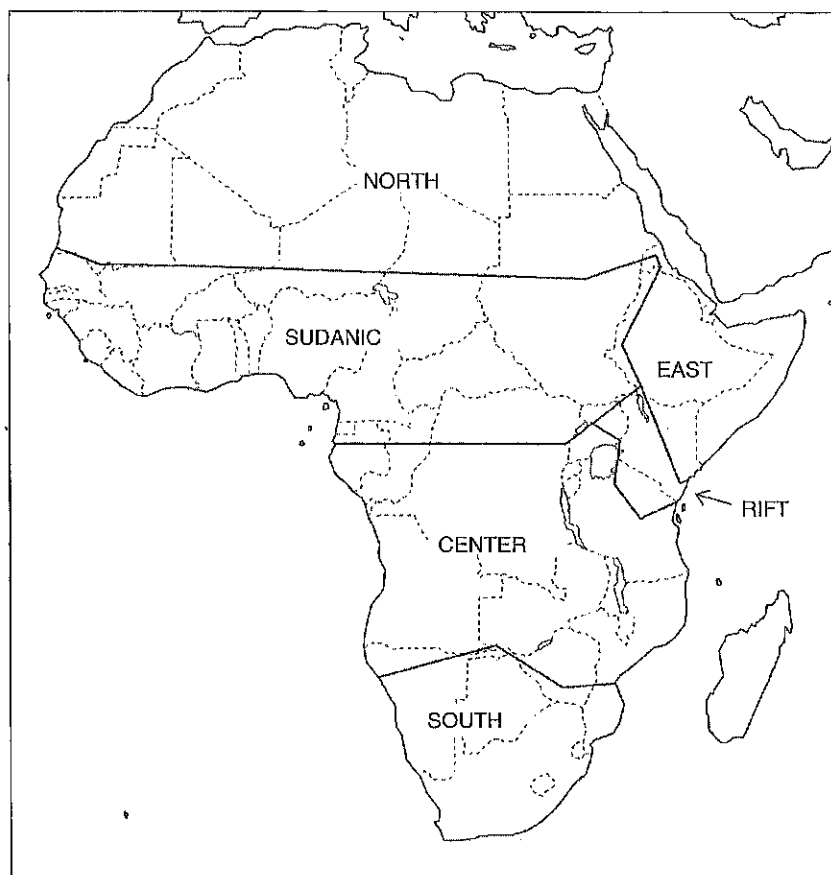


Phonological zones in Africa, according to Clements, G. N. & A. Rialland, 2008, 'Africa as a phonological area', in Heine, B. & D. Nurse (eds.), *A linguistic geography of Africa*, pp. 36-85, Cambridge: Cambridge University Press.



Map 3.1 Six phonological zones in Africa

3.4 Summary and discussion

Table 3.11 summarizes some of the main phonological features of African languages, as they occur across zones.

Table 3.11 *Phonological characteristics of African languages, by zone.*
 (xxx = very common or ubiquitous, xx = common, x = infrequent, - = very rare or absent, (x) = Omotic and/or Cushitic, /x/ = Bantu, [x] = Khoisan)

	North	East	Sudanic	Center	South	Rift
absence of P-sounds	xxx	xx	x	xx	-	x
emphatic consonants	xx	-	-	-	-	-
non-tonal prosody	xxx	x	-	-	-	-
labial flaps	-	-	x	x	-	-
labial-velar stops	-	-	xx	-	-	-
implosives	-	(xx)	xx	x	/x/	x
nasal vowels	-	-	xx	-	[xxx]	-
two series of high vowels	-	(x)	xxx	xx	x	xx
3+ tone levels	-	(x)	xx	-	[x]	-
"lax" question markers	-	-	xx	?	-	?
ejective stops	-	xx	-	-	xxx	x
aspirated stops	-	-	-	-	xxx	/x/, [xxx]
clicks	-	-	-	-	xx	[xxx]
slack voiced stops	-	-	-	-	/xx/	-

How well does this table support a division of the African continent into phonological zones? We again emphasize, as we did at the outset, that no zone is airtight. Because of this, neighboring zones, as the table shows, often show features of both. For example, implosives and 2H vowel systems with ATR vowel harmony occur well beyond the eastern limit of the Sudanic belt in the East and Rift zones. Moreover, phonological isoglosses rarely coincide. A typical example is labial-velar stops: while these sounds have diffused widely into the Congo Basin, labial flaps, nasal vowels and 2H-2M vowel systems have not.

While the patterns are therefore complex, there appears to be some justification for the main thesis of this chapter, which is that Africa is best viewed as a set of zones rather than a single linguistic area. Three of the proposed zones, at least, are sharply distinguished by independent, marked phonological features that occur across major genetic lines and which show substantial overlap. Let us review them briefly.

The North, as we see from an examination of the first three features in table 3.11, is set apart by the absence of P-sounds, the presence of an emphatic series of consonants, and the prevalence of non-tonal prosodic systems. These features span a major genetic boundary, that between Arabic and Berber. These two units share many other characteristic features, including a series of "guttural" consonants, contrastive consonant gemination, and small vowel inventories doubled by contrastive vowel length, the latter also found in most Nilo-Saharan languages in the region.

The Sudanic belt is well defined by the next group of features: labial flaps, labial-velar stops, implosives, nasal vowels, 2H vowel systems, multiple tone levels and "lax" question prosodies, among others. None of these features are as common in other zones. Nor, as we have seen, are they equally distributed within it; however, their overlap defines the Sudanic belt quite well, with the exception of the extreme northwest (northern Atlantic languages) and the northeast (the eastern Sudan, as discussed in section 3.2.10).

A third zone, the South, is sharply delineated by the remaining features in table 3.11: ejective and aspirated stops, clicks, and slack voiced stops. To these features we could add their characteristic series of lateral affricates and fricatives. All these features are widely shared by Khoisan and Bantu languages in the region.

Less well demarcated is the East zone, whose languages share many features with those of the North due to their common Afroasiatic heritage. Nevertheless, the two non-Semitic families in this zone, Omotic and Cushitic, display several features different from those of the North, notably the widespread presence of tone or tonal accent systems, and the common occurrence of implosives and ejectives (sometimes in the same language). We have seen that only in this zone does *d* occur as the unique implosive. Ejectives also occur in Ethio-Semitic languages (see Crass 2002 for a fuller account).

The Center is well defined by the inherited features of the Bantu languages spoken within it, and does not as a whole display the characteristic features of the Sudanic languages spoken to the north nor the Khoisan and Bantu languages spoken to the south. We have seen that it is well characterized by a unique system of vowel harmony.

As far as the more diverse Rift zone is concerned, this survey has not succeeded in identifying large-scale diffusion of phonological features across major genetic boundaries, the hallmark of a genuine phonological area. This fact might well call the independence of this zone into question. It remains to be seen, however, whether further study will reveal cases of such diffusion, at least in micro-areas.