

Autosegmental phonology is a "nonlinear" or multi-tiered approach to phonological analysis. Rather than restricting an analysis to a single linear representation (and being unable to effectively 'shoe-horn' suprasegmental phenomena, such as tone, onto a given segment's representations), Goldsmith proposes that linguistic data is more effectively analyzed as parallel sequences in which one tier represents the 'regular' features of the segment (the features that make-up a C or V) and the other tier represents suprasegmental data (eg, tone, shape of the glottis, etc). These tiers are tied together by means of association lines, and the overall effect is a representation that shows how, as time progresses in a given sequence (segment), the suprasegmental layer influences the data on the other tier.¹ Thus, the key concepts of the theory per Goldsmith include "*segment, feature, rule, and association.*" In the context of a tone language, the association lines "connect" tone to vowel. The theory includes a well-formedness condition that applies to derivations, which Goldsmith writes, adds or deletes "association lines at any point throughout the derivation." The end result is a representation that has every vowel connected to one or more tonemes (and vice versa), and none of the association lines crosses another.

In the paper, Goldsmith makes the case for this approach using Igbo, a tone language spoken in Nigeria (figures to right from Wikipedia) and derives several examples in the manner just described above. Before getting into the analysis, Goldsmith discusses the difficulties of accounting for contour tones using standard methodology of the time (the generative phonology of SPE), although he acknowledges that his theory is more of an augmentation to generative phonology. The problem with the linear approach is that, by itself, it cannot effectively capture contour tones, tones that may have existed on the UR yet are 'lost' on their way to the surface, through rule application, nor can it effectively handle the 'floating tones' that may be part of any tone language. Goldsmith steps through several attempts to use a [contour] feature ([-contour]/ [+ contour]) and shows how such attempts failed to really work—they allow surface forms that don't exist, for example.



Igbo	
Asusu Igbo	
Pronunciation	[iɡbo]
Spoken natively in	Nigeria
Region	southeastern Nigeria
Native speakers	24 million (2007) ^[1]
Language family	Niger–Congo <ul style="list-style-type: none">Atlantic–Congo<ul style="list-style-type: none">Volta–Niger<ul style="list-style-type: none">YEA<ul style="list-style-type: none">Igboid<ul style="list-style-type: none">Igbo

¹ "...parallel strings of segments in the phonological and phonetic representations, enriched...by 'association lines'...that indicate [at the phonetic level] the co-registration of the different tiers of the segments..."(Goldsmith 205)

Goldsmith also points out that linear analysis could not account for “stability,” the notion that a tone remains, even after deletion of the vowel to which it was (underlyingly) applied. On the other hand, autosegmental phonology, by virtue of its association lines, could represent such data, and Goldsmith shows us how, by stepping through several Igbo examples, demonstrating various rules (Floating H Deletion, Prefix Tone Deletion, for example, and how the WFC impacts the end result, that is, the surface representation).

Goldsmith’s paper is quite dense, but considering that it forms the basis of (what seems to have been, at the time) a controversial proposal, it is thorough and thought provoking. I labored to get through his analysis of Igbo, but in the end, I think Goldsmith proves his point (particularly, with the help of your slides which call-out the essential details), although I’m still puzzling over Goldsmith’s (14), the Prefix Tone Deletion rule: It would have been nice if Goldsmith’s editor had revised that figure somewhat, or tied the narrative text to the figure more explicitly, to facilitate an understanding of the ‘flow’ of the rule application. That said, the later sections of the paper, where he generalizes the autosegmental approach to vowel harmony with reference to McCarthy’s work on Classical Arabic, help make his case in the context of a different phonological environment and help show how the tool can be applied to other suprasegmental data.

Finally, the most interesting section of this paper (to me, personally) is Goldsmith’s discussion of his idea that “a child’s acquisition of the phonology of a language was a stage in which the phonological features were independent, or in our terms, autosegmental.” (Goldsmith 215). His idea seems to be that during (first) language acquisition, the “autosegmental status” of various aspects of the speech signal (“tone in Igbo, nasality in Guarani, or tongue position in Hungarian” are the examples Goldsmith provides) are understood to be separate, distinct ‘tiers’ by the language learner (infant, child in this first-language context) and that ultimately, effective language use is achieved when these de-constructed (primitive?) tiers are coalesced (per Goldsmith, “systematization (lending of significance of imposition of symmetries, rules, and so on)”) and put to use in language.