

# Prelude, theme and riffs

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**Sonic Signatures: Studies dedicated to John Harris**

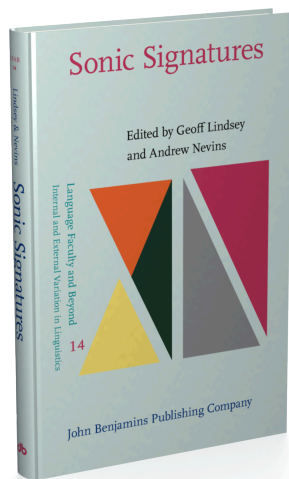
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# Prelude, theme and riffs

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This book is a tribute to the phonologist John Harris from his friends, colleagues, students, and collaborators, and a celebration of his research themes in phonological theory.

John began his linguistic career with the study of German Language and Linguistics at the University of Edinburgh, where his teachers included John Anderson and Roger Lass, seminal thinkers in Dependency Phonology. He earned his Edinburgh PhD under Lass's supervision in 1983. John also worked with James and Lesley Milroy on the sociolinguistics of his native Belfast English, publishing research on syntax (Harris 1984) as well as phonology, his doctoral thesis appearing in revised form as *Phonological variation and change: Studies in Hiberno-English* (Harris 1985). His work on Irish English has been influential, as of course has his large body of work in phonological theory, including Government Phonology and Element Theory. In addition, John has contributed notably and ongoingly to the field of phonological impairment (e.g. Gallon et al. 2007). As his friends know well, his talents extend far beyond scholarship, ranging from performing as a singer-guitarist to connoisseurship of beer, and knowing where in London to get an offbeat meal whatever the hour.

A central and major theme in John's research provides the title of this book, as for some years he has persuasively advocated a view of phonology in terms of significant patterns in sound: sonic signatures. Many of those who John has influenced and enriched thereby voice their riffs on this theme in the following pages.

## 1. Sonic signatures: Brilliant corners

Since the inception of the Dependency Theory and Government Phonology frameworks, the status of the corner vowels [i,u,a] as the three most common vowels has been formalized in terms of primitive elements [I,U,A]. These can combine to form more complex structures such as [I,A] and [U,A]. This notion of combination – parallel to the way in which the subtractive pigment primary colors

red, blue, and yellow can combine to form the secondary ones orange, purple, and green – has both intuitive appeal and a great deal of explanatory value with respect to vowel reduction, vowel coalescence, consonant-vowel assimilation and overall typological markedness. Nonetheless, until the work of Harris & Lindsey (1995), no mechanism was specified for the way in which these elements actually ‘combine’. In Harris & Lindsey, the proposal was offered that each element bears a specific acoustic signature. Thus, |I| was characterized by the ‘dip’ in acoustic energy between F1 and F2, |A| by the ‘mass’ of mid-region energy occasioned by the approximation of F1 and F2, and |U| by a low frequency energy ‘rump’. Harris & Lindsey showed that the spectra of ‘combined’ elements are more complex precisely in that they combine the primes’ signatures.

Consonants were similarly described, paving the way for the crystallization of Element Theory in Backley (2011), with each element assigned a specific acoustic signature. Thus a proposal was re-introduced into phonological theory that had all but vanished since Jakobson, Fant & Halle (1956) – that the atomic elements of phonological representation are auditory images, and not primarily articulatory in nature.

John Harris has continued along this research path, developing in Modulation Phonology the notion that each element is characterized by a specific modulation to a schwa-like carrier signal. This signal lies at the base of every communicative utterance, and the constituent elements of phonological expressions represent modulations of it, whether in the spectral domain as in the case of |I,A,U|, or in terms of the periodic/aperiodic effects imposed by |L,H|. Under this view, speech is a code and its decoding by speaker-hearers depends on the recovery of these modulating patterns.

## 2. Lenition: Element solos

John Harris’s interest in lenition dates back to his Edinburgh work on synchronic and diachronic variation in English, Harris (1985) treating spirantisation as lenition. He perceived Government Phonology as an ideal model for lenition in terms of element complexity, as presented in his 1994 book *English Sound Structure*. In Harris’s work, ‘lenition’ becomes less of a metaphor, as it describes phonological events in which composite structures become reduced in complexity.

An illustration is provided by English /t/, defined in its fullest form as a complex expression comprising the elemental primes [ʔ,R,h,H], respectively occlusion, coronality, frication, and voicelessness. John’s proposal was that different outcomes of lenition processes could all be seen as simplifications of this complex expression

through element depletion. When /t/ occurs in foot-medial position as in *city*, different varieties of English lenite in different ways: tapping in North American and Northern Irish varieties, glottaling in London. These processes had previously been treated disparately, as sonorization and debuccalization. But Harris & Kaye's aptly-named 'A tale of two cities' (1990) reveals the processes to be as unified as the triggering environment. In tapping varieties, everything but |R| is removed, solo |R| being independently interpretable as a tap. In glottaling varieties, everything but |ʔ| is removed, |ʔ| alone being a glottal stop.

More broadly, Harris's view of the allophonic distribution of plosives in English and elsewhere is that they serve a demarcative function, being associated with positions of strength and weakness. Fortition is found in strong positions, lenition in weak positions. Foot-initially, English plosives enjoy the greatest degree of elemental complexity, replete with aspiration.

In the case of vowels, reduction may be treated as element depletion in a wholly parallel way. Consider the superficially different reductions undergone by /e/ in Bulgarian and Catalan, raising to [i] in the former and centralizing to [ə] in the latter. Harris (2005) formalized the notions of 'centrifugal' and 'centripetal' reduction: the vowel [e] is elementally composed of |I,A|, with the loss of |A| in Bulgarian leaving the corner vowel [i] (centrifugal reduction) and the loss of both elements in Catalan leaving the central vowel [ə] (centripetal reduction). Again, the formal mechanism at hand is positional strength: unstressed (weak) positions cannot license the complexity of |I,A|.

The harmonization of specific prosodic positions with specific degrees of melodic complexity is not available to most models of segmental structure. Sets of binary features, typically couched in articulatory terms, cannot dwindle to leave a tap, glottal stop or a corner vowel. This is precisely because in standard feature theory, features are not interpretable in isolation, whereas in Element Theory the elements each have sonic signatures. Element theory also facilitates the analysis of interactions between consonants and vowels, which in this model share most of their features. Certainly for consonants, this perspective is less familiar to many phonologists than it should be.

### 3. Giant steps

John Harris has taken major steps to connect phonology with the actuality of sound and of signification. His phonology perceives the order in the improvisation, placing the avoidance of discord centre stage. Phonological primes are there in the signal if we know what to look for. Simple phonotactic patterns are there if we can free

ourselves from ‘trad’ syllable- and word-boundaries. In addition to the advances detailed above, this has provided a re-diagnosis of ambisyllabicity as a foot-based generalisation (Harris 2003).

John has encouraged and inspired many others to take exciting phonological steps of their own. Everyone who has met him has been touched by his originality and his unique soundings on lenition, final devoicing, vowel mergers, syllabification, and the foot-domain, from Belfast English to Ibibio. The contributors to this volume, across five continents, let resonate their riffs on some of John’s key contributions.

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