Mohammad Al-Rohili

University of Essex

The Ḥarbi dialect of Medina is a Bedouin dialect belongs to North-West family dialects. At present, the Banu Ḥarb tribe occupies a fairly large part of Saudi Arabia ranging from the region of Ḥijaz (where their territory is delimited to the south by a line along the west coast extending from Al-Gunfuda to Al-Medina) to Central Arabia (where their territory extends into the Al-Qaṣi:m district). This tribe is divided into two groups: The first group is the urbanized population of the Ḥarb, especially the Ḥijazi group, who live in cities and permanent villages and work as cultivators like those found in Badir, Al-Figra and Ra:biy. The second group is the Najdi group found in Central Arabia, who are considered to be Bedouin or semi-nomadic (Prochazka 1988). The focus of this paper will be on the Ḥarbi community of Medina.

One of the salient features of this dialect is the palatalization of [gʲ] and the velar-stop [g] as variants of (g), e.g. *gʲidi:m*, *gidi:m* ‘old’, *gʲili:l*, *gili:l* ‘little’. To date, this feature has not been investigated as a sociolinguistic variable in the city of Medina. The current analysis fills this gap.

The analysis presented in this paper comes from large-scale research which aims to investigate variation and change in the dialect of the Ḥarbi tribe in general. The data were obtained through sociolinguistics interviews with 43 native speakers, distributed over three age groups from both genders. The level of speakers’ social contact (low/high contact) was also measured. Regarding the linguistic factors, the data were coded for: preceding and following sounds, number of syllables and position in syllable. Data were analyzed using Rbrul statistical software.

The results show that the traditional palatalization of [gʲ] is undergoing a change in the speech of Ḥarbi clans in Medina, and that there is a tendency to use the innovative and supra-local form [g]. With respect to the social variables, ‘contact’ was returned to be the most significant factor, with high contact speakers leading the low contact speakers in using non-traditional variant at factor weight 0.881. Age was found to be significant with the young and mid-age being the most innovative groups (80%), (74%) respectively. While the oldest group favour the palatalized [gʲ] (66%).

Regarding gender, the female group was found to be ahead of men in using the innovative form at FW 0.666.

With respect to linguistic factors, Rbrul returned the preceding and following sounds to be significant. And there seems to be a tendency in using the palatalized [gʲ] in the vicinity of high- front, back, coronal and post-velar sounds, while the emphatic and dental environments favour the traditional variant least.

Neg Raising in Shamali Arabic

Shatha Alruwaili and Louisa Sadler

University of Essex

The term neg raising (NR) refers to a class of predicates for which the inference schema \neg (Pred (S)) \Rightarrow Pred (\neg (S)) holds. Typically, such predicates preferentially take semantic scope over a clausemate negation, but they also generally permit a second reading in which the negation itself scopes high. These readings are exemplified for the English NR predicate *want* in (1). NR predicates have been very largely uninvestigated in previous work on (any variety of) Arabic, and the aim of this paper is to provide an initial exploration and analysis of this phenomenon in Shamali Arabic.

For English a subset of five semantic classes of predicates are NR predicates, including *think, believe, expect, suppose, imagine, reckon* (opinion); *seem, appear, look like, sound like, feel like* (**perception**); *be probable, be likely, figure to* (**probability**); *want, intend, choose, plan* (**intention/volition**); *be supposed, ought, should, be desirable* (**judgement/obligation**). Note that although semantically underpinned, the distribution is clearly *lexically based* (e.g. *want* is an NR predicate in English but *desire* is not). Along- side the NR reading shown in (1), a number of further properties can serve as diagnostics for NR. One of these is the distribution of NPIs. Unlike other predicates, NR predicates allow so-called strict NPIs (the subset of NPIs which are licensed by anti-additive environments) in the complement clause. A wider class of predicates (including English *claim, know, regret*) allow only the weak subset of NPIs in the embedding, and still other predicates do not permit any. A further interesting property of NR predicates is that a variety of negative expressions in addition to sentential negation may trigger NR interpretations, as shown by the so-called split scope reading in (2).

- (1) John doesn't want to help me. John wants not to help me NR reading
John does not have a desire to help me non NR reading
- (2) No student thinks Mary left until Friday.
= Every student thinks Mary didn't leave until Friday.

This talk contributes to the crosslinguistic literature on NR, investigating NR in Shamali Arabic (SA). We will discuss a class of predicates in Shamali Arabic, exemplified by (3), which we will argue have the characteristics exhibited by NR predicates crosslinguistically.

- (3) mā ʔden ann-h musulim il-barak
NEG think. Impv.1SG that-3SGM Musalim Ilbarak
raḥ ya-traḡaṣ ʕan rʕyaḥ
FUT retract.IMPV.3SGM about opinion-3SM

I do not think that Musalim Ilbarak will retract his opinion. (non-NR reading).
I think Musalim Ilbarak will not retract his opinion. (NR reading)

Our paper will address the core questions which arise in determining the nature and extent of NR. We will show that Shamali Arabic does have a class of NR predicates. In relation to NPIs we will use a variety of criteria to determine the nature and extent of NR and to

distinguish such predicates from those which allow a smaller set of NPIs in embedded complements. An important question is the extent to which the set of NR predicates in Shamali Arabic is comparable with the classes of predicates which have been established as NR predicates in other languages, and here we address in particular the classes of modal predicates. Finally we will also discuss the question of whether a variety of negative expressions beyond sentential negation trigger Neg Raising and the sort of split scope phenomena illustrated for English.

- Gajewski, Jon Robert. 2005. *Neg-Raising: Polarity and Presupposition*. Ph.D. thesis, MIT.
- Homer, Vincent. 2015. Neg-raising and positive polarity: The view from modals. *Semantics and Pragmatics* 8:1–88.
- Horn, Laurence R. 1989. *A natural history of negation*. Chicago: University of Chicago Press.

Is pharyngealization associated with an epilaryngeal constriction? An acoustic investigation in Jordanian and Moroccan Arabic

Jalal Al-Tamimi

Speech and Language Sciences, Newcastle University

Pharyngealization is traditionally described as causing retraction of the tongue body/root, with some reports of lowering of the tongue body. Acoustically it causes lowering and raising of the second and first formants respectively. Although these are the mostly agreed upon characteristics, pharyngealization is also associated with a retracted epiglottis, a raised larynx, a pressed/tense voice quality and/or a protruded lip posture (see e.g., Al-Tamimi, F. & Heselwood, 2011; Cantineau, 1960; Laufer & Baer, 1988; Lehn, 1963; Zeroual & Clements, 2015, among others). This combined effect of pharyngealization seems to be related to the “Laryngeal Articulator Model”’s descriptions (LAM, henceforth, Esling, 2005). Vowels in the vicinity of pharyngealized consonants are “retracted” and are better described as having a back and low gesture that are combined rather than separate thanks to the hyoglossus being pulled back (Esling, 2005; Moisik, 2013; Moisik, Czaykowska-Higgins, & Esling, 2012; Sylak-Glassman, 2014). Subsequently the epilarynx and larynx are constricted causing tense/pressed voice quality.

The aim of this exploratory study is to evaluate which acoustic cues are used to highlight this combined effect of pharyngealization in two Arabic dialects, Jordanian and Moroccan (JA and MA, henceforth). We will claim that using formant ratios (or formant bark-difference) leads to a better characterization of the “retracted” vowel quality associated with pharyngealization than absolute formants only. Spectral slope measures will assess any voice quality differences associated with these vowels. These combined acoustic cues will enable to *acoustically* shed light into whether an epilaryngeal constriction is associated with pharyngealization in Arabic.

Twenty male speakers (10 per dialect) produced vowels preceded by /d or d^h/. A total of 30966 measurements (17992 in JA and 12974 in MA) obtained from the 13 acoustic cues measured at both onset and midpoint (total of 26) were statistically analysed via Generalized Logistic-Mixed Effects modelling (GLMMs). Likelihood ratio differences are used to eliminate non-significant acoustic cues, followed by using predicted probabilities of significant cues as a way to assess their predicted strength. An exploratory Random Forests classification technique is used to evaluate percent correct classification and the degree of importance of these cues.

In both dialects, vowels in the vicinity of pharyngealized consonants are “retracted”; they are both more open (higher F1, F1-f0) and more back (lower F2, higher F3-F2), are more compact (lower F2-F1), and with spectral divergence as an enhancing cue to the compacted spectrum (higher F3-F2). Spectral slope results showed these vowels to have a more tense/pressed voice quality with an increased energy in high frequencies; some correlates of constricted epilarynx (Halle & Stevens, 1969; Story, 2016). Random forests results on all acoustic cues showed extremely high classification rates (93.2% in JA, and 91.2% in MA), with the acoustic cues varying in order of importance (see Figure 1); in JA, F2 based cues followed by F1 based are more important, while in MA, it is F1 based followed by F2 based cues. Spectral slopes only results (not shown here) are used as secondary cues and provide ≈70-75% classification accuracy. These results show variation between dialects in how pharyngealization is phonetically implemented and provides support for a constricted epilarynx as used in Arabic.

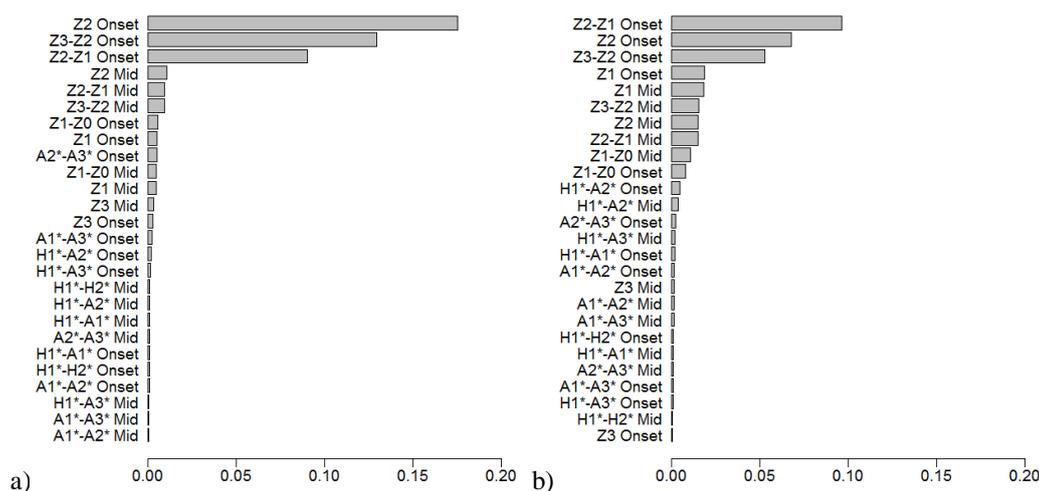


Figure 1: Mean decrease in accuracy importance scores of acoustic cues in JA (a) and MA (b)

- Al-Tamimi, F., & Heselwood, B. (2011). Nasoendoscopic, videofluoroscopic and acoustic study of plain and emphatic coronals in Jordanian Arabic. In B. Heselwood & Z. Hassan (Eds.), *Instrumental studies in Arabic phonetics* (p. 165-191). John Benjamins.
- Cantineau, J. (1960). *Études de linguistique arabe*. Paris: Klincksieck.
- Esling, J. H. (2005). There Are No Back Vowels: The Laryngeal Articulator Model. *The Canadian Journal of Linguistics / La revue canadienne de linguistique*, 50(1), p. 13-44.
- Halle, M., & Stevens, K. (1969). On the Feature 'Advanced Tongue Root'. In Quarterly Progress Report No. 94, Research Laboratory of Electronics, M.I.T (p. 209-215).
- Laufer, A., & Baer, T. (1988). The emphatic and pharyngeal sounds in Hebrew and in Arabic. *Language and Speech*, 31, p. 181-205.
- Lehn, W. (1963). Emphasis in Cairo Arabic. *Language*, 39(1), p. 29-39.
- Moisik, S. (2013). *The epilarynx in speech*. PhD thesis. Department of Linguistics, University of Victoria.
- Moisik, S., Czaykowska-Higgins, E., & Esling, J. (2012). The epilaryngeal articulator: a new conceptual tool for understanding lingual-laryngeal contrasts. *McGill Working Papers in Linguistics*, 22(1).
- Story, B. H. (2016). The Vocal Tract in Singing. In G. Welch, D. Howard, & J. Nix (Eds.), *The Oxford Handbook of Singing*.
- Sylak-Glassman, J. (2014). An emergent approach to the guttural natural class. *Proceedings of the Annual Meetings on Phonology*.
- Zeroual, C., & Clements, G. N. (2015). The feature [pharyngeal]. In A. Rialland, R. Ridouane, & H. van der Hulst (Eds.), *Features in Phonology and Phonetics: posthumous Writings by George N. Clements and Coauthors* (p. 247-276). Mouton de Gruyter: Berlin.

The perception and production of Arabic consonants: a cross-linguistic study

Sara Al Tubuly

Al-Maktoum College of Higher Education/University of Essex

Attempts have been made to examine the acquisition of Arabic consonants by Adult learners. Alish (1987) compared Arabic learners' perception of some Arabic emphatic consonants with native Arabic speakers. Kara (1976) questioned the claim of the difficulties of learning Arabic language by exploring the problems created by dissimilarities between Arabic and English. Al Mahmoud (2013) examined learners' perception of Arabic contrasts referring to the perceptual assimilation model (PAM). Alwabari (2013) examined the influence of learners' proficiency in Arabic on their ability to produce Arabic pharyngeal and emphatic consonants. Shehata (2015) examined the awareness and perception of adult native English speakers regarding the difficulty of Arabic consonants in both perception and production. Recently, Lancaster and Gor (2016) examined phonetically and phonologically the perception of pharyngeal fricatives by English-speaking learners. However, not much is known about the phonological and typological factors that might affect learning of a foreign Language, particularly Arabic by a diverse sample of L1 speakers.

The current study examines the production and perception of Arabic emphatic and pharyngeal consonants by learners from different linguistic background. Therefore, the participants in the study are native speakers of English, Greek, Chinese, Turkish and German learning Arabic as a second or a third language. Fifty two participants are deployed in this study at two levels of proficiency: beginner and intermediate. The participants are classified according to their native tongue and their level of proficiency to examine how proficiency is related to learners' perception and production of sounds and whether their linguistic background will affect their level of proficiency of learning Arabic consonants. An experimental approach was employed to collect data. Subjects were required to read minimal pairs items with emphatic and pharyngeal consonants in order to test their production and they were also required to take AXB discrimination test to evaluate their perception of the attested sounds. The data was analysed statistically and linguistically. The findings show that the problem of perception and production of pharyngeal and emphatic sounds can be encountered by learners of different levels of proficiency; however, intermediate learners performed significantly better in perception which implies that perception might precede production. Learners pronounced the sounds differently regardless of their level but based on the richness of the consonantal system in their L1 and L2.

The current study will assist Arabic linguists to obtain more insight into what problems the learners from different linguistic backgrounds might face in learning Arabic. This will be reflected in teaching by helping students to articulate the right organs of speech and to perceive the distinction between similar pairs. It is important for the field of teaching Arabic as a foreign or second language that future research investigates how learners handle their perceived problematic sounds and the learning strategies that they employ.

- Al Mahmoud, M. S. (2013). Discrimination of Arabic contrasts by American learners. *Studies in Second Language*, 3(2), 261-292.
- Alosh, M. L. (1987). *The perception and acquisition of pharyngealized fricatives by American learners of Arabic and implications for teaching Arabic phonology* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses database. (Order No. 8717599).
- Alwabari, S. (2013). *Non-Native Production of Arabic Pharyngeal and Pharyngealized Consonants*. Master's Thesis). Carleton University, Ottawa. Available from ProQuest Dissertations and Theses database.
- Lancaster, A. and Gor, K. (2016) Abstraction of Phonological Representations in Adult Non-native Speakers. *Proc Ling Soc Amer*, vol.1, 24:1-15.
- Shehata, A. (2015) Problematic Arabic Consonants for Native English Speakers: Learners. Perspectives. *International Journal of Educational Investigations*. vol.2, 24-47.

Genitive Exponents in Modern Omani Arabic

Simone Bettega

University of Torino

This study presents a synchronic analysis of the use of genitive exponents (GEs) in Omani Arabic. Although the research is mainly focused on the dialects of Northern Oman (both Bedouin and sedentary varieties; see Holes, 1989, and Holes, 1996, for a discussion of the terms Bedouin and sedentary in Oman), references will be made to southern sedentary varieties as well (i.e. Coastal Dhofari Arabic; see Davey, 2016, for a definition). The data for the present study are drawn from both television material and original interviews with native speakers carried out in northern Oman in the course of the last two years.

Studies dealing specifically with GEs in Omani Arabic are virtually non-existent. In her large-scale comparison of the use of GEs throughout the Arabic speaking world, Eksell-Harning (1980) refrains from dealing with the dialects of the eastern half of the Arabian Peninsula, due to the lack of data concerning this area. Although in recent years more data have become available for both the Gulf Coast (see, in particular, Holes, 2015: 223-7, for a detailed analysis of the use of GEs in Bahraini Arabic) and the southern region of Dhofar (Davey, 2012), northern Oman still remains a blank spot on the map. Fleeting remarks in Holes (1990: 170) and Holes (2008: 484) suggest that three different GEs may be in use in this area, namely *māl*, *ḥagg* and *ḥāl*. I will argue, however, that *ḥagg* is rarely used in northern Oman (especially in sedentary varieties), and that *ḥāl*, although widely employed, is either used to mark NP-internal specifications other than possession (I will here adopt the definition of possession given in Dixon, 2010: 262) or - in predicative constructions - as a dative/benefactive marker.

In the course of this presentation, the various uses of GEs in Omani Arabic will receive in-depth treatment: in particular, the following topics will be addressed:

- a) the frequency of use of the exponents (compared with the figures provided by Eksell-Harning, 1980, and Davey, 2012, in their respective works on the subject)
- b) the possible contexts of use of the GEs, with particular reference to the definiteness/indefiniteness of the possessor (R) and possessed element (D), the pronominal or non-pronominal nature of R, the presence of modifiers accompanying either R or D
- c) the possible meanings expressed by the GEs (alienable/inalienable possession, concrete/abstract possession, non-possessive relations, etc.)
- d) possible motivations for the use of the GEs (in place of the more commonly employed synthetic annexation structure)

Finally, two phenomena will be briefly described which have not so far been addressed in the literature on GEs in Arabic dialects. These are i) the potential loss of the definite article in the case of a definite D followed by a GE and ii) the omission of D in a D + GE + R structure in fast, colloquial speech.

References

- Davey, R. J. (2012), *Analytic Genitive Constructions in Coastal Dhofārī Arabic*, in Eades, D. (ed.), *Grammaticalization in Semitic*, Oxford: Oxford University Press, pp. 67-81.
- Davey, R. J. (2016), *Coastal Dhofari Arabic: a Sketch Grammar*, Leiden: Brill
- Dixon, R. M. W. (2010), *Basic Linguistic Theory. Volume II. Grammatical Topics*, Oxford: Oxford University Press
- Eksell-Harning, K. (1980), *The Analytic Genitive in Modern Arabic Dialects*, Gothenburg: Acta Universitatis
- Holes, C. (1989), *Towards a Dialect Geography of Oman*, in «Bulletin of the School of Oriental and African Studies» 52, pp. 446-62
- Holes, C. (1990), *Gulf Arabic*, London - New York: Routledge
- Holes, C. (1996), *The Arabic Dialects of South Eastern Arabia in a Socio-historical Perspective*, in «Zeitschrift für arabische Linguistik» 31, pp. 34-56
- Holes, C. (2008), *Omani Arabic*, in Versteegh, K., et alii (eds.), *Encyclopedia of Arabic Language and Linguistics*. 4 vols, Leiden: Brill, pp. 478-91
- Holes, C. (2015), *Dialect, Culture, and Society in Eastern Arabia, Volume III: Phonology, Morphology, Syntax, Style*, Leiden: Brill

Intonational marking of contrastive focus in the noun phrase in Moroccan Arabic

Anna Bruggeman^a & Sam Hellmuth^b

^aUniversity of Cologne/University of York, ^bUniversity of York

This paper reports on results from a pilot experiment on Moroccan Arabic investigating the intonational marking of contrastive focus within the noun phrase (NP), with two complementary aims: i) to qualitatively document the intonation contours marking contrastive focus within the NP in MA, and ii) to critically assess the generalisability of results on prosodic focus marking obtained through elicitation of NP focus.

Earlier work on contrastive focus marking in MA has yielded different results. Yeou *et al.* (2007) investigate, in read speech, the alignment of a rise-falling pitch contour that consistently marks contrastively focused single-word constituents. They find that the peak in this contour is predictably aligned at or shortly after the end of the stressed syllable. For contrastive focus within NPs, however, Burdin *et al.* (2015), claim that MA lacks pitch marking (i.e. no difference between contrastive focus on the adjective, noun, or full NP).

The present experiment investigates the intonational contours used to convey contrastive focus in a semi-spontaneous interactive task, similar to that used by Burdin *et al.* Speakers were 12 multilingual Casablanca speakers of Moroccan Arabic and Tashlhiyt Berber aged 20-32. The experiment consisted of a simple interactive card description task modelled after Krahmer & Swerts (2001). Participants described cards showing pairs of animals in varying colours, yielding utterances with contrastive focus either on the adjective (indicated in bold in 1.), or the noun (indicated in bold in 2.).

1. *ana 'andi zarafa **griya** ou zarafa **fanidiya**.*
'I have a **grey** giraffe and a **purple** giraffe.'
2. *ana 'andi **zarafa** griya ou **hemama** griya.*
'I have a grey **giraffe** and a grey **pigeon**.'

The full dataset contains 216 utterances with 2 NPs each consisting of a noun and an adjective, split equally between noun and adjective focus. After exclusion of disfluent and non-target items, 159 initial and 161 final NPs remained.

Figure 1 shows all holistic pitch contours for repetitions of *hemama limoniya* ("orange pigeon") per phrase and per word, both in the initial NP-slot in the sentence and in the second NP slot. Speakers do not produce qualitatively different patterns in the different focus conditions, so there is no apparent effect of focus on the presence or type of intonational movement. This observation holds across all 12 speakers and across all different NPs in this pilot, and informal listening checks with 2 native speakers on single NPs excised from context showed that performance on the retrieval of the relevant corresponding NP was chance-like. The present results thus support Burdin *et al.* (2015)'s suggestion that MA lacks intonational marking of NP-internal contrastive focus. Moreover, these findings are plausible in view of similar findings on the lack of deaccentuation of given constituents in other languages, like Italian and Romanian (Swerts *et al.* 2002, Swerts 2007).

Although not much is known about the accentuation patterns of Moroccan Arabic, every word is not typically accented, and accentuation instead seems to be sparsely distributed on the phrasal level (cf. Maas 2013). In order to determine whether the absence of intonational marking of contrastive focus reflects idiosyncrasies of the task (varying focus only within

NPs), we will also present results of analysis of fully spontaneously produced instances of contrastive focus from a corpus of map task data, as a contribution to a better understanding of the as yet difficult to classify nature of intonational pitch movements in MA.

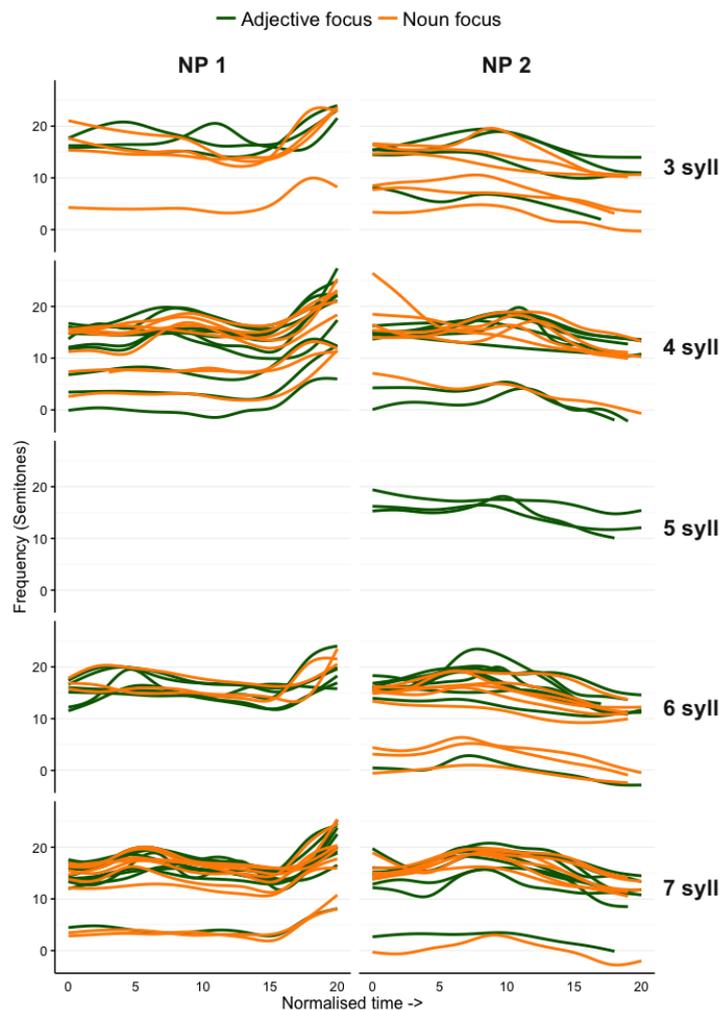


Figure 1 Pitch contours with normalised duration for all noun + adjective combinations produced without intervening words or pauses in both NP slots (initial and second in sentence).

Benkirane, T. (1998). Western Arabic (Morocco). In: Hirst, D. & Di Cristo A. (eds.) *Intonation systems: a survey of twenty languages*, pp. 345-359. **Burdin, R. S. et al. (2015).** Variation in the prosody of focus in head-and head/edge-prominence languages. *Lingua*, 165, 254-276. **Hellmuth, S., et al. (2015).** F0 peak alignment in Moroccan Arabic polar questions. *Proceedings of the 18th ICPhS Glasgow*. **Krahmer, E., & Swerts, M. (2001).** On the alleged existence of contrastive accents. *Speech Communication*, 34(4), 391-405. **Swerts, M., Krahmer, E. and Avesani, C. (2002).** Prosodic marking of information status in Dutch and Italian: a comparative analysis. *Journal of Phonetics*. **Swerts, M. (2007).** Contrast and accent in Dutch and Romanian. *Journal of Phonetics*. **Yeou, M., Embarki, M. and Al-Maqtari, S. (2007).** Contrastive focus and F0 patterns in three Arabic dialects. *Nouveaux cahiers de linguistique française*, 28, 317-326.

- Ahmed, J. M. M. (2011). *The Syntax of Negation in Yemeni Arabic*. Ph.D. thesis, University of Islamabad, India.
- Comrie, B. (1989). *Language Universals and Linguistic Typology: Syntax and Morphology*. Chicago: University of Chicago Press.
- Comrie, B. (1991). On the importance of Arabic for general linguistic theory. In B. Comrie & M. Eid (Eds.), *Perspectives on Arabic Linguistics III*, pp. 3-30. Amsterdam/Philadelphia: John Benjamins.
- Stassen, L. (2009). *Predicative Possession*. Oxford: Oxford University Press.

On the distribution of *xejn* in Maltese

Maris Camilleri & Louisa Sadler

University of Essex

The main aim of this study is to show that the facts are considerably more complex than the claim that *xejn* is essentially an “inherently negative” negative concord item. We seem to find three different *xejn* lexical items in Maltese. One of the uses is that of a negative concord item which means ‘nothing’ and which requires the presence of sentential negation at the exclusion of the presence of the *-x* suffix, which otherwise forms the bi-partite verbal negation strategy in Maltese. Contrast the utterances in (1).

- (1) a. Ma ra-x nies
NEG see.PFV.3SGM-NEG people
He didn't see people
- b. Ma ra xejn
NEG see.PFV.3SGM nothing
He didn't see anything

In such contexts, *xejn* functions as a subcategorised grammatical function of different sorts of predicates, or as the sentential predicate in itself, as in (2):

- (2) M'jien xejn
NEG.I nothing
I am nothing

In other contexts, *xejn* appears to function as a negative quantifier where it operates obligatorily as the sole expression of negation, as a negative quantifier. This set of environments has not been adequately characterised in previous literature. The sole mention is Lucas' (2009) unclear term “non-verbal argument positions”, which he exemplifies with the negative standard of comparison *aħjar minn xejn* ‘better.COMPAR from nothing’ and a PP *b'xejn* ‘with.nothing’ which has actually lexicalised into the meaning ‘(for) free’. It seems to us that *xejn* in these contexts is always part of an ADJ.

- (3) a. ... dejjem huwa aħjar minn xejn
... always COP.3SGM better.COMPAR from nothing
always better than nothing
- b. Ġie mix-xejn
come.PFV.3SGM from.DEF-nothing
It came from nothing

Evidence that *xejn* is a negative quantifier with its own inherent negative interpretation comes from the double negation that results when sentential negation is co-present.

- (4) Ma mar-x għal xejn
NEG go.PFV.3SGM-NEG for nothing
He didn't go for nothing ... i.e. He went for a purpose

The third use of *xejn* means ‘any(thing); at all’. In such contexts, we wish to argue that *xejn* is an NPI which unlike the NCI and negative quantifier uses of *xejn*, never displays an inherent negative interpretation. It seems that the various meanings associated with the lexical item vary according to the construction in which it is present. It essentially takes on an ‘anything’

interpretation in conditional non-veridical constructions; ‘(any)thing’ and ‘at all’ in interrogative constructions, and an ‘at all’ interpretation in negative declarative structures. The broad split across the uses of *xejn* in non-veridical contexts as opposed to veridical ones is the obligatory presence of sentential negation in the latter, but not in the former, such that one could argue that depending on the syntactic construction involved, *xejn* is a strong (5) or a weak NPI (6).

- | | | | |
|-----|--|-----|--|
| (5) | <i>Xejn</i> *(ma) <i>rqad-t</i>
at.all NEG sleep.PFV-1SG
I didn't sleep at all | (6) | <i>Rqad-t</i> <i>xejn?</i>
sleep.PFV-1SG at.all
Did you sleep at all? |
|-----|--|-----|--|

While we will be drawing on, on a number of comparisons with what takes place in other Arabic varieties which involve a bi-partite negative strategy or make use of *šayʔan* and its alternatives, we will be accounting for this first full description of *xejn* in Maltese through the use of the Lexical Functional Grammar framework.

Lucas, C. (2009). The development of Negation in Arabic and Afro-Asiatic. Ph.D. thesis, University of Cambridge.

On verbal negation in the Arabic dialects of the Fezzān

Luca D'Anna

University of Mississippi

The development of the circumfixal verbal negation *mā ... š* and of the cognate continuous nominal negation *mūš / məš* represents one of the most interesting phenomena in the evolution of the Arabic dialects over time. The existence of an exclusively suffixal negation *-š* in some Palestinian and Omani dialects, moreover, makes Arabic one of the many languages interested by the so-called Jespersen's cycle (Jespersen 1917). Lucas (2007, 2009, 2010, 2015) and Diem (2014) provide a convincing explanation of the origin of the phenomenon from a post-verbal adverbial quantifier *šayʔan* and of the historical stages of its evolution, which probably originated in Egypt and spread to Northern Africa (with the exception of Mauritania), but also to Lebanon, Palestine and other Mashreqi dialects, as well as Oman. The puzzle, however, has not been completely solved, since the presence of stage III dialects in Oman in the 19th century still poses an issue concerning the possibility of polygenesis. Diem correctly points out the difference between conservative and progressive *-š* dialects, based on the degree of generalization of the new circumfixal negation at the expense of the older (prefixal) one. The preservation of the old pattern in specific contexts, thus, can be seen as a relic of the linguistic stages through which the new one became predominant, which may allow us to answer the fundamental question of *how* the generalization happened. The present study is based on data from the geographic area called the Fezzān, the South Western, mostly desert province of Libya. The dialects spoken in the area can be distinguished into sedentary and nomadic ones and have been known since the publication of Marçais (2001), which includes a rich collection of ethnographic texts. Both the sedentary and the nomadic variety are of the Bedouin type and show particularly archaic traits, both morphologically (preservation of the gender distinction in the plural) and syntactically (such as the structure of conditional sentences described by D'Anna (forthcoming)). Their treatment of verbal negation is peculiar, showing a rather predictable distribution of the new negation *mā ... š* in main clauses and of the old one *mā ...* in subordinate ones within the prose texts. Poetry, which usually preserves older stages of the language, shows more occurrences of the older prefixal negation also in main clauses. This distribution is, to the best of my knowledge, not documented in any other North African variety, and might provide evidence of the stages in which the new structure was generalized, starting from its original employment as an adverbial quantifier and through a progressive generalization to main clauses first and subordinate ones later. Such a pattern of development, moreover, would fit into general linguistic theories concerning grammaticalization, such as Bybee, Revere and Pagliuca (1994) and Bybee (2001).

Bettini, Lidia. 2004. "Remarques sur les parlers Arabes du Fezzân (Libye)". In F. Bauden (ed.), *Mélange de langue arabe et d'islamologie offerts à Aubert Martin*. Louvain: Peeters, 11-28.

Brustad, Kristen, 2000. *The syntax of spoken Arabic*. Washington D.C: Georgetown University Press.

Bybee, Joan / Perkins, Revere / Pagliuca, William, 1994. *The evolution of grammar. Tense, aspect, and modality in the languages of the world*. Chicago / London: The Chicago University Press. Bybee, Joan, 2001. "Main clauses are innovative, subordinate clauses are conservative: consequences for the nature of constructions". In J. Bybee

- and M. Noonan (eds.), *Complex sentences in grammar and discourse: essays in honor of Sandra A. Thompson*. Amsterdam: John Benjamins, 1-17
- Caubet, Dominique, 2004. "Les parlers arabes nomades et sédentaires du Fezzân, d'après William et Philippe Marçais". *Approaches to Arabic dialects, A collection of articles presented to Manfred Woidich on the Occasion of his Sixtieth Birthday*, M. Haak / R. De Joong / K. Versteegh (eds.). Leiden: Brill, 67-96.
- , forthcoming. "A tentative description of Aspect and Modality in the Fezzan through the texts collected by William and Philippe Marçais (1944-1953)".
- D'Anna, Luca, forthcoming. "On the development of conditional particles in the Arabic dialect of the Fezzân".
- Diem, Werner, 2014. *Negation in Arabic. A Study in Linguistic History*. Wiesbaden, Harrassowitz-Verlag.
- Lucas, Christopher, 2007. "Jespersen's Cycle in Arabic and Berber". *Transactions of the Philological Society*, Volume 105: 3, 398 – 431.
- , 2009. *The development of negation in Arabic and Afro-Asiatic*. Thesis submitted for the degree of Doctor of Philosophy at the University of Cambridge.
- , 2010. "Negative -š in Palestinian (and Cairene) Arabic: Present and possible past". *Brill's Annual of Afroasiatic Languages and Linguistics 2*: 165-201.
- , 2015. On Wilmsen on the development of postverbal negation in dialectal Arabic. *SOAS Working Papers in Linguistics 17*: 77-95.
- Marçais, Philippe, 2001. *Parlers arabes du Fezzân, Textes, traductions et éléments de morphologie rassemblés et présentés par Dominique CAUBET, Aubert MARTIN et Laurence DENOOZ*. Genève: Librairie DROZ.
- Jespersen, Otto, 1917. *Negation in English and Other Languages*. København: Kgl. Danske videnskabernes selskab.

A grammar with opposite productive rules: some evidence from Arabic diglossia

Ahmed Ech-charfi

Mohamed V University (Rabat-Morocco)

In Moroccan Arabic, a lot of borrowings from Fusha are used to express concepts for which the colloquial provides no appropriate forms (e.g. *zamaʕa* “municipality”). The result is that the MA lexicon can be divided into items which have a colloquial shape and those which have a standard shape. In a traditional approach to borrowing, a basic grammar is hypothesized to be productive while exceptional loans are discarded as non-assimilated borrowings which will be assimilated gradually to the basic system.

In order to test this hypothesis, the assimilation (or non-assimilation) of the definite article with *z*-initial nouns is investigated. MA requires the assimilation of “l-” with such nouns whereas Fusha does not (compare *z-zmāl* and *l-zamal* “camel”). A list of 34 nonce words was prepared, 20 of which had initial *z* and the other 14 used as distracters. Of the 20 test items, half had a colloquial form, while the other half had a standard form. The colloquial form is characterized mainly by non-standard phonemes such as /g/, initial consonant clusters, or syllabic structure. The standard form is characterized by a lack of these features and the presence of full vowels. The list was presented to a group of 30 native speakers who were asked individually to read the words in isolation and, next, to provide the definite form of each word. The results showed that the informants used both the assimilated and the non-assimilated forms of the definite article. A two-way chi-square statistic was run to test the degree of correlation between assimilation and the colloquial shape of words, and between non-assimilation and the standard shape, and the result turned out to be highly significant. The informants were also asked to rate the same list of nonce words along an informal-formal scale consisting of four points. The responses were later on categorized either as “formal” or “informal”. A chi-square test was run and the correlation between formality and the shape of words was also found highly significant.

These results were interpreted as indicating that native speakers divide the MA lexicon into two classes which obey different grammar rules. Since the (non-) assimilation of the definite article applied to nonce words, the rules must be productive.

The prosody of themes in Egyptian Arabic

Dina El Zarka and Barbara Schuppler

University of Graz/Graz University of Technology

In a large-scale corpus study of the interaction of information structure and prosody in Egyptian Arabic (El Zarka 2013) a variety of topic constructions has been identified and analysed prosodically. The study was based on a qualitative analysis of a wide range of naturalistic data. The present study aims at testing the results of the qualitative analysis providing quantitative evidence using a statistical model that evaluates the effect of different linguistic (syntactic category (NP, clause, etc.) and thematic construction (clitic and non-clitic left dislocation (CLLD and LD, frame, pseudo-cleft, etc.)) and extra-linguistic (contrast, topic shift, information status, new episode) factors on the occurrence of accentuation, tonal shape and intonation break associated with a thematic constituent. We adopt a wide definition of *theme* (i.e. sentence initial topic) that includes *referential topics* (Reinhart 1982; Lambrecht 1994), *frame topics* (Chafe 1976) as well as *relational presuppositions* (Jackendoff 1972; Matic 2003; El Zarka 2013).

454 sentence initial topic constituents were extracted from a corpus of conversations (El Zarka 2013). For a comparison, a sample of 109 cases of rhematic sentence-initial NPs was also extracted from the same corpus to test the primary hypothesis that thematic and rhematic constituents exhibit different prosodies, viz. rising versus falling.

The main results of the study are as follows:

1. *Themes* in EA are associated with rising contours while *rhemes* are associated with falling contours (El Zarka 2011, 2013).
2. EA is an H* language (Hedberg & Sosa 2008), contrary to Spanish, Italian or German, i.e. the default topic accent is a simple rise (LH(*)) rather than L*H.
3. Content words are almost always accented, pronominal topics are almost as frequently accented (46%) as deaccented (54%).
4. There is no uniform coding, neither of syntactic, nor of information structural categories, such as contrastive topic, shifting topic and continuing topic.
 - Rather *contrast*, *topic shift* and *information status (new)* have a significant influence on the intonation associated with the thematic constituent, albeit to different degrees and in various ways. While *contrast* and *topic shift* both induce higher register, only contrast enhances the likelihood of a phrase break. New topics are significantly more often associated with a falling contour.
 - The detailed tonal analysis revealed that information status (new) is preferably associated with a falling accent ((L)HL) or with a high rise (LH^H%). Contrast favours LH^H% or L*H% over a simple rise. This tendency, however, is statistically less robust than in the case of information status (new).
 - The factor *thematic construction* had a significant effect on tonal realization: L(-) (deaccented low flat contour) is favoured by *subject topics*, frequently encoded as pronominals; L*H is favoured by *frames*, *conditionals* and (*hanging*) *left dislocations*, however not by CLLDs; LH^H% by conditionals

and (L)H- (including double accentuation LH*H*) by thematic presuppositions; the default accent occurs in all thematic constructions.

- *New discourse segments* prefer a higher register as well as (L)H^H% terminals.

5. Finally, the hypothesis that phonological weight is a significant factor in predicting phrase break and to a lesser extent marked intonation (i.e. L*H and LH^H) was also confirmed.

In general, the main assumption that *contrast*, *topic shift* and *information status* are rather to be viewed as factors that influence the prosodic shape of a thematic constituent than as independent linguistic categories is supported by our study. In sum, the present study provides evidence that a probabilistic model of the mapping of the segmental string to prosodic features is superior to the assumption of a one-to-one mapping of information structural and prosodic categories.

- Büring, Daniel. 1997. The meaning of topic and focus. The 59th street bridge accent.. London, New York: Routledge.
- Büring, Daniel. 2003. On D-Trees, Beans, and B-Accents. *Linguistics and Philosophy* 26(5). 511–545.
- Chafe, Wallace L. 1976. Givenness, contrastiveness, definiteness, subjects, topics and point of view. In Charles Li (ed.), *Subject and topic*, 25–56. New York: Academic Press.
- El Zarka, Dina. 2011. Leading, Linking, and Closing Tones and Tunes in Egyptian Arabic: What a Simple Intonation System Tells Us about the Nature of Intonation. In Ellen Broselow & Hamid Ouali (eds.), *Perspectives on Arabic Linguistics, XXII-XXIII* (Amsterdam Studies in the Theory and History of Linguistic Science IV: Current Issues in Linguistic Theory (CILT)), 57–73. Amsterdam, Netherlands: Benjamins.
- El Zarka, Dina. 2013. *On the interaction of information structure and prosody: the case of Egyptian Arabic*. Graz: Karl-Franzens-Universität Graz Habilitationsschrift.
- Hedberg, Nancy A. & Juan M. Sosa. 2008. The prosody of topic and focus in spontaneous English dialogue. In Chungmin Lee, Matthew Gordon & Daniel Büring (eds.), *Topic and Focus: Cross-Linguistic Perspectives on Meaning and Intonation* (Studies in Linguistics and Philosophy), 101–120. New York: Springer.
- Hellmuth, Sam. 2006. Focus-related pitch range manipulation (and peak alignment effects) in Egyptian Arabic. In R. Hoffmann & H. Mixdorff (eds.), *Proceedings of the International Conference on Speech Prosody 2006*. Dresden: TUD Press.
- Hellmuth, Sam. 2006. *Pitch accent distribution in Egyptian Arabic*. Ph.D. dissertation, SOAS.
- Jackendoff, Ray. 1972. *Semantic interpretation in generative grammar*. Cambridge, Mass.: MIT Press.
- Lambrecht, Knud. 1994. *Information structure and sentence form: Topic, focus and the mental representations of discourse referents* (Cambridge studies in linguistics). Cambridge [u.a.]: Cambridge Univ. Press.
- Matic, Dejan. 2003. *Topics, Presuppositions, and Theticity: An Empirical Study of Verb-Subject Clauses in Albanian, Greek, and Serbo-Croat*. Köln: University of Köln Ph.D. dissertation.
- Reinhart, Tanya. 1982. *Pragmatics and linguistics: an analysis of sentence topics*. Bloomington, Indiana: Indiana University Linguistics Club.

Tense and Aspect in Egyptian Arabic: a corpus-based study

Shaimaa ElSadek

University of Essex/Alexandria University

There is an ongoing debate as to whether Arabic language distinguishes between aspect only (Al-Aqarbeh, 2011), tense only (Fehri, 2012), or both tense and aspect (Eisele, 1990) on the verb form. Distinguishing the forms by which morphosyntactic tense and grammatical aspect are marked is particularly interesting in Egyptian Colloquial Arabic (ECA) as it makes use of the prefix **bi-** which is added to the imperfective verb form to indicate either habitual or progressive readings (Tawakol, 2008). The absence of this prefix is often correlated with loss of the indicative meaning, where the bare imperfective verb indicates possibility rather than a fact (Abdel-Massih et al., 1979). The difference is shown in the following examples:

- (1) ʔahmad bi-yelʕab basket
Ahmed play.bi.ipfv.3sgm basketball
Ahmed is playing basketball

- (2) ma-tedi-l-uʃ forsa yelʕab b̄-i-ki
neg-give.ipfv.2sgf-to-him-neg chance play.ipfv.3sgm with-you
Don't let him manipulate you!

- (3) yinfaf w̄-ahid yeruḥ el-ʔeʕdadeyya ʔabl ma
can.ipfv.3sgm one go.ipfv.3sgm the-secondary before what
ymur b-el-ʔebtedaʔeyya?
pass.ipfv.3sgm with-the-primary?
Can someone go to secondary school before passing the primary?

This raises the question of whether the bare imperfective verb represents a non-finite verb form in ECA, following the assumption by Hallman (2015). The current work investigates this issue along with other questions concerning the temporal and aspectual marking in ECA and how the auxiliary **k̄an** can be combined with the lexical verb to mark compound tense. As well as how to account for these facts within the LFG syntactic framework and how can they be implemented in a grammar of ECA. Data on which this study is based is extracted from a 3 million words corpus of ECA online texts that was built for these purposes. Sentences including sequences of the auxiliary **k̄an** and lexical verbs were collected and analyzed to show the various forms in which each verb can occur and its different interpretations as well as the LFG analysis for each form.

Results of the analysis show that ECA verbs can be inflected for both tense and aspect 3, where in simple tense the tensed verb occupies I, while in compound tense the auxiliary **k̄an** carries tense and occupies I while the lexical verb denotes grammatical aspect and occupies V. The auxiliary in compound tense is analyzed as a raising verb. These results are implemented in an XLE grammar that is capable of producing all (and only) the grammatical sentences in ECA on which this study is based.

- Abdel-Massih, E. T., Z. N. Abdel-Malek, and E.-S. M. Badawi (1979). *A Reference Grammar of Egyptian Arabic*. Center for Near Eastern and North African Studies at the University of Michigan.
- Al-Aqarbeh, R. (2011). *Finiteness in Jordanian Arabic: A Semantic and Morphosyntactic approach*. Ph. D. thesis, University of Kansas.
- Eisele, J. C. (1990). Tense reference, tense and formal aspect in Cairene Arabic. *Current Issues in Linguistic Theory* 63, 173–212.
- Fehri, A. F. (2012). *Key Features and Parameters in Arabic Grammar*. John Benjamins Publishing Company.
- Hallman, P. (2015). The Arabic imperfective. In *Brill's Journal of Afroasiatic Languages and Linguistics*, Volume 7, pp. 103–131.
- Tawakol, H. (2008). Code mixing in 'ammiyat al-muthaqqafin: A case study of the use of the b-prefix as a tense marker. Master's thesis, The American University in Cairo.

The Role of Prosodies in Understanding the Spoken Modern Standard Arabic Discourse

Mervat Mohamed Ahmed Fashal

Alexandria University, Egypt

This study introduces an experimental approach to investigate the structure of natural spoken Arabic in terms of prosodies and prosodic boundaries, as uttered by native speakers and as perceived by native listeners. Sometimes the understanding of discourse lies in the prosody rather than the words. Therefore several kinds of information have been taken into account: a) perceptual classification of the prosodic boundaries in the recorded speech material; b) linguistic description of these boundaries in their contexts; and c) detailed acoustic signaling of the predicted prosodic boundaries. Last but not least, the study tries to investigate the extent to which acoustic and linguistic features model perceived boundaries. It also provides insight into the factors that govern the structuring of speech.

A sample of natural spoken data was recorded from the General Station of the Egyptian Radio Broadcast. One of its cultural programs, about an ancient scientist, was chosen. It is presented in the form of *interactive dialogues* performed in Modern Standard Arabic (MSA) between the scientist and others in a dramatic style. The program was chosen in this form to get wide varieties of prosodic features and boundaries in natural performance of some sort of expressive speech. The recorded data was digitized and analyzed using Computerized Speech Lab. (CSL 4500) Kay Elemetrics. The software program which is used in the analysis is: Real-Time pitch program.

Because of the lack of literature about the informative prosodic boundaries used in Modern Standard Arabic; the collected data include natural phonetic performance that represents paralinguistic - as well as - linguistic information. The results of the study indicated that the data include wide varieties of prosodic features such as; prominent syllables, high focus tones, pausing, pre-pausal laryngealization, lengthening and a great variety of intonational boundary contours. They serve as cues for the prediction of boundaries and understanding the spoken discourse. These cues will be clarified through the various examples of the discourse analysis of the present data.

- Wichmann, Anne. (2000), *Intonation in Text and Discourse: Beginings, Middles and Ends*, Pearson Education Limited. Edinburgh, England.
- Swerts, M. and Geluykens, R. (1994) "*Prosody as a marker of information flow in spoken discourse*", *Language and Speech*, 37 (10), 21 - 43.
- Schuetze-Coburn, S., Shapley, M. and Weber, E.G. (1991) "*Units of intonation in discourse: A comparison of acoustic and auditory analyses*". *Language and Speech*, 34, 207 - 234

Ground Form Vowels and Participant Order

Peter Glanville

University of Maryland

In this paper I address the signification of the ground form variants traditionally referred to as *faʕala*, *faʕila* and *faʕula*. Drawing on work in cognitive semantics (Croft 1990, 1991; Langacker 1987, 1990, 1999) I propose a prototypical ordering of participant roles in an event or situation, and argue that a ground form verb represents the organization of semantic content in a structure that either matches this order or that deviates from it. Deviations from the prototype are semantically marked, and the Arabic verbs that construe them are therefore marked morphologically. I present contemporary and historical data to illustrate that Arabic verbs formed in the *faʕala* pattern all have subjects with roles that match the first argument in the prototypical order. Hence the subject is typically agentive (as with *rafaʕa* ‘to raise’), but may also simply be located or compared relative to a reference point (as with *daxala* ‘to enter’ or archaic *kabara* ‘to be older than’). Verbs formed in *faʕila* all have subjects with roles that match the second argument of the prototype. Their subjects are frequently affected experiencers (like the subject of *hazina* ‘to become sad’), but may also be locations with reference to which some other argument is located (*labisa* ‘to put on, wear’), or they may be preceded in a temporal or spatial sequence (*tabiʕa* ‘to follow’). It is well established that *faʕula* verbs construe stative meaning (Wright 1859), and this pattern represents a semantic structure wherein an entity is third in the prototypical ordering of roles, situated in a state (as with *hasuna* ‘to be or become good’). The approach I outline here is able to explain why a given ground form verb means what it does without simply equating the verb with its root. The paper expands our knowledge of the relationship between morphology and semantics, and contributes to a growing body of research that seeks to determine how meaning is constructed in the mind and construed to others with specific linguistic forms.

- Croft, W. 1990. Possible Verbs and the Structure of Events. In Tsohatzidis, S. (ed.), *Meaning and Prototypes*, 48-73. London: Routledge.
- Croft, W. 1991. *Syntactic Categories and Grammatical Relations*. Chicago: The University of Chicago Press.
- Holes, C. 2004. *Modern Arabic: Structures, Functions and Varieties*. Washington, DC: Georgetown University Press.
- Langacker, R. 1987. *Foundations of Cognitive Grammar. Vol. I: Theoretical Prerequisites*. Stanford: Stanford University Press.
- Langacker, R. 1990. *Concept, Image, Symbol: The Cognitive Basis of Grammar*. Berlin and New York: Mouton de Gruyter.
- Langacker, R. 1999. *Grammar and Conceptualization*. Berlin and New York: Mouton de Gruyter.
- Watson, J. 2002. *Phonology and Morphology of Arabic*. New York: Oxford University Press.
- Wright, W. 1859 [1967]. *A Grammar of the Arabic Language*. Cambridge: Cambridge University Press.

Articulatory cues for the singleton-geminate contrast in Libyan Arabic

Amel Issa

University of Leeds

This study investigates the articulatory correlates of the singleton-geminate contrast in Libyan Arabic (LA) using the sonorant sounds /l/, /n/ and /r/. The phonetic realisation of the geminate contrast has been the subject of many cross-linguistic and cross-dialectal studies (e.g. Al-Tamimi, 2004; Arvaniti, 2001; Ham, 2001). The emphasis has mainly been on the durational cues to gemination. However, some studies have suggested that other non-temporal characteristics can contribute to the singleton-geminate distinction. These include, for instance, a palatalized configuration for geminate sonorants (Local and Simpson, 1988) and geminate laterals (Payne, 2005), more lenited stops in singleton contexts (Ridouane, 2007), and apical contact for singletons as opposed to laminal contact for geminates (Payne, 2006). Some of these cues can be investigated acoustically, while others can also be investigated articulatorily.

There are few articulatory studies on Arabic gemination (and none on the LA dialect), since the majority of the studies on Arabic gemination have focused on the durational cues of geminates. This study contributes to the literature on gemination and the literature on Arabic language (and LA) by providing a detailed investigation of the articulatory correlates of the singleton-geminate contrast in LA. One native speaker of LA was recorded using electropalatography (EPG) reading a word-list containing medial intervocalic singleton and geminate consonants preceded by short vowels. Trisyllabic minimal or near minimal utterances were considered. Articulate Assistant software was used to analyse the data. Both spatial and dynamic (spatio-temporal) properties of the target segments were measured.

The results of this study show that the constriction during the production of geminates is firmer, deeper and flatter than that of singletons. It also involves more linguo-palatal contact. These parameters signpost a more laminal contact for geminates as opposed to an apical contact for singletons. The results also provide evidence that singletons are produced with a more anterior tongue configuration than geminates. In addition, the findings confirm that the build-up and decrease in contact of the articulators in the case of singletons are of the same speed, whereas the closure of the articulators is slower than the release for geminates. The data from the current study provides evidence of possible differences in gestural plans between singleton and geminate consonants. Geminate consonants appear to be SPATIALLY distinct from singletons in LA.

T°-Φ parameter and agreeing complementizers in Jordanian Arabic

Marwan Jarrah

Newcastle University

There is no Φ-feature-inheritance from C° to T° in embedded clauses, introduced by the complementizer *ʔinn* in Jordanian Arabic (JA). Contra Chomsky (2007), I propose that T° enters the derivation endowed with a set of unvalued, uninterpretable Φ-features, irrespective of whether T° is selected by C° or not. Evidence for this proposal comes from T° being inflected for agreement in ECM constructions where C° is not expected to merge. Consider the following sentences:

- (1) hummuh badhum [ʔiyaaha **ʔitkuun** mustaʕideh la-l-ʔimtihan].
They want.3PM her be.3SF ready to-DEF-exam
They want her to be ready for the exam.'

It is clear that the verb in boldface still agrees with the subject, entailing that an Agree operation is established between T° and the subject. I formulate T°'s endowment of Φ-features as a parameter, labelled as *T°'s Φ-features Parameter* (T° is endowed with Φ-features). In languages with the positive value of this parameter, as in JA, other Arabic dialects (cf. Fassi Fehri 1993: 52) and Greek (Parodi and Tsimpli 2005), T° appears inflected for agreement, even if C° is not projected.

This being the case, Φ-features of C° remain at C°, the matter that turns C° as an agreeing head. Consider the following example:

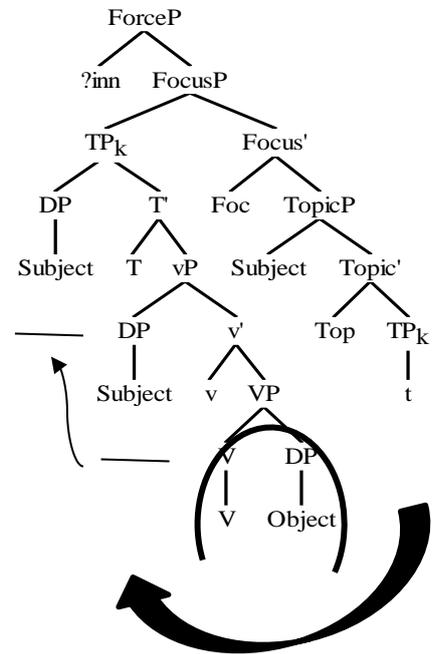
- (2)[ʔinn-ha l-binit ʃaaf-at l-wlaad].
.....that-3SF DEF-girl sawe-3SF DEF-boys
'..... that the girl saw the boys.'

C° *ʔinn* looks for an accessible goal within its c-commanding domain which has interpretable Φ-features. *ʔinn* finds the subject, *lbinit*, and thus a probe-goal relation between *ʔinn* and *lbinit* is established. The unvalued Φ-features of *ʔinn* are valued. As a reflex of this valuation, an agreement suffix showing the same Φ-content of the preverbal subject (i.e. -ha) appears on *ʔinn*. This does not imply that *ʔinn* always agrees with the preverbal subject. *ʔinn* agrees with the object if the latter is fronted, c-commanding the subject. Furthermore, in cases where the subject precedes the fronted object, *ʔinn* agrees with the former rather the latter. As such, *ʔinn*'s agreement is ruled by locality.

On the other hand, what might be taken as a counterevidence for my assumption that *ʔinn*'s agreement is ruled by locality is the observation that C° *ʔinn* agrees with the subject not the object in VOS clauses. Consider the following example:

- (3) ?aboo-i fakkar [?inn-ha jaaf-at l-wlaad l-binit].
 Father-my believed.3SM that-3SF took-3SF DEF-boys DEF-girl
 ‘My father believed that the girl saw the boys.’

Sentence (3) is not a problem for that C°’s Agree is ruled by locality. I assume that the object is not accessible to C°, hence the latter agrees with the subject. The inaccessibility of the object comes from the assumption that the verb and the object move to the left periphery as a part of the remnant TP moving to the Spec-Focus Phrase as one block (after the subject moves to left periphery as a topic). Given the phase theory and the Phase Impenetrability Condition (Chomsky 2001), the object being situated in a complement of v*P is not visible for C° ?inn. uΦ-features of C° ?inn being still unvalued are thus valued by the subject, lbinit, located in Spec-TopicP below the Focus Phrase. Consider the tree for VOS clause.



On the nature of gender shift in Arabic Infant/child Directed Speech (CDS)

Reem Khamis-Dakwar, Gubei Tarabeh and Ghada Khattab

Adelphi University/Sakhnin College/Newcastle University

Child-Directed Speech (CDS) has been reported to entail simplified aspects of phonological, lexical, grammatical and stylistic structure (Whyatt, 1994). While CDS features are considered universal, the evidence base for Arabic CDS is missing. In his investigation of baby talk in six languages, Ferguson (1964) was the first to report the exhibition of gender shift in Arabic and Marathi. In gender shift “a feminine noun, pronoun, adjective, or verb form is used in reference to a boy or vice versa” (Ferguson, 1964. P106) such as when a parent directs to a boy the question /ʔinta ʔakalte / (You-fem ate-3.sg.fem) instead of /ʔinta ʔakalit / You ate-3.sg.masc.

Cross linguistic research suggests different roles of CDS in child language acquisition; while many studies have advocated a facilitative role of CDS in language development through linguistic simplifications of speech input (e.g. Fernald et al, 1989; Fernald and Mazzie, 199; Kuhl et al, 1997) a rising number of studies have recently started to question the degree to which CDS is simplified (e.g. Cristia & Siedl, 2013; Dodane & Al-Tamimi, 2007; Englund and Behne, 2005). Other studies highlight the expressive role of affection (e.g. Fernald 1984; Grieser and Kuhl, 1988; Uther et al, 2007). Since in Arabic, the feminine gender marker is considered to be the marked form and the masculine is considered the unmarked, a facilitative role of gender shift in CDS would be manifested in the use of the unmarked form with both genders (i.e. differential distribution of gender shift for boys and girls), whereas a primary affection-related function of gender shift would predict an equal distribution of gender shift in interactions with boys and girls.

Studies on gender shift in Arabic have typically examined this phenomenon either within a cross-linguistic framework in order to identify universal linguistic features of CDS (e.g. Ferguson, 1964), or to address methodological issues such as the validity of self-reports as investigative tools for examining the existence of CDS (e.g. Haggan, 2002); others still exemplify the use of gender shift in adults' social communicative interactions (e.g. Frayha, 2004; Plonka, 2012; Wilmsen, 1999, and in Hebrew Tobin, 2001). No studies have explored the underlying role of gender shift in CDS while controlling for parental style effect.

We will present an investigation of the role of gender shift in caretaker-child interactions in Arabic by examining its distribution based on gender of child, demographic factors, and parenting styles. In this study, an Arabic online survey designed by the authors to address the study queries was administered using Survey Monkey. 256 parents participated in this study; 17 fathers (6.6%) and 239 mothers (93.3%). Years of education among fathers ranged from 6 to 30 ($M = 15.19$, $SD = 3.05$) and among mothers it ranged from 9 to 28 ($M = 16.24$, $SD = 2.48$). 198 of the participants were Muslims (77.3%), 40 Christians (15.6%), and 13 Druz (5.1%). 174 participants identify their selves as conservatives (68%), 47 as secular (18.4%), and 32 as religious (12.5%).

All participating parents were asked to answer closed and open questions regarding their child's linguistic development, their use of and awareness to CDS and attitudes in relation to CDS in addition to a parental authority Questionnaire (PAQ) . We selected using a survey design in light of two factors: (1) an analysis of recordings of play-based child-parent interactions revealed challenges in identifying the use of gender shift in relatively short

recordings of parent-child interactions (Tarabeh ,2013) and (2) to enable us to elicit as much information on the use of gender shift as a baseline for later observational studies of gender shift in CDS. All participants were recruited through word of mouth, the Arab speech pathologists and occupational therapists listerves.

145 parents filled the survey about their first child (56.6%) while 52 parents filled about their second child (20.3%) and 59 parents filled about their third child and above (23.1%).

Quantitative and qualitative analysis of the data revealed equal distribution of reported use of gender shift in boys and girls. Moreover, results of Pearson's correlation analysis indicated a significant interaction of parenting style and gender shift use. The most frequent style reported to use gender shift was the permissive parenting style (males or females children) [$r(224) = 0.17, p = 0.012$], while authoritative parents reported less use of gender shift in specific with their female children [$r(222) = -0.19, p = 0.005$]. Mothers with more years of education were found to be less permissive [$r(224) = -0.15, p = 0.027$] and there was no correlation between parenting styles of fathers and years of education.

We discuss the multiple factors that shape linguistic input in language learning in terms of the different theoretical accounts of CDS and the specific role of gender shift in CDS through development.

How templatic is Arabic input to children? The role of child-directed-speech in the acquisition of Semitic morpho-phonology

Ghada Khattab and Tamar Keren-Portnoy

Newcastle University/University of York

Semitic languages are known for having a non-concatenative morphology: words are typically made of consonantal roots (e.g. k-t-b) with intercalated vowels (e.g. a-a-a) and morphological patterns (e.g. In Standard Arabic, Form I CVCVCa expresses a verb in the perfect tense in 3rd person masculine, yielding the derived word /kataba/ *he wrote*). However, the issue of whether morpho-phonological representation in Arabic adults is root-and-pattern-based or stem-based is still a matter of debate (e.g. Shimron, 2003; Boudelaa & Marslen-Wilson, 2014; 2011; 2010; 2005; Schluter, 2013, etc.). While overt exposure to the concepts of roots and patterns typically takes place through literacy (and therefore learning Standard Arabic), little is known about whether implicit awareness of Arabic non-concatenative morphology arises from a young age through exposure to the statistical properties of the native dialects. Less still is known about how templatic the morphology of certain Arabic dialects is compared with the Standard, which is a pre-requisite to looking at how early these templatic patterns might be evident in children's emerging linguistic representations.

In this study we chose to look at Lebanese Arabic, a North Levantine variety which has been in contact with French and English for decades due to its colonial history. With overt teaching of roots and patterns not taking place till the (pre-)school years from ages 3-4, we looked at naturalistic interactions in early language development (ages 1-3) and hypothesised that mixed Arabic-English-French input may 'dilute' the salience of roots and patterns in language acquisition. We carried out recordings of half-hour spontaneous mother-child interactions from 70 children aged 1 to 3 (age and gender balanced) and growing up in the Greater Beirut area. The recordings were phonetically transcribed in PHON, resulting in a corpus of child-directed-speech (CDS) of ~82000 words, and a corpus of child speech of ~34000 words. We compared root and pattern structures in the most 50 frequent Arabic word types from these two corpora (focusing only on content and social words) with those of an existing corpus of Lebanese adult-directed-speech (ADS) from the LDC corpus (LDC, 1992-2012), containing ~320000 words.

Our most surprising result was the limited number of words that conform to one of the agreed upon Arabic templates among the most frequent words in ADS (32 out of 50), with fewer in CDS (22/50) and even fewer in words targeted by the children (15/50). Words that did not fit a Arabic word pattern/template included a) baby words, e.g. /ji:/ 'wow', /vrum/ 'car noise', /nan:a:/ 'food'; b) words of foreign origins: /ba:j/, /ʔalo:/, /ʔok:e:/, /ba:ba/ 'daddy'; c) proforms: /fi:/ 'there-is' (derived from preposition), /hajda/ 'this.M', /hal:aʔ/ 'now'; and d) other word forms whose root and pattern structure is no longer transparent due to historical processes involving e.g., blending of words, reduction and elision of segments and syllables. Examples are /ʔe:/ 'yeah', /jal:a/ 'come on' (derived from /ja ʔalʔ:a:/ 'Oh, God!'). An additional type of words with a less-transparent templatic structure are words with deficient roots or with a repeated consonant in the root, such as /ħa(:)ʔ:/ 'pilgrim' from the root ħ-ʔ-ʔ. Finally, the number of words with regular tri-consonantal roots (whose templatic structure is therefore the most transparent), are a minority in all the corpora we've looked at, with only

17 out of the 50 most frequent word types in ADS having a regular tri-consonantal root, followed by 11 in CS and only 5 in words targeted by the children.

Semitic structure seems to be far less evident in both input to children and words targeted by children aged 1-3 than may have previously been assumed. A combination of language contact, the nature of the register that is used with children, and the children's own early linguistic abilities (with marked preference for disyllabic shapes with two consonants, e.g. Khattab & Al-Tamimi, 2013) may be responsible for the dearth in templatic structures with a tri-consonantal root in early Lebanese Arabic child language. These findings bring into question the extent to which Arabic-speaking children may exhibit sensitivity to templatic structure in early language processing and the role of literacy in the emerging awareness of morpho-phonological structure.

- Boudelaa, S. (2014). Is the Arabic Mental Lexicon Morpheme-Based or Stem-Based? Implications for Spoken and Written Word Recognition. In *Handbook of Arabic Literacy* (pp. 31-54). Springer Netherlands.
- Boudelaa, S., & Marslen-Wilson, W. D. (2001). Morphological units in the Arabic mental lexicon. *Cognition*, 81(1), 65-92.
- Boudelaa, S., & Marslen-Wilson, W. D. (2005). Discontinuous morphology in time: Incremental masked priming in Arabic. *Language and Cognitive Processes*, 20(1-2), 207-260.
- Boudelaa, S., & Marslen-Wilson, W. D. (2010). Aralex: A lexical database for modern standard Arabic. *Behavior Research Methods*, 42(2), 481-487.
- Khattab, G., & Al-Tamimi, J. (2013). Influence of geminate structure on early Arabic templatic patterns. In M. Vihman & T. Keren-Portnoy (Eds.), *The Emergence of Phonology: Whole-word Approaches and Cross-linguistic Evidence* (pp. 374-414): Cambridge University Press.
- Linguistic Data Consortium, 1992-2015. The Trustees of the U. of Pennsylvania <https://www ldc.upenn.edu/>.
- Schluter, K. T. (2013). Hearing words without structure: Subliminal speech priming and the organization of the Moroccan Arabic lexicon. PhD, U. of Arizona.
- Shimron, J. (Ed.). (2003). *Language processing and acquisition in languages of Semitic, root-based, morphology* (Vol. 28). John Benjamins Publishing.

English embedded verbs in Arabic-English code-switching in Egypt

Małgorzata Kniaź

Jagiellonian University in Krakow

Studies on Arabic-English code-switching (CS) have usually been carried out among Arabic-speaking immigrant communities. However, over the last few decades, mainly due to globalization and international schooling, the phenomenon has become popular in the Arab world as well. The purpose of the paper is to present patterns of Egyptian Arabic-English CS in Egypt. Special attention will be devoted to embedded English verbs and pronoun doubling.

The study is based on data collected in 2015 in Cairo. The data consist of audio recordings of naturally occurring conversations and group interviews. Most participants are students of the American University in Cairo. Approx. 12 hours of recordings were used for the analysis.

The theoretical basis is the Matrix Language Frame model developed by Carol Myers-Scotton. The main premise of the MLF model is asymmetry between the involved languages – only one language, i.e. the Matrix Language (ML), provides the grammatical frame in intrasentential CS. Previous studies concerning CS with Arabic (Arabic-French, Bentahila and Davies 1983; Arabic-Dutch, Noritier 1990; Arabic-English, Eid 1992; among others) raise the issue of pronoun doubling before English embedded verbs, which seems to contradict the assumptions of the MLF model. Myers-Scotton labels such examples as Embedded Language (EL) islands which are caused by an incongruence between ML and EL (Myers-Scotton, Jake, Okasha 1996).

The study is still in progress; however, the results of a preliminary analysis show that:

1. English verbs are one of the least frequently occurring categories when Arabic is the ML;
2. Not all instances of pronoun doubling can be considered as EL islands since they are usually followed by multi constituent English passages:
(1) inti **you go to your school and come back**
(2) la-inn ihna ya'ni ihna **we swim, we're swimmers**

This suggests that pronoun doubling triggers the ML switch. For that reason, this should be considered as alternational CS as proposed by Muysken (2000).

3. In insertional CS, when Arabic is the ML, English verbs are usually used with Arabic inflection, as in (3) and (4).

(3) ya'ni kull wāḥid **bitfocus** bi-gadd hiyya 'ayza ta'mil ēh u-'ayza tiwṣal li-ēh

(4) ya'ni muḥḥi makanš ya'rif **yiadapt** it-tafkīr bi-l-inglīzi

It is worth noting the lack of Arabic topic pronouns (contrary to (1) and (2)) in the position directly before the mixed verb even if it is theoretically possible. This may indicate a constant relationship between the use of a topic pronoun and the form of English embedded verbs.

On the other hand, there are also examples that seem to violate the asymmetry between the ML and EL. In (5), *bitloses* is inflected both in Arabic and English, which is inconsistent with the MLF model. Such examples require further investigation.

(5) **bitloses** il-funny aspect bita'itha

Plural formation of loanwords in Palestinian Arabic

Lior Laks

Bar-Ilan University

This study examines loanwords pluralization in Palestinian Arabic (PA). Such cases demonstrate variation, where nouns take more than one plural form. I show that this variation results from competing constraints that are not crucially ranked.

Arabic plural formation relies on sound plural (SP), based on affixation, and template-based broken plural (BP). PA words, as well as loanwords, can take SP (*faks-faks-a:t* 'fax'), BP (*folder-fala:dir* 'folder') or both (*ballo:n-ballo:n-a:t/balali:n* 'balloon'). Laks (2014) shows that this is partially predicted, based on morpho-phonological constraints. The current study is based on collection of loan words mainly from English, as well as from Hebrew, regardless of whether these words were completely integrated into PA or not. For the purposes of this study all words are treated as one class.

This talk addresses loan nouns denoting humans, which demonstrate greater variation. Some can take the three SP suffixes *-a:t*, *-i:n* and *-iyye*, as well as BP forms. *še:f* 'chef', for example, takes the BP *šeyaf* and three SP forms (*še:fa:t*, *še:fin*, *še:fiyye*). *brofeso:r* 'professor' takes the three suffixes (*brofeso:r-iyye*, *brofeso:r-a:t*, *brofeso:r-i:n*). This variation results from the wide range of strategies the PA pluralization system has for human nouns.

The *-i:n* suffix is less accessible since it is restricted to native words in templates like *mCaCCeC* (*mšallemi:n* 'teachers') and adjectives ending with *-i*. Since the BP templates are incompatible for most human loanwords and the suffix *-i:n* is less accessible, the majority take *-iyye* or *-a:t* (1).

(1)

Singular	Plural	
šu:fe:r	šu:fe:riyye	šu:fe:ra:t 'driver'
malyune:r	malyune:riyye	malyune:ra:t 'millionaire'

-iyye is used mainly with native nouns ending with *-i* and its distribution is also restricted. As shown for [-human] nouns, *-a:t* is the default suffix for loanwords in general. Selecting it for the pluralization of human loanwords results in paradigm uniformity (Steriade 1988) of the plural system. However, it eliminates gender distinction (Al-Sharkawi 2014). *-iyye* denotes masculine forms, and *-a:t* can still be used for feminine. When *-a:t* is selected the plural noun denotes masc. and fem. and the gender distinction is lost.

The existence of these two competing suffixes reflects non-crucial constraint ranking: paradigm uniformity and preserving the gender distinction. Several studies (Kiparsky 1993, Reynolds 1994, Antilla 1997, Boersma 1997, among others) show that languages provide evidence for crucial unranking, responsible for variation. The case of human loanwords demonstrates an unstable grammar where no fixed strategy is used. However, there are more instances of loanwords that take *-a:t* (2). This could imply a tendency to opt for paradigm uniformity on the expense of gender distinction.

(2)

Singular	Plural
ba:rma:n	ba:rma:na:t 'barman'
dijey	dijeyha:t 'DJ'

Previous studies have shown that the [+/- human/animate] distinction is relevant for many areas of the grammar like transitivity alternations, word order and idiom formation. It also plays an important role in language processing. Animate entities are conceptually highly accessible and are retrieved more easily. This study provides evidence for the strong effect of the [+/- human] distinction on the grammar. When selecting pluralization patterns, the morphological mechanism examines semantic properties of nouns, in addition to morphological properties. The study also sheds light on the degree of integration of loanwords. This provides direct access to word formation and shows how different types of criteria are taken into consideration.

Morphological interference of Palestinian Arabic in the Standard Arabic writing

Lior Laks and Elinor Saiegh-Haddad

Bar-Ilan University

This study examines morphological variation in the verbal system of colloquial Palestinian Arabic (PA) and Modern Standard Arabic (MSA) in light of the issue of ‘diglossia’ (Ferguson 1959). While a rigid separation between the functions of the two varieties is a defining feature of diglossia, code-switching between them characterizes the speakers' linguistic behavior (Badawi 1970). We examined elements of PA surfacing in MSA in order to identify interference patterns.

Methodology is based on an international cross-linguistic project on developing literacy (Berman 2008; Berman&Verhoeven 2002). Participants were shown a clip demonstrating conflicts and were asked to write texts on this topic in MSA. We analyzed instances of PA elements in texts in grades 4, 7 and 9. The results reveal strong tendencies to use PA in several domains, where we focus on morphological interference. We show that the occurrence of PA morphological elements can be predicted based on systematic criteria. The morphological distance between PA and MSA is mainly in inflection. We therefore expected to find more cases of inflectional than derivational interference. However, interference was mainly in derivation. We assume that this reflects the high token-frequency of inflectional morphemes.

Interference was reflected mainly in the alternation of verbal templates based on both morpho-phonological and semantic-syntactic criteria. Arabic relies highly on non-concatenative morphology, where words are formed using templates. The template determines the phonological shape of the verb - its vowels, prosodic structure and affixes (if any). The shape of the verb is essential for determining the shape of other forms in the inflectional paradigm (Berman 1978; Bolozky 1978; Bat-El 1989; Aronoff, 1994, 2007). Participants used the same stem consonants with templates that are more common in PA, aiming at paradigm uniformity within the verbal system (Steriade 1988). Participants showed preference for *CaCCaC* and *tCaCCaC*, which are used almost exclusively in new-verb formation, since they alone can host verbs with more than three stem consonants. Speakers tend to favor these templates within existing forms as well, and hence they also occurred in MSA. For example, *ʔaCCaC* was replaced with *CaCCaC* (*ʔarjaʃ~rajjaʃ* 'return') and the *iCtaCaC* with *tCaCCaC* (*intaqal~tnaqqal* 'move'). The transition into another template is also systematic with respect to transitivity; *CaCCaC* is used for transitive verbs and *tCaCCaC* for intransitive ones. In addition, participants tended to avoid weak verbs with segmental alternation in their paradigms. For example, *ʔaja:ba* 'reply' (*ʔaCCaC*) consists of two surface stem consonants, where the middle consonant *w* was historically deleted. Since the morpho-phonology of such verbs is not an active part of the grammar, many of them change into templates, where all consonants surface. In this example, participants used *ja:wab* (*Ca:CaC*).

The results demonstrate the impact of diglossia on writing development in MSA and predictions with respect to which morphological features of PA are more likely to occur in MSA. The selection of a specific verbal template over another in MSA can be predicted based on the distribution and function of the templates in PA.

Bilingual Code Switching Patterns in Libyan Arabic-English School-Aged Children: A Study of Code Switching Behaviour as an Indication of Linguistic and Communicative Competence.

Gada I. B. Mahmud

Newcastle University

The aim of the study is to investigate the bilingual performance and specifically code switching patterns of school-aged Arabic-English bilingual children in informal contexts in the home and school domains. The main focus was put on examining how the children's linguistic and communicative competences are reflected through their use of code switching in their bilingual interactions. 30 children between the ages of 8 to 11 were recruited for this study and were observed and audio recorded during their bilingual interactions with their friends in the Libyan Arabic school domain in Newcastle city, and with members of their families in the home domain. All the children had been living in the UK since their early childhood and were fluent in both languages; but English was their dominant one. Their linguistic skills in both languages were measured using standardised language tests in order to gauge the degree to which code switching may be used as a means to fill gaps in knowledge of one of the languages. In addition, copies of sociolinguistic questionnaires were distributed to all of the children's parents in order to obtain background information about them and the children. According to the answers provided, all of the parents had good command of English and positive attitudes towards their children's bilingualism; the parents did not view code switching in a negative way or discourage the children from using it, but Arabic was definitely their preferred language in the home context. The findings of the study revealed underlying levels of linguistic and communicative competences in terms of, firstly, the children's ability to alternate between the two codes without violating their syntactic or morphological constraints; and secondly, in terms of selecting particular code switching functions which precisely index what they intend to convey during their interactions with others.

The Origin of the Direct Object Marker /li-/ in Andalusí Arabic

Estefanía Valenzuela Mochón

The University of Texas at Austin

Andalusí Arabic has been traditionally described as “a bundle of dialects resulting from interference by local stock and interaction of the Arabic dialects that arrived at the Iberian Peninsula in the 8th century AD.” (Corriente, 2013). One of the linguistic traits that characterizes this variety of spoken Arabic is the occasional usage of the preposition /li-/ to introduce the direct object:

(Ferrando, 1995, p. 98):

Ragabat **li**’abaṭišša
begged 3SGF-PST DOM-abbess
‘She begged the abbess’

(Corriente, 2013, p. 108):

Aštum **li**wildī
insult 2.SG-IMP DOM-father-mine
‘Insult my father’

The emergence of this direct object marker (DOM) has been presented in previous literature as an example of the Romance inferences found in Andalusí Arabic (Ferrando, 1995). Additionally, it has been discussed as an instance of contact-induced grammaticalization between Romance and Andalusí Arabic (Heine & Kuteva, 2005). However, the claim of a possible grammatical transfer as the result of the contact situation between Romance and Arabic in the Iberian Peninsula raises many questions which have not yet been addressed. First, the relationship between language change and grammaticalization faces many challenges. In fact, quite often the literature on contact-induced grammaticalization fails to demonstrate that change has occurred as the product of contact and not internal evolution (Poplack & Levey, 2011). Second, the use of the preposition /li-/ as a direct object marker is not an exclusive feature of spoken varieties of Arabic that have been in contact with Romance languages such as Andalusí Arabic and Maltese. Indeed, it has also been found in several Levantine Arabic dialects. Last but not least, the diachronic development of DOM in Spanish deserves further study as its distribution has changed over time. More specifically, a detailed comparison between the linguistic constraints that governed DOM in Andalusí Arabic and Romance during the language contact period is essential.

This paper aims to shed some light on these questions. To that end, I approach the study of the DOM in Andalusí Arabic following the methodology proposed by Poplack & Levey (2010) to evaluate contact induced change. Moreover, I will show that the emergence of DOM in Andalusí Arabic cannot be considered a case of contact-induced grammaticalization. Instead, I propose that the Arabic dialects that arrived to the Iberian Peninsula beginning at the 8th century had already developed this marker in an earlier stage as a result of their contact with Aramaic.

Phonological Doublets in Syro-Palestinian Colloquial Arabic: A Key to Tracing Aramaic Routes into Arabic

Mila Neishtadt

The Hebrew University of Jerusalem

A phonological doublet is a pair of words which stem from a single etymon, yet reflect different phonological (and possibly semantic) characteristics. Since the phenomenon of phonological doublets usually owes its existence to the fact that doublets enter a given language through various routes (cf. English *shirt* vs. *skirt*), it is usually mentioned in the context of loanwords.

Yet, loanwords are not the only factor in the emergence of phonological doublets. A fertile source of phonological doublets in some languages lies in substrate words as well. Indeed, both *loanwords* and *substrate words* refer to words adopted from one language into another. However, these two terms display different diachronic realities. *Loanwords* enter an already existing target language from a source language, whereby both languages are not mutually involved in language shift, i.e. when the source language is not being abandoned by its speakers in favour of the target language. *Substrate words*, on the contrary, are words that *remain* in use in the course of *language shift*, a process whereby a speech community ceases to speak one language and acquires another one instead.

In course of my study of Aramaic substrate words in Syro-Palestinian Arabic colloquial dialects (Syro-PA), phonological doublets turn out to be one of the most prominent phenomena. In this talk I will present and analyse several examples of such phonological doublets, based on the material I have gathered from various written sources.

Whilst Aramaic doublets in Syro-PA may exhibit similar phonological pairs (e.g. /f/~b/; /s/~š/), it is noteworthy to distinguish two basic doublet-types. The first type displays parallel development, where a genuine Arabic word has an Aramaic substrate doublet. This type of pairs may be identified as a phonological doublet due to irregular consonant correspondence: e.g. Classical Arabic (CA) and Palestinian colloquial Arabic (PA) \sqrt{lbs} 'dress, wear' vs. Syro-PA $\sqrt{lbš}$, e.g. *labaš* (coll.); *labše* (sg.) / -āt; *labābīš*; *lbāš* (pl.) 'baggage, equipment (loaded on the back of an animal), luggage, stuff, personal belonging(s), coarse clothes, object(s) of little value, shoe' (Bustānī, 1987[1867-1870]; Hobeika, II, 1904; Féghali, 1918; Frayha, 1973[1947]; Barthélemy, IV, 1950; Bauer, 1957; Denizeau, 1960; Bargūṭī, 2001); $\sqrt{lbš} > \sqrt{dlbš}$ e.g. *dalbaš* 'have someone wear many layers of clothing' (Bargūṭī, 2001; Basis, 2000).

The second type exhibits pairs of discernible Aramaisms, which may in turn be divided into two separate categories:

- a) A pair of Aramaic substrate words exhibiting different adaptation to the Arabic phoneme inventory: e.g. Syro-PA *bayyūr* ~ *fayyūr* 'a small wooden peg or wedge 1) connecting between the draft-beam and the stilt of a plough (Dalman, II, 1932; Basis, 2000; ead. 2009; Bassal, 2004); 2) used for filling small holes (e.g. in carpentry) (Barthélemy, I, 1935; Mubarak, 1999)';
- b) A pair of Aramaisms which entered Arabic via two separate routes: Aramaic substrate word vs. Aramaic loanword attested in CA: e.g. PA *ʿabāš* '*Quercus infectoria* (Aleppo oak)' (Dalman, I/I, 1928; id. VII, 1948; Bauer, 1957) ~ CA (and Syro-Palestinian colloquial Arabic) *ʿafš* 'gall'.

It is true that irregular consonant correspondence *per se* may serve as phonological evidence for foreign origin of a given word. Yet in the case of phonological doublets, each word constitutes a substantial "control group" in relation to its doublet counterpart. Specific consonantal phonological pairs such as /f/~b/; /s/~š/ etc. are a strong indicator of dialectal Arabic words stemming from Aramaic. Phonological doublets, therefore, serve as a major key to the challenge of tracing Aramaic vocabulary and determining its route into Syro-Palestinian colloquial lexica.

- Bargūṭī, 2001 = al-Bargūṭī, ‘Abd al-Laṭīf Maḥmūd. *Al-qāmūs al-‘arabī al-ša‘bī al-Filasṭīnī: al-lahja al-Filasṭīniyya al-dārija* (Rāmallah 2001).
- Barthélemy, 1935-1954 = Barthélemy, Adrien. *Dictionnaire arabe-français: Dialectes de Syrie: Alep, Damas, Liban, Jérusalem*, vols 4-5 ed. H. Fleisch (5 vols, Paris 1935-1954).
- Basis, 2000 = Basis, Rabia. ‘The Aramaic and Hebrew Elements in the Israeli Druzes Dialect’, unpublished MA thesis (Haifa University 2000). [in Hebrew]
- , 2009 = Basis, Rabia. ‘Aramaic and Hebrew Elements in the Spoken and Written Arabic of the Druze in Israel’, unpublished PhD dissertation (Haifa University 2009). [in Hebrew]
- Bassal, 2004 = Bassal, Ibrahim. ‘Hebrew and Aramaic Elements in the Vernacular Christian Arabic in Israel and in the Written Christian Arabic in the Holy Land, Syria and Lebanon’, unpublished PhD dissertation (Haifa University 2004). [in Hebrew]
- Bauer, 1957 = Bauer, Leonhard. *Deutsch-arabisches Wörterbuch der Umgangssprache in Palästina und im Libanon*, with assistance of Anton Spitaler, 2nd ed. (Wiesbaden 1957).
- Bustānī, 1987[1867-1870] = al-Bustānī, Buṭrus. *Muḥīṭ al-muḥīṭ: qāmūs muṭawwal li-l-luġa al-‘arabiyya* (Beirut 1987; originally published in 1867-1870).
- Dalman, 1928-1942 = Dalman, Gustaf. *Arbeit und Sitte in Palästina* (7 vols in 8, Gütersloh 1928-1942; vol. 8, Berlin 2001).
- Denizeau, 1960 = Denizeau, Claude. *Dictionnaire des parlers arabes de Syrie, Liban et Palestine: Supplément au dictionnaire arabe-français de A. Barthélemy* (Paris 1960).
- Féghali, 1918 = Féghali, Michel T. *Étude sur les emprunts syriaques dans les parlers arabes du Liban* (Paris 1918).
- Frayha, 1973[1947] = Frayha, Anis. *Mu‘jam al-alfāz al-‘āmmiyya: A Dictionary of Non-Classical Vocables in the Spoken Arabic of Lebanon* (Beirut 1973; originally published in 1947).
- Hobeika, 1902/1904 = Hobeika, J. *Al-dawāṭir: baḥṭ fī baqāyā al-luġa al-suryāniyya fī al-luġa al-‘arabiyya al-‘āmmiyya fī Lubnān wa Sūriyya: Étymologie arabo-syriaque: Mots et locutions syriaques dans l’idiome vulgaire du Liban et de la Syrie*, (2 vols, Basconta 1902 and 1904).
- Mubaraka, 1999 = Mubaraka, Fadel M. *Baqāyā al-ārāmiyya fī luġat ahl Ṣadad al-maḥkiyya: The Aramaic Influence in the Vernacular of Sadad* (Damascus 1999).

The Arabic Connectives – A Classification Proposal

Tsvetomira Pashova

Sofia University “St. Kliment Ohridsky”

Under connectives I understand a class of formally diverse language elements (conjunctions, adverbs, prepositions and prepositional phrases) with a common function in discourse: the text producer uses a connective to signal to the text receiver a particular type of relation between text segments of differing complexity. The present proposal aims at a semantic classification of connectives used in Modern Written Arabic. It is theoretically rooted in text linguistics and discourse analysis, and is based on the following main principles:

(a) relations between text segments are in fact relations between different types of discourse entities – states of affairs (SoAs), propositions and speech acts; in the default case a speech act contains a proposition about one or more SoAs;

(b) relations between SoAs can be subsumed under four basic semantic categories: temporality, causality, (dis)similarity and incompatibility; relations between propositions and speech acts are part of the thematic (presentational) and speech act (interpersonal) global organizations of discourse;

(c) the meaning of connectives is centered around a discourse relation but it often comprises additional semantic and/or pragmatic features, some of which are part of the semantics of the text segments between which the relation holds; only features present in all the contexts of use of a connective can be deemed to be part of its meaning;

(d) a connective can be polysemous either in signaling relations between different types of discourse entities or in signaling relations pertaining to different categories of the relations between SoAs;

(e) each use of a connective signals a relation between one type only of the discourse entities represented in the related text segments.

The choice of these principles is the result of prolonged testing of different classifications of discourse relations and concepts of the meaning of connectives on a large number of instances of use of Arabic connectives in texts representing a variety of text types and genres.

Blakemore, D. (2002) *Relevance and Linguistic Meaning: The Semantics and Pragmatics of Discourse markers*. Cambridge: CUP.

Degand, L. (1998) On classifying connectives and coherence relations. In Stede, L. et al. (eds.) *Discourse relations and Discourse markers*, Proceedings of the Workshop COLING-ACL'98, August 1998, Universite de Montreal, 29-35

Hengeveld, K. and J. L. Mackenzie (2008) *Functional Discourse Grammar: A Typologically Based Theory of Language Structure*. Oxford: Oxford University Press.

Knott, A. & T. Sanders. (1998) The classification of coherence relations and their linguistic markers: an exploration of two languages. *J. of Pragmatics* 30/2: 135-175.

Knott, A. 1996. *A Data-Driven Methodology for Motivating a Set of Coherence Relations*. PhD Thesis.

Martin, J. R. 1992. *English Text: System and Structure*. Amsterdam: Benjamins.

Motsch, W. 1996. Ebenen der Textstruktur. Begründung eines Forschungsprogramms. In: Motsch, W. (Hrsg), *Ebenen der Textstruktur*. Tübingen: Max Niemeyer Verlag. 3–33.

Pander Maat, H. & L. Degand. 2001. Scaling causal relations and connectives in terms of speaker involvement. *Cognitive Linguistics* 12-3: 211-245.

Pashova, T. (2008) The functions of the Arabic connective *fa* in written discourse. In: Theophanov et al. (eds) *Thirty Years of Arabic and Islamic Studies in Bulgaria*. Sofia: Sofia University Press. Pp. 97-126.

- Pashova, T. (2011) Arabic connectives marking the antecedent as a cause: a feature based account. In: Avram, A et al. (eds) *A Festschrift for Nadia Anghelescu*. Bucharest: Editura Universitatii din Bucuresti. Pp. 366-380.
- Pashova, T. (2012) Конективи – семантика и прагматика: българските съюзи *и* и *а* и арабските им еквиваленти *wa* и *amma* (Connectives - semantics and pragmatics: the Bulgarian conjunctions *i* and *a* and their Arabic equivalents *wa* and *amma*). In: *Littera et Lingua*, year 9/3, <http://slav.uni-sofia.bg/naum/lilijournal/%D0%B5%D1%81%D0%B5%D0%BD-2012>
- Pashova, T. (2015) Конективи и видове значение (Connectives and types of meaning). In: Popova, M. (ed) *Актуални тенденции в развитието на прагматиката и когнитивната лингвистика (Current Developments in Pragmatics and Cognitive Linguistics)*. Sofia: Sofia University Press. Pp. 99-112.
- Roulet, E. 2006. The description of text relations markers in the Geneva model of text relations, in Fischer, K. (eds.) *Approaches to discourse particles*. Amsterdam: Elsevier. 115–132.
- Sweetser, E. 1990. *From Etymology to Pragmatics. Metaphorical and cultural aspects of semantic structure*. Cambridge: Cambridge University Press.
- Van Dijk, T. A. and W. Kintsch. 1983. *Strategies in Discourse Comprehension*. New York, London and Academic Press.

Language perception as a tool to validate language investigation: Evidence from Egypt

Saudi Sadiq

University of York

Can language perception be used as a tool to validate language investigation as conducted in language variation and change (LVC) studies? The present paper attempts to answer this question and offers evidence from the researcher's doctoral project (Sadiq, 2016). Very often, LVC researchers use frequency tables, graphs and/or apply statistical analysis to report their results. The problem with statistically-obtained results is whether they reflect a true trend of LVC as is found in the speech community investigated.

Sadiq (2016) investigated dialect convergence in Egypt, from Minya Arabic (MA) on Cairo Arabic (CA). Focus was placed on the salient differences between the two dialects: (dʒ), (q), (stress) and vocalic differences including the (KaLLiM), (ʕaLLiM) and (WaSSaL) variables. The social factors studied included gender, age, education and residence place; and following a statistical random-sloped regression analysis, education and residence place were found significant, while gender and age were not found to be significant with most variables studied. The researcher had a problem with these results because gender and age are usually significant in leading linguistic change (Labov, 1990; Al-Wer, 2006); thus, he wanted to make sure that his results were in harmony with MA speakers' perceptions regarding the role of the social factors investigated in causing convergence.

To make sure that his results reflect the real picture in Minya, the researcher conducted an online questionnaire where participants were asked about their expectations of the social factors responsible for convergence from MA on CA, the associations of the variables studied, their expectations of how likely the MA variants would be abandoned in the case of convergence on the CA variants and why MA speakers would converge. 61 MA speakers answered the questionnaire and the results came to validate the statistically-obtained results: most participants' answers suggest the significance of education and residence in causing convergence from MA on CA and the insignificance of gender and age. The answers also suggest that the salience degrees go from the highest to the lowest as hypothesised by the researcher: (dʒ), (q) followed by (stress) and finally the vocalic differences in (KaLLiM), (WaSSaL) and (ʕaLLiM). Finally, the answers show some mistakes that the researcher committed relying on his observations. For example, in attempting to explain the high convergence on CA in Minya, the researcher thought that this is greatly related to the prestige of CA and watching and/or listening to the media in CA, but the questionnaire results show that it is the economic needs, loose social networks as a result of tertiary education and marital status that make most MA speakers converge on CA. This means that convergence on CA in Minya is done pragmatically.

To sum up, the online questionnaire made the researcher confident about his results as representing what is going on in MA speakers' heads about the reasons for convergence on CA and also corrected the way the researcher interpreted the results.

Al-Wer, E. (2006). Variation. In K. Versteegh, M. Woidich, M. Eid, A. Elgibali, & Z. Andrzej (Eds.), *EALL* (Vol. 4, pp. 627-636). Leiden: Brill.

Labov, W. (1990). The intersection of sex and social class in the course of linguistic change. *Language Variation and Change*, 2(2), 205-254.

Sadiq, S. (2016). *Dialect convergence in Egypt: The impact of Cairo Arabic on Minya Arabic*. (Unpublished Ph.D Thesis). The University of York, York.

Gapping in Hijazi Arabic: an LFG Approach

Louisa Sadler and Muhammad Swaileh Alzaidi

University of Essex/Taif University

Gapping occurs in coordinate structure where the initial conjunct is syntactically complete and the non-initial conjunct is incomplete. (1) is a simple example of gapping in Hijazi Arabic (HA).

- (1) [al-bint 'kal-at ar-ruz] w [al-walad ad-diġaġ].
The-girl eat.PFV.3SGF the-rice and the-boy the-chicken
'The girl ate the rice and the boy the chicken.'

This study identifies and provides an analysis of gapping in HA. We demonstrate that sentences such as (1) exhibit the array of properties identified crosslinguistically with gapping. Amongst the facts to be accounted for is the possible morphological non-parallelism between the verb in the initial conjunct and the missing verbal element in the non-initial conjunct: in (1) if the second conjunct is completed, the verb must be 'kal 'eat' (3SGM). Since verbs in HA agree with its subject in gender, number and person, the verb 'kal must agree with its own subject *al-walad* whose features are *singular* and *masculine*. Any analysis of gapping in HA must take account of this partial non-parallelism. Another fact is that gapping is not possible in the initial conjunct in a coordinate structure: the 'missing' element of the non-initial conjunct must be spelt out in the initial conjunct, and not vice versa. Working with LFG, we adopt a function spreading approach to gapping in HA within this framework and show how it is able to account for the facts of gapping in HA identified in this study, using mechanism proposed independently for other construction types.

As far as we are aware, there is no previous description or analysis of gapping in HA. Approaches to gapping proposed in other languages (e.g., English, Russian, Jordanian Arabic) fall into four major types: gapping as a result of deletion, a trace of movement, non-constituent coordination in LFG, and linearization theory in HPSG. We show that none of these approaches succeeds in accounting for gapping in HA, and hence they fail to capture the facts of gapping in this language.

Briefly, within the minimalism framework, Johnson (2004) claims that gapping in English (e.g., as in *Some people speak to Sal and others to Henry*) is a result of A(cross)-T(he)-B(oard) movement of the verbs from each member of a coordinate structure. Ross (1970), Neijt (1979), Coppock (2001) and among others on the other hand claim that gapping is a rule that deletes the elements in the non-initial conjuncts that are overtly spelt out in the initial conjunct. Within LFG approach, Maxwell and Manning (1996) propose the use of F(inite)-S(tate)-A(utomata) in a surface based approach to non-constituent coordination, suggesting that such an account might afford an analysis of gapping as a case of non-constituent coordination.

We show however that none of these approaches account for the facts of HA gapping. Since HA displays a morphological agreement between the verb and its subject in gender and number, Johnson (2004)'s approach fails to predict the difference in gender agreement required on the first and second conjuncts in the HA example in (1). As for Maxwell and Manning (1996)'s LFG approach, it will interact with the LFG theory of coordination to predict that the subject in the first conjunct will distribute into the f-structure of the second conjunct, leading to a violation of LFG wellformedness constraints (Dalrymple, 2001).

To account for gapping in HA, we develop the function-spreading approach within LFG, which is applied by Frank (2002) to the Subject Gap in Coordination construction in German and by Sadler (2006) to Asymmetrical Sentential Coordination in Welsh. In this paper we extend this approach to cover gapping in HA in a way that allows us straightforwardly and accurately to distribute the overtly spelt out element(s) in the initial conjunct over the members of the coordinate structure, yielding a well-formed structure.

- Albukhari, J (2016). *The Syntax of Elliptical Constructions in Jordanian Arabic*. PhD Thesis, University of Wisconsin, Milwaukee, US.
- Coppock, E. (2001) Gapping: In Defense of Deletion. In Mary Andronis, C. B., Heidi Elston, and Syivain Neuvi (eds.) *CLS 37: The Main Session. Papers from the 37th Meeting of the Chicago Linguistic Society*, pp. 133–148. Chicago Linguistic Society.
- Dalrymple, M. (2001) *Lexical Functional Grammar*, Academic Press.
- Frank, A. (2002) A (discourse) Functional Analysis of Asymmetric Coordination. In Butt, M. and King, T.H. (Eds.) *Proceedings of the LFG02 Conference*. CSLI Publications, Stanford, CA. <http://csli-publications.stanford.edu/LFG/>.
- Johnson, K. (2004) *In Search of the English Middle Field*. Ms., University of Massachusetts, Amherst.
- Maxwell, J. T. & Manning, C. D. (1996) A Theory of Non-Constituent Coordination Based on Finite-State Rules. *In on-line Proceedings of the First LFG Conference, Rank Xerox, Grenoble, August 26-28, 1996*
- Neijt, A. (1979) *Gapping: a Contribution to Sentence Grammar*, Dordrecht, Holland: Foris Publication.
- Ross, J. (1967) *Constraints on Variables in Syntax*. PhD dissertation: MIT.
- Sadler, L. (2006) Function Spreading in Coordinate Structures. *Lingua*, 116, 1777-1806.

The Impact of Diglossia on Voweled and Unvoweled Word Reading in Arabic: A Developmental Study from Childhood to Adolescence

Elinor Saiegh-Haddad & Rachel Schiff

Bar-Ilan University

Introduction: All native speakers of Arabic read in Standard Arabic (StA), a language variety that is remarkably distant from the one they use in everyday speech, Spoken Arabic (SpA). StA and SpA are linguistically distant. Yet, many linguistic structures are also shared by the two language varieties. Research has thus far tested the effect of the phonological distance between StA and SpA on phonological awareness and on the phonological recoding and naming of SpA versus StA phonemes (Saiegh-Haddad, 2003, 2005; Saiegh-Haddad et al, 2011). Yet, the effect of the linguistic distance has not been systematically tested in the reading of words in the two varieties. Neither has this question been tested in the reading of voweled versus unvoweled words, or developmentally.

Objectives: The current study tested the development of word reading ability (voweled and unvoweled) in StA (lexical items associated with Standard Arabic only) and in SpA (lexical items that are shared by StA and SpA), separately. Pseudo words in the two language varieties were also constructed using the phonological and morphological structures that are used in StA only versus those that are used in both.

Method: Word reading accuracy and fluency (C/W per minute) in the two varieties and in the voweled and unvoweled orthography were measured among 100 students in the 2nd, 4th, 6th, 8th, and 10th grades (N=20 per grade).

Results: The results showed a clear effect of diglossia on reading accuracy and fluency for words and pseudo words in both voweled and unvoweled Arabic with higher scores in SpA than in StA across all grades. Vowelization, however, was found to affect only reading fluency but not accuracy with unvoweled words yielding higher scores.

Conclusion: The results provide direct evidence of the effect of diglossia and vowelization on word reading development in Arabic.

Metalinguistic labels and language ideologies: evidence from a folk linguistic study in peripheral Egypt

Valentina Serreli

University of Aix/Marseille - IREMAM

Linguistic taxonomies and labels are conventional rather than fixed (Miller 2009). Specialists' and nonspecialists' taxonomies might not match and the metalinguistic labels they use might differ or might be used with a different meaning. The term "Arabic" embraces a multiplicity of linguistic varieties and, although specialists coined numerous labels to identify intermediate varieties situated between the two poles High and Low of Fergusonian diglossia (Ferguson 1959; see Boussofara-Omar 2006 for a synthesis), nonspecialists tend to conceive it in terms of two poles (Suleiman 2013). For example, Egyptians refer to them as *fushā* and *'ammīyya*, respectively, and recognise an intermediate level defined as *luġa wuṣṭā* to a much lesser extent (Mejdell 2006; Kebede, Kindt and Høigilt 2013). Moreover, nonspecialists hold a set of well-established ideas and stereotypes about language (Bauer and Trudgill 1998). Arabic is no exception: myths or representation held by speakers point to the superiority of Arabic with respect to other languages, to the superiority of *fushā* with respect to non-standard varieties, to the prestige of the regional standard and the stigma of other varieties (Ferguson 1968; Eisele 2002, 2003).

The paper discusses the use of metalinguistic labels, the folk conceptualisation of the relationship between standard and non-standard Arabic varieties and the stereotypes associated to them in the Berber-speaking oasis of Siwa in Egypt. Specifically, the paper presents the metalinguistic labels used, e.g. *luġa*, *lahġa/lahġa* and *kalām*, and the labels used to refer to Arabic varieties, e.g. *'arabi*, *fushā*, *'ammīyya* and *maṣri*, among others, stressing the way they are associated to one another and the variability of meanings attributed to them. The analysis of these connections and interviewees' explicit comments reveal that the stereotypes relating to the superiority of Arabic, to the similarity between Classical and Bedouin Arabic, to the prestige or stigma attached to specific Arabic dialects and dialect groups found in this Berber-speaking Egyptian periphery correspond to a certain extent to the stereotypes related to Arabic found in other Egyptian regions. However, it also reveals that these comments concern a portion of the population, while for other Siwans (e.g. uneducated people) Arabic varieties' taxonomy and classification are neither clear nor significant.

The study is based on data collected during a doctoral research aimed at portraying the sociolinguistics of Siwa from an insider perspective, in a moment in which almost all the Berber-speaking population speaks Arabic as second language. Data about linguistic behavior and language attitudes was collected through participant observation and ethnographic interviews conducted between 2011 and 2015. The accounts presented in this paper were not the main focus of the interviews; therefore, they seem valuable for spontaneity and reliability, despite being elicited during formal interviews. The paper gives us a glimpse into the extent to which the Arabic language ideologies apply to a nonnative context.

- Bauer, L and P. Trudgill (eds.) 1998. *Language Myths*. London: Penguin Books.
- Boussofara-Omar, N. 2006. Diglossia. K. Versteegh (ed.) *Encyclopedia of Arabic Language and Linguistics I*. Leiden: Brill. 629-637.
- Eisele, J. 2002. Approaching Diglossia: Authorities, Values, and Representations. A. Rouchdy (ed.) *Language Contact and Language Conflict in Arabic*. London: Routledge-Curzon. 3-23.
- Eisele, J. 2003. Myth, Values and Practice in the Representation of Arabic. *International Journal of the Sociology of Language* 163: 43-59.
- Ferguson, C.A. 1959. Diglossia. *Word* 15: 325-340.
- Ferguson, C.A. (1968 [1959]). Myths about Arabic. J. Fishman (ed.) *Readings in the Sociology of Language* De Gruyter Mouton. 375-381
- Kebede, A., K.T. Kindt and J. Høigilt. 2013. *Language Change in Egypt: Social and Cultural Indicators Survey. A Tabulation Report*. Oslo: Fafo.
- Mejdell, G. 2006. *Mixed Styles in Spoken Arabic of Egypt: Somewhere between Order and Chaos*. Leiden: Brill.
- Miller, C. 2009. Enjeux des dénominations de l'arabe en Afrique sub-saharienne. C. de Féral (ed.) *Le nom des langues III. Le nom des langues en Afrique sub-saharienne : pratiques, dénominations, catégorisations. Naming Languages in Sub-Saharan Africa: Practices, Names, Categorisations*. Louvain-la-Neuve, Peeters, BCILL 124. 233-254.
- Suleiman, Y. 2013. Arabic Folk Linguistics: Between Mother Tongue and Native Language. J. Owens (ed.) *The Oxford Handbook of Arabic Linguistics*. Oxford University Press. 264-280.

Native English Speakers' Perception and Production of Arabic Consonants

Asmaa Shehata

University of Calgary

Modern Standard Arabic includes a number of consonant sounds that represent a substantial challenge for English learners (Alosh, 1987; Alwabari, 2013; Shehata, 2015). Prior research has mainly focused on exploring second language (L2) learners' perception and production of novel Arabic segments independently (Al Mahmoud, 2013; Saadah, 2011). However, the Interrelation between L2 learners' perception and production of Arabic consonant phonemes is still unclear. Thus, the present research aims to fill this research gap by exploring the relationship between native English speakers' accuracy in perceiving and producing Arabic consonant contrasts. It also examines the hypotheses of both Best's perceptual assimilation model (PAM) and Flege's Speech Learning Model (SLM) in L2 learners' acquisition of Arabic non-native contrastive consonant phonemes. Thirty American English learners of Arabic, who learnt Arabic for at least two years and had no experience in an Arabic speaking country, participated in two perception and production tasks. Three native Arabic speakers subsequently evaluated learners' productions of the target stimuli. The results showed an asymmetrical relationship between perception and production where perception was more difficult than production. That is, English learners of Arabic were able to produce discernable target phonemes but they were unable to accurately distinguish them. Findings also provided partial evidence for PAM predictions where Best's (1995) categories applied to a few learners' perception patterns. Results are discussed in terms of their implications for Arabic language teaching and research.

References

- Al Mahmoud, M. S. (2013). Discrimination of Arabic contrasts by American learners. *Studies in Second Language*, 3(2), 261-292.
- Alosh, M. L. (1987). *The perception and acquisition of pharyngealized fricatives by American learners of Arabic and implications for teaching Arabic phonology* Unpublished doctoral dissertation, Ohio State University, Columbus.
- Alwabari, S. (2013). *Non-Native Production of Arabic Pharyngeal and Pharyngealized Consonants*. Unpublished master's thesis, Carleton University, Ottawa.
- Best, C. (1995). A direct realist perspective on cross-language speech perception, in W. Strange (Ed.), *Speech Perception and Linguistic Experience: Theoretical and Methodological Issues*. York: Timonium, MD.
- Saadah, E. (2011). *The perception of Arabic vowels by English L2 learners and heritage speakers of Arabic*. Unpublished doctoral dissertation, University of Illinois at Urbana-Champaign, Illinois.
- Shehata, A. (2015). Problematic Arabic consonants for native English speakers: learners' perspectives. *The International Journal of Educational Investigations*, 2(9), 24-47

The Role of Age and Gender in Linguistic Choices

Ourooba Shetewi

Newcastle University

This project studies the role of age and gender in the linguistic choices of rural children and adolescents in dialect contact situations. It examines their use of a number of socially-conditioned linguistic variables with respect to notions of prestige and models of accommodation. The analysis focuses on six variables that are realized differently in the two dialects; namely, the phonological variables (q) (δ^s) (θ) (δ) (d^s) and the morphophonological feminine ending (a).

The project is designed to study the emergence of linguistic variation in children and look at the development of their sociolinguistic knowledge and awareness and its influence on their linguistic behaviour. It aims to investigate the occurrence of accommodation in their speech and identify accommodation patterns in relation to linguistic prestige.

Data collection was carried out in a Palestinian refugee town to the south of the Syrian capital, Damascus, where the dominant dialect is a Bedouin variety with low prestige. Most contact with another dialect occurs with the urban dialect of Damascus-the national standard in Syria (Miller *et al.* 2004) through geographical diffusion (Britain 2009). Thirty-eight boys and girls between the ages of 3-18 years old were recorded for the study. In order to guarantee spontaneous speech and introduce different speakers and contexts, they had a picture-naming task and were interviewed by two people with different dialects; the local dialect and the Damascene dialect.

Based on previous literature (cf. Lanza 1992, Paugh 2005), it was hypothesized that children will be able to accommodate at the earliest age presented in the project and that girls will be more inclined towards the urban variants than boys (Habib, 2011).

One-way ANOVA and Univariate tests were used to establish the relationship between age, gender, and the interaction of age and gender and the use of linguistic variables. One-way ANOVA was also used to examine the relationship between tasks and the choice of variables.

Variation patterns were mostly influenced by different phonological variables. For example, the (a) variable was resistant to variation across all tasks and all participants used the local realization almost categorically at 96 %. Other variables showed interesting patterns of variation based on context, age and gender and the interaction of age and gender. For example, older speakers used the local variant of (δ) significantly more than younger speakers at $p = .001$. Boys used the local variant of (δ^s) significantly more than girls in the interview with the local speaker at $p = .027$. Results also showed that boys in the 9-11 years old group used the local variant of (δ^s) more than girls at $p = .001$.

This study contributes to the understanding of children's linguistic behavior in dialect contact situations in the vicinity of major urban centers in Arabic speaking communities and offers a description of a new dialect that has not been studied previously.

Cairene Arabic Palatalization in Progress

Islam Youssef

University College of Southeast Norway

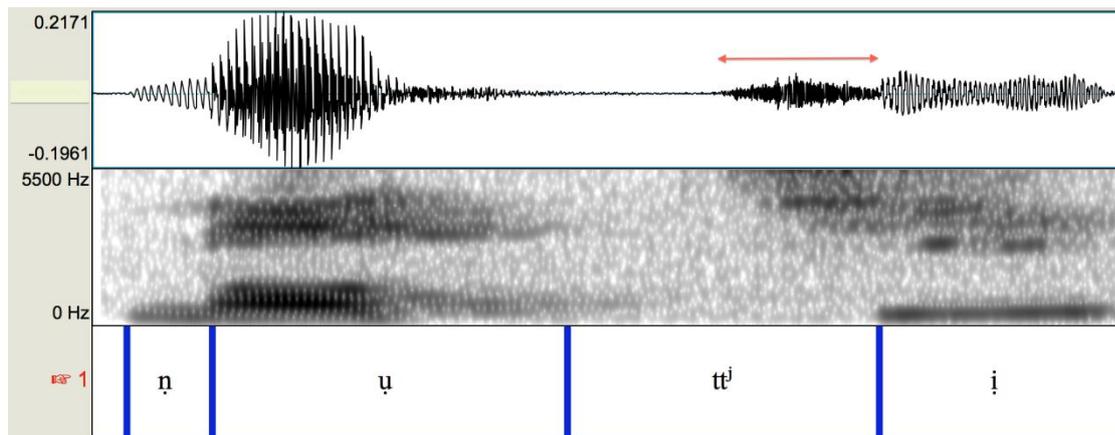
This paper examines a process of secondary palatalization in Educated Cairene Arabic (ECA), which has been characterized as a property of women's speech as well as a sound change in progress (Haeri 1994, Woidich 2006). The phenomenon is known as "weak palatalization" (WP), and it involves the addition of a secondary palatal articulation to coronal stops before certain realizations of underlying high front /i/. The main goal is to determine whether the shift to palatal [tʲ] or [dʲ] is phonetic coarticulation or phonological assimilation by means of examining all triggers, targets, and potential blockers. Since both plain /t d/ and emphatic /t̤ d̤/ undergo WP, it is also necessary to consider how WP interacts with pharyngealization in this Arabic dialect. Moreover, I refer to the process of "strong palatalization" (Geenberg 2012), namely primary place shift, in an uneducated sociolect of Cairene Arabic, and discuss the hypothesis that weak and strong palatalization may represent consecutive stages through which a sound change takes place.

Although the phenomenon is relatively well known, the phonetic and/or phonological conditioning favoring it has not been studied in detail. The current paper attempts to fill this descriptive gap in the literature based on accurate, first-hand data. Acoustic analysis of the data confirms that palatalized coronal stops have more gradual release and longer release noise burst when compared to non-palatalized ones (in line with Haeri 1994/1997). Another finding is that emphatic coronals /t̤/ and /d̤/ are technically depharyngealized when they palatalize; their formant transitions are concealed by the frication noise of WP, as shown in spectrogram (1). Nevertheless, there is evidence that pharyngealization/emphasis spread from these palatalized consonants is uninterrupted.

The distributional patterns show that coronal stops /t t̤ d d̤/ (singleton and geminate) are targeted exclusively by the palatal glide [j], long [i:], and word-final [i], as exemplified in (2). The process is not triggered by the phonetically lower word-internal [i], by epenthetic short [i], or by the long mid vowel [e:] (3). Furthermore, palatalization is not blocked by other sibilants in the same domain (4), and it does not interfere with pharyngealization spread (depicted with a dot underneath the symbol). In the absence of any phonological testimony – such as lexical exceptions, sensitivity to word-internal structure, opacity effects, etc. – weak palatalization must be considered a phonetic coarticulatory effect (cf. Shahin 2002:47), and hence it is not part of the phonology of ECA (but see Watson 2002).

Finally, I explore Hyman's (1976) phonologization hypothesis, namely that over time low-level phonetic variation evolves into phonological patterns. I show that WP is phonetic in ECA but may have been phonologized, i.e. extended to broader unpredictable contexts, in uneducated Cairene. In this way, one could propose some sort of chronological development from weak to strong palatalization in the two varieties. And to entertain any such hypothesis of sound change, one must first reach a definite conclusion as to the phonetic vs. phonological nature of palatalization in a given language.

- (1) Spectrogram and waveform of the word /nuṭṭi/ ‘jump! F.SG.’ demonstrating a palatalized coronal stop [tʃ] before word-final [i] (38-year-old female speaker of ECA)



- | | | | | |
|-----|----------------|------------------|-----------------|--------------------|
| (2) | [madʃju:n] | ‘indebted’ | [ˈwatʃja] | ‘low F.SG.’ |
| | [ˈtʃi:na] | ‘mud’ | [mawguˈdʃi:n] | ‘present PL.’ |
| | [ˈwiʃi] | ‘he got lower’ | [ˈsi:dʃi] | ‘my lord’ |
| | [xaˈbattʃi] | ‘you hit F.SG.’ | [ˈʔa:dʃi] | ‘judge’ |
| (3) | [dʃe:f] | ‘guest’ | [binˈt-e:n] | ‘two girls’ |
| | [ħutˈtʃi-na] | ‘put us!’ | [ʃadˈdi-ni] | ‘he pulled me’ |
| | [ˈnuʃtʃi-ħabl] | ‘jump the rope!’ | [ˈbinti-ˈlajla] | ‘Layla’s daughter’ |
| (4) | [fiˈtʃi:s] | ‘for nothing’ | [ma-jʔadˈdʃi:j] | ‘he doesn’t cross’ |
| | [ˈʔazʃi] | ‘my intention’ | [ˈmiʃtʃi] | ‘my comb’ |

Greenberg, Kathrine Rose (2012). The people who say tsh tsh: the social life of Cairene Arabic palatalization. *University of Pennsylvania Working Papers in Linguistics*, vol. 18/2, article 4.

Haeri, Nilofar (1994). A linguistic innovation of women in Cairo. *Language Variation and Change* 6: 87–112.

Haeri, Nilofar (1997). *The Sociolinguistic Market of Cairo: Gender, Class, and Education*. London: Kegan Paul International.

Hyman, Larry (1976). Phonologization. In A. Juilland (ed.) *Linguistic studies offered to Joseph Greenberg on the Occasion of his Sixtieth Birthday*, 407–418. Saratoga, CA: Anma Libri.

Shahin, Kimary N. (2002). *Postvelar Harmony*. Amsterdam: John Benjamins.

Watson, Janet C. E. (2002). *The Phonology and Morphology of Arabic*. Oxford: Oxford University Press.

Woidich, Manfred (2006). *Das Kairenisch-Arabisches: eine Grammatik*. Wiesbaden: Harrassowitz.

<http://arabiclinguisticsforum.com/>

#riwaq2016



UNIVERSITY
of York