

Aspects of Dorsality in Baghdadi Arabic

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This paper examines a curious interaction of emphasis spread and labialization in Baghdadi Arabic (BA) and supports the claim that phonological activity and feature specification are language-particular—following the Toronto school of contrast (Dresher, Piggot & Rice 1994 *inter alia*). Furthermore, it shows that the same place feature can attach to different locations within the segment à la Clements' (1991) analysis of Cantonese place. However, the BA pattern of double attachment is crucially and interestingly different. Using contrasts and alternations, I propose economical and exhaustive distinctive feature specifications of the BA inventory that account for otherwise quite different phonological phenomena. My analysis, formulated in terms of the Parallel Structures Model of feature geometry (Morén 2003, 2007), not only makes new predictions about the data, but also unifies and explains previously puzzling facts.

BA exhibits the well-known process commonly called emphasis spread (ES), which is the assimilation of a place feature, i.e. “dorsal”, to adjacent segments throughout a particular domain (Watson 2002). The consonantal triggers of ES in BA are coronals with a secondary place of articulation, i.e. [tʰ, sʰ, ðʰ, lʰ, rʰ]. These emphatic consonants distinguish a large number of minimal pairs; they occur in almost any phonological environment; and roots containing them display emphasis throughout the paradigm (Erwin 1963:15). These facts strongly suggest that [tʰ, sʰ, ðʰ, lʰ, rʰ] have contrastive emphasis in BA. In addition, the fact that all consonants must be emphaticized in syllables containing a low vowel [a] suggests that this vowel is contrastively emphatic in BA as well (Ghazeli 1977). This means that /tʰ, sʰ, ðʰ, rʰ, lʰ, a/ are the natural class of emphatic triggers in BA, and that they share a single feature. Emphasis spread in BA is blocked by non-tautosyllabic high front /i/ and palatal consonants /ʃ, ʧ, ɟ/ (Hassan & Esling 2007), as shown in (1). This suggests another set of vowels and consonants sharing a single feature.

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|-----|--------------|-----------|-------------|-----------|
| (1) | [ʔatʰjab] | ‘best’ | [rʰabiːʔ] | ‘spring’ |
| | [masʰaːrif] | ‘banks’ | [ʃatʰʃaːn] | ‘thirsty’ |
| | [busʰtʰatʃi] | ‘postman’ | [rʰaɟaːʔan] | ‘please’ |

ES interacts with an unusual labialization process in BA. Specifically, the vowels [i] and [u] are in complementary distribution (Blanc 1964, Altoma 1969) and there is evidence that [u] is phonologically related to labial, velar and emphatic consonants. This is best seen in the behavior of epenthetic vowels (EV), where words ending in illicit CC sequences are repaired by epenthesis of a vowel to yield CvC. If the preceding vowel is [i] or [u], the EV is [i] or [u] (i.e. vowel harmony). Importantly, this is regardless of the quality of the last two consonants (2).

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|-----|----------|---------|---------|---------|
| (2) | [sʰudug] | ‘truth’ | [xubuz] | ‘bread’ |
| | [himil] | ‘load’ | [sihir] | ‘magic’ |

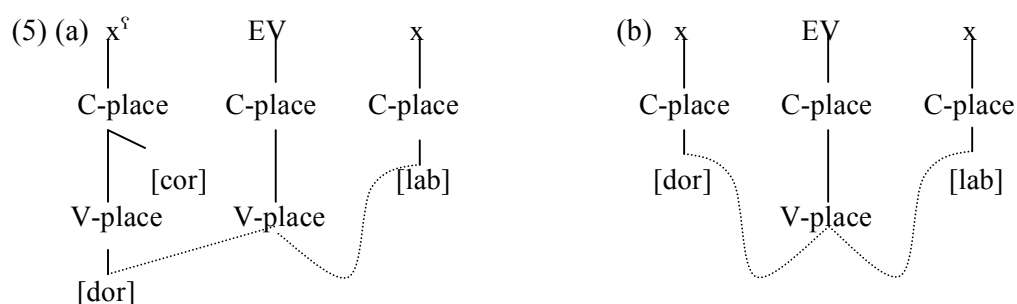
However, when the preceding vowel is [a], the EV may be [i] or [u] depending on the nature of the adjacent consonants. If the consonants are a labial [p, b, f, m] followed or preceded by a velar [g, x, ɣ], uvular [q] or emphatic [tʰ, sʰ, ðʰ, rʰ, lʰ], the EV is always [u], as shown in (3).

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|-----|-----------|------------|----------|---------------|
| (3) | [habutʰ] | ‘dropping’ | [ʃaðʰum] | ‘bone’ |
| | [rʰafusʰ] | ‘kick’ | [ħarʰub] | ‘war’ |
| | [tʰabux] | ‘cooking’ | [sʰamux] | ‘glue’ |
| | [saguf] | ‘ceiling’ | [ħamuq] | ‘furiousness’ |

Otherwise, the EV is [i] – even if one of the adjacent consonants is labial, velar or emphatic; or if the consonants are two labials, two emphatics or a velar and an emphatic (4).

(4)	[ʃamis]	‘sun’	[daʔib]	‘habit’
	[ʃaxis ^ʕ]	‘person’	[d ^ʕ ayit ^ʕ]	‘pressure’
	[nagið ^ʕ]	‘exhaustion’	[was ^ʕ it ^ʕ]	‘middle’

I propose that the natural class of ES triggers /t^ʕ, s^ʕ, ð^ʕ, r^ʕ, l^ʕ, a/ is defined by a V-place[dor] feature, and that the blocking of ES by high front vowels and palatal consonants /i, j, tʃ, ɟ/ is due to the feature V-place[cor], which is antagonistic to the emphasis feature. Further, the [i]~[u] distribution is the result of default feature specification combined with place assimilations. Epenthetic [i] surfaces with a V-place[cor] feature that it receives either from a preceding [i] (harmony) or by default fill-in, while epenthetic [u] has both V-place[dor] and V-place[lab] that it receives from a preceding [u] (harmony) or from surrounding consonants specified with [lab] and [dor]. Since both of these features participate in vowel harmony, they must be V-place features following Clements (1991). The interesting cases are the epenthetic [u] vowels that are not due to harmony. Spread of V-place[dor] from emphatic consonants is straightforward (5a). However, the spread of [lab] and [dor] from labial and velar consonants is perhaps less so. I show that the facts of BA provide evidence in support of a representational option where a single place feature (i.e. [lab] and/or [dor]) can be attached to both C-place and V-place simultaneously (5a–b).



To summarize, new empirical evidence about V-V and C-V place assimilations in Baghdadi Arabic demonstrate not only that feature specification must be done on a language-by-language basis using explicit and overt evidence from the language in question, but also that consonants and vowels can share features even if those features associate with different parts of the segment-internal structure. Furthermore, it is important to look at languages holistically when analyzing particular phenomena because there are often unexpected relationships among processes that can make or break analyses designed to account for a single phenomenon.

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