

“Toned-up” Spanish: stress → pitch → tone(?) in Equatorial Guinea

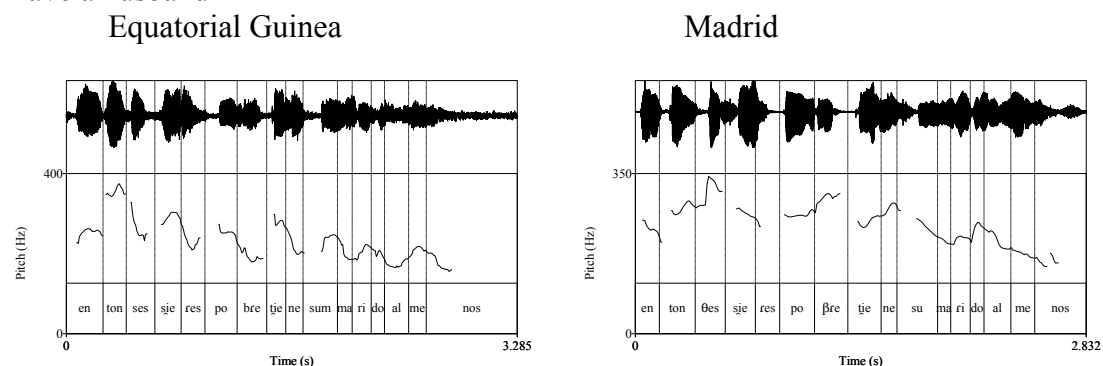
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In Equatorial Guinea, the only Spanish-speaking nation in sub-Saharan Africa, Spanish is in contact with lexical tone languages of the Bantu family (Bubi, Fang, Ndowé, and others). The present study, based on field data collected in Equatorial Guinea, analyzes the prosodic system of Guinean Spanish in terms of the transition from a pitch-accent based metrical stress system to an emergent lexical tone system. In Spanish, lexical stress is determined metrically; vocalic duration and pitch accent are the primary acoustic correlates of lexical stress. In citation pronunciation, polysyllabic words always include a stress accent, but in connected speech relatively long expanses with no pitch peaks frequently occur. In lexical tone languages each syllable carries a phonologically specified tone and the tones persist in connected speech. Sequences of High tones may occur with little “smoothing out” or stress-clash avoidance such as occurs with successive pitch accents in Spanish, and lexically specified tones do not usually “spill over” into adjacent syllables, unlike the late peak-alignment of prenuclear pitch accents in many varieties of Spanish. Speakers of lexical tone languages who learn a stress-/pitch-accent language normally perceive pitch accents as High tone, but when faced with phrase-level intonation, may have no default intonational templates. The acoustic cues of the homology PITCH/STRESS ACCENT \equiv HIGH TONE are attenuated during connected speech and the only suprasegmental roadmap possessed by speakers of a lexical tone language may be an intuitive awareness of the stochastic distribution of tones in the native language. In the present study a corpus of naturalistic Equatorial Guinean Spanish produced by native speakers of Bubi and Fang (languages with High and Low lexical tones) was analyzed for the presence and distribution of pitch accents. The data were compared with exemplars of the same utterances produced by monolingual Spanish speakers from Madrid, the dialect zone that served as primary input for the formation of Guinean Spanish. In connected speech, Guinean Spanish presents early-aligned pitch accents on all lexically stressed syllables including functional elements. Even in fluent speech, each word is pronounced as a citation form and there is no avoidance of stress clashes or High tone spreading to posttonic syllables, as occurs, e.g. in varieties of English in contact with lexical tone languages (Nigeria, Singapore, Hong Kong, Malaysia). Moreover the fundamental frequency of atonic syllables is tightly constrained, suggesting consistent interpretation as a Low tone and not simply the absence of a pitch accent. The relative invariance of syllabic pitches in Guinean Spanish is more characteristic of lexical tone languages than of pitch accent/stress languages. The Madrid Spanish data show significantly fewer pitch accents per utterance, exhibit general late-peak alignment of prenuclear pitch accents, and show evidence of stress clash avoidance, all traits associated with pitch accent/stress languages. Although Guinean Spanish still maintains obligatoriness and culminativity (each lexical word has one and only one syllable marked for prominence, i.e. pitch accent), the relative invariance of the pitch accents in connected speech and the assignment of pitch accents to functional items not normally accented in other varieties of Spanish is consistent with the lexicalization of phonological tone. The retention of citation-like intonational patterns in spoken Guinean Spanish is attributed in part to the fact that for most Guineans Spanish was primarily acquired in school and church settings. In addition, corpora of spoken Bubi and Fang were analyzed for relative distributional probabilities of High and Low tones: the rate at which high pitch accents occur in Guinean Spanish is closer to the distribution of High tones in Fang

and Bubi than to the distribution of pitch accents in Madrid Spanish, and statistical learning of probabilistic patterns in indigenous Guinean languages may contribute to the emergent status of Equatorial Guinean Spanish as a lexical tone language.

Example: *Entonces si eres pobre tienes un marido al menos* 'Then if you are poor at least you have a husband'



References

- Devonish, Hubert. 1989. *Talking in tones: a study of tone in Afro-European creole languages*. London, U. K. and Christ Church, Barbados: Karia Press and Caribbean Academic Publications.
- Eady, Stephen. 1982. Differences in the F₀ patterns of speech: tone language versus stress language. *Language and Speech* 25.29-42.
- Face, Timothy. 2003. Intonation in Spanish declaratives: differences between lab speech and spontaneous speech. *Catalan Journal of Linguistics* 2.115-131.
- Griper-Friedman, Lindsay. 1990. The tone system of West African Coastal English. *World Englishes* 9.63-77.
- Gussenhoven, Carlos. 2004. *The phonology of tone and intonation*. Cambridge: Cambridge University Press.
- Gut, Ulrike. 2005. Nigerian English prosody. *English World-Wide* 26.153-177.
- Harris, James. 1983. *Syllable structure and stress in Spanish*. Cambridge, MA: MIT Press.
- Hyman, Larry. 2006. Word-prosodic typology. *Phonology* 23.225-257.
- _____. 2009. How (not) to do phonological typology: the case of pitch-accent. *Language Sciences* 31.213-238.
- Lipski, John. 1985. *The Spanish of Equatorial Guinea*. Tubinga: Max Niemeyer.
- Llisteri, Joaquim, María Jesús Machuca, Carme de la Mota, Montserrat Riera, Antonio Ríos. 2002. The role of F₀ peaks in the identification of lexical stress in Spanish. *Phonetics and its applications: festschrift for Jens-Peter Köster on the occasion of his 60th birthday*, ed. Angelika Braun, Herbert Mastroff, 350-361. Stuttgart: Franz Steiner.
- Prieto, Pilar, Jan van Santen, and Julia Hirschberg. 1995. Tonal alignment patterns in Spanish. *Journal of Phonetics* 23.429-451.
- Quilis, Antonio y Celia Casado-Fresnillo. 1995. *La lengua española en Guinea Ecuatorial*. Madrid: Universidad Nacional de Educación a Distancia.
- Yip, Moira. 2002. *Tone*. Cambridge: Cambridge University Press.