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OVERVIEW ARTICLE

Redrawing the margins of language: Lessons from research on ideophones

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Ideophones (also known as expressives or mimetics, and including onomatopoeia) have been systematically studied in linguistics since the 1850s, when they were first described as a lexical class of vivid sensory words in West-African languages. This paper surveys the research history of ideophones, from its roots in African linguistics to its fruits in general linguistics and typology around the globe. It shows that despite a recurrent narrative of marginalisation, work on ideophones has made an impact in many areas of linguistics, from theories of phonological features to typologies of manner and motion, and from sound symbolism to sensory language. Due to their hybrid nature as gradient vocal gestures that grow roots in discrete linguistic systems, ideophones provide opportunities to reframe typological questions, reconsider the role of language ideology in linguistic scholarship, and rethink the margins of language. With ideophones increasingly being brought into the fold of the language sciences, this review synthesises past theoretical insights and empirical findings in order to enable future work to build on them.

Keywords: ideophones; iconicity; linguistic theory; language ideology

“Words go on living despite the efforts of scholars to manage them.”
— Taro Gomi (1989)

1 Introduction

Ideophones are marked words that depict sensory scenes like *c'onc'on* ‘woven tightly’, *ulakpulak* ‘unbalanced, scary appearance’ and *colcol* ‘flowing liquid’ in Korean, or *mukumu* ‘mumbling mouth movements’, *gelegele* ‘glittery appearance’ and *gbadara-gbadara* ‘a drunkard’s wobbling gait’ in Siwu, a Kwa language spoken in Ghana (Dingemanse 2012). They have been recognised as a major lexical class in West-African languages for at least 150 years, and equivalent phenomena have since been described in many languages across Asia and the Americas. Their striking forms and colourful meanings have captured the attention of many linguists, anthropologists and cognitive scientists. Their large numbers render them crucial for lexical typologies of property and manner. Their special semiotic and sound-symbolic properties have made them an attractive target for studies of multi-modality, iconicity and sensory language.

A common trope in the linguistic literature is that ideophones have not been given the serious, sustained, scholarly attention they deserve. Instead, they have been misunderstood and marginalised as “a step-child of modern linguistic science” (Voeltz & Kilian-Hatz 2001b: 2). Here I argue that this narrative of marginalisation, though historically justified (Joseph 1997), has outlived its usefulness: it risks obscuring insights from a rich history of research and stands in the way of progress on key questions in linguistics. How does form link to meaning? What are the limits of language? How do subsystems in language relate

to each other? How does language ideology shape linguistic inquiry? Ideophones speak to these and other fundamental questions about linguistic theory and practice.

This survey complements reviews that focus on synthesizing current or recent work on ideophones (Dingemans 2012; Akita 2015; Ibarretxe-Antuñano 2017; Svantesson 2017). It traces empirical discoveries and intellectual lineages that have been influential in shaping today's ideas about ideophones. The goal is to highlight how work on ideophones has led to innovations in linguistic theory and methods, and how it may motivate a redrawing of the margins of language. To this end, it presents a mostly linear narrative, interspersed with overviews of historical terminology (Table 1), iconic associations attested in ideophones (Table 2), examples of the impact of ideophones on general linguistics (Table 3), reported magnitudes of ideophone inventories (Table 4), and current questions for which ideophones provide critical evidence (Table 5). The final section summarises some common misconceptions, lessons learned, and challenges provided by ideophones.

1.1 Terms and definitions

The words in focus here have not always been known by the same name. Before Doke (1935) introduced the term “ideophone”, now widely adopted, they were discussed under a diverse range of labels (Table 1). Though confusing at times, the proliferation of terms usefully highlights some key aspects of ideophones. Some of the labels characterise semantic or pragmatic functions (expressive, descriptive, intensifier). Some foreground morpho-syntactic properties (radical, particle, adverb). Some focus on mode of representation (imitative, Lautbild, picture word). And some labels align ideophones with phenomena familiar to the investigator (onomatopoeia, interjection, Schallwort).

Most of the terms in Table 1 come from grammatical descriptions of particular languages, and they reveal a degree of language-specificity. For instance, depending on the language, ideophones may pattern with verbs or with adverbs, or they may form their

Table 1: Pre-1930s labels for ideophone-like phenomena.

<i>adverbes descriptifs</i> ‘descriptive adverbs’ (Christaller 1888)
<i>Bildwörter</i> ‘picture words’ (Schuchardt 1919)
echoisms (Smith 1920)
imitative words (Müller 1861)
indeclinable adjectives (Whitehead 1899)
indeclinable verbal particles (McLaren 1906)
<i>Intensitäts- und Frequenzadverbien</i> ‘intensity and frequency adverbs’ (Schlegel 1857)
<i>Klangfiguren</i> ‘sound figures’ (Winkler-Breslau 1907)
<i>Lautbilder</i> ‘sound pictures’ (Wundt 1900)
<i>mots expressifs</i> ‘expressive words’ (Grammont 1901)
onomatopoeia/onomatopoesis (Aston 1894; Urtel 1919)
(onomatopoeic) interjections (Wilson 1847)
radical descriptives (Doke 1927)
<i>Schallnachahmungen</i> ‘sound imitations’ (Leskien 1902)
<i>Schallwörter</i> ‘sound words’ (Schuchardt 1919)
specific adverbs (Vidal 1852)
<i>spezifische Verstärkungsadverbien</i> ‘specific intensifying adverbs’ (Prietze 1908)
vocal images (Lévy-Bruhl 1910)

own word class (Childs 1994a), and they may imitate mostly sounds or (more often) a broad range of sensory scenes. Despite such differences, there are enough cross-linguistic similarities to identify a common core that can serve as a basis for cross-linguistic comparison. This survey adopts a broad definition of ideophones that is designed to capture this core, while leaving room for language-specific differences in implementation: ideophones are “marked words that depict sensory imagery” (Dingemanse 2012: 655). Across languages, ideophones tend to be MARKED, standing out in terms of prosody, phonotactics and morphosyntax. They are WORDS, conventionalised lexical items that are made up of phonemes and are listable and learnable. They DEPICT, using the iconic affordances of speech to present structural analogies to aspects of sensory scenes. And what they depict is SENSORY IMAGERY, perceptual content that may range from sound to motion, texture, visual appearance, and inner feelings and sensations.

While “ideophone” today is the most widely used term for the phenomenon, used not just within Africa but also for languages as varied as Korean, Mandarin, Turkish, Basque, English, Quechua and Navaho (Voeltz & Kilian-Hatz 2001a), two prolific research traditions maintain their own terms for what is typologically essentially the same phenomenon (with expected area-specific nuances): “mimetics” in Japanese linguistics (Iwasaki, Sells & Akita 2017) and “expressives” in Southeast Asian linguistics (Williams 2013). The term “onomatopoeia” is usually understood to be limited to words imitative of sound (Moore 2015), and therefore forms a proper subset of “ideophones”.

1.2 Marginality and commonality

What does it mean to be marginal? In discussing the margins of language, it is useful to make a distinction between *rara* and *marginalia*. “RARA are typologically exceptional phenomenona that illuminate the fringes of linguistic diversity. [...] MARGINALIA are typologically unexceptional phenomena that many linguists think can be ignored without harm to linguistic inquiry. They are not rare, but linguistic practice assigns them to the margins by consensus. Whereas *rara* can be objectively described as exceptional, *marginalia* are viewpoint-dependent” (Dingemanse 2017: 195–6). Until recently, ideophones have been treated as marginal in this subjective sense. In many languages, ideophones are a major lexical class on a par with nouns and verbs, counting hundreds to thousands of lexical items (Samarin 1970b; and see Table 4 below). Yet in most grammatical descriptions, they appear as stowaways in minor chapters on interjections and other *marginalia*, if they appear at all. The marginal representation of ideophones in descriptive grammars reinforces the idea that they have no linguistic properties worth describing — a neat example of a self-perpetuating myth. As long as grammars can have blind spots the size of a major lexical class, we have not found the proper way to model the grammar of lexicalised depictions like ideophones.

To neutralise the narrative of marginalisation we must briefly consider its origins. It springs from two common ways of making sense of ideophones: assimilation and exceptionalism. In ASSIMILATION, ideophones are equated with grammatical categories more familiar to the investigator (Haspelmath 2007). In a recent debate on the importance of linguistic diversity, Pinker and Jackendoff (2009) conflate ideophones with response cries, citing Goffman (1978) who defines response cries as “exclamatory interjections which are not full-fledged words” and gives as primary examples expressions like *Oops!* and *Ah!*. Equating ideophones with such exuded expressions obscures the fact that they are quite distinct in form, meaning and use, not to mention sheer number. An equally potent form of assimilation is to identify ideophones with onomatopoeia, sound-imitating words most familiar to speakers of Standard Average European languages. In reality, ideophones

depict many aspects of sensory scenes beyond sound, and onomatopoeia make up only a minor portion of most well-described ideophone inventories (Samarin 1965).¹

A second mechanism behind the marginalisation of ideophones is EXCEPTIONALISM: the impulse to stress their utter difference from other phenomena in language. When Owen Emeric Vidal first came across ideophones in Yoruba, he declared them to be a “singularly unique feature” of the language, and confidently announced, “therefore I shall not waste time in comparing it with the adverbial systems, whatever they may be, of other African languages” (Vidal 1852: 17). This statement would prove to be fantastically wrong, yet ideophone exceptionalism remained an alluring perspective until recently (Newman 2001). An example is a study of English ideophones billing itself as “explorations in the lunatic fringe of language” (Frankis 1991), reinforcing the supposedly marginal nature of the phenomenon under study. Ironically, exceptionalism often arises out of attempts to counteract assimilation, yet has the same effect: relegating ideophones to the margins of language.

This review walks the fine line between assimilation and exceptionalism. It highlights the unique significance of ideophones while showing how they are shaped and constrained by the linguistic systems they are part of. It shows how ideophones are distinctive, but also how they support generalisations about semiotics, semantics and syntax. It does so by reviewing how work on ideophones sheds new light on what is possible and probable in language. After all, we can only critically examine received notions of marginality if we have all the relevant evidence.

2 The discovery of ideophones

The earliest extant linguistic document to mention imitative words is Pāṇini’s *Ashtādhyāyī* on Sanskrit, usually dated to the 4th century BCE. Pāṇini’s succinct statements on the matter are found in sutra’s I.4.62, V.4.57, VI.1.98-100 and VIII.2.4 and revolve around the notion of *anukāraṇa*, or imitative words (Hoffkann 1952; Pāṇini 1962). Two structural observations are made: these words are marked by the quotative *-iti*, and they often occur in reduplicated form. Both hold for many ideophone systems today (Güldemann 2008). In the wider Indian context, a short list of ideophones is found under this same term *anukāraṇa* in an 8th century AD dictionary of Ancient Tamil, a Dravidian language (Chevallard 2004). This continuity is not often recognised and presents opportunities for research on the diachrony of ideophone systems.

In Western philology, some of the first mentions of ideophone-like words appear in grammatical treatises of Japanese. An early grammar of Japanese, Diego Collado’s *Ars grammaticae Iaponicae linguae*, appears to refer to the utterance-final morphosyntax and marked prosody of Japanese ideophones by characterising them as “aduerbia concludendi & aduertendi”, adverbs that conclude and draw attention (Collado 1632: 56). The marked forms and perceptual meanings of ideophones are highlighted in a characterisation that goes back to Rodrigues’ 1604 *Arte da lingua de Iapam* (I translate from an abridged 1825 French version):²

¹ The observation that sound imitatives play a relatively minor role in larger ideophone inventories should not be taken as a comment on the theoretical interest of onomatopoeia. The use of speech to imitate sounds is governed by intricate rules and regularities (Assaneo, Nichols & Trevisan 2011), and sound imitatives, like the larger set of ideophones, exemplify the fact that sound-meaning mappings in speech are probabilistic, not deterministic.

² Here and below, English translations of original sources are mine unless otherwise noted.

§81. The Japanese have a great number of adverbs which serve not only to express the manner of an event, but which also indicate the sound, the noise, the posture of the thing. (...) Many of these adverbs are formed by repetition of the same word, to express the manner in which a thing is done, or the sound of the thing: like *fara-fara*, ‘sound of rain or tears falling’. (Rodriguez 1825 [1604]: 87)

It would take until halfway through the 19th century before ideophones were recognised as a phenomenon worthy of broader attention in Western linguistics, and the first descriptions came from students of African languages. In the 1850s, three linguists independently noted large numbers of ideophones in West-African languages. The first of them, Vidal (1852) in a foreword to Crowthers dictionary of Yoruba, described the remarkable semantic precision of Yoruba ideophones and noted that many verbs denoting state or manner seemed to form collocations with specific ideophones, as in *pon rokiroki* ‘be yellow *roki-roki*’ vs. *pipa roro* ‘be red *roro*’. It was a matter of some puzzlement to him that these words seemed to have an intensifying function comparable to “very” in English, yet “the Yoruban would express the same meaning with far more of definiteness and precision by a separate adverb in each case, no two of which could be used convertibly” (Vidal 1852: 16).

Two years later Sigismund Wilhelm Koelle published a grammar of Kanuri, a Saharan language of Central Africa (Koelle 1854a) and a grammar of Vai, a Mande language of Liberia (Koelle 1854b). In the Kanuri grammar, Koelle noted that “[t]hese singular adverbs which seem to be common in African languages, as they exist also in the Aku [Yoruba, MD] and Vei, have something in their nature which may be compared to the onomatopoeica, or something in which the immediate, instinctive sense of language particularly manifests itself” (1854b: 283). Another three years later, the German missionary Schlegel wrote a first grammar of Ewe, a Kwa language from southern Ghana and Togo, and devoted a chapter to a special type of vivid sensory adverbs. As he noted, “for almost any property or manner concept, the language has this kind of special adverb, which is reduplicated to express degree or intensity” (Schlegel 1857: 113).

With the first descriptions of ideophone systems in Yoruba, Vai, Kanuri and Ewe, we may call the 1850s the decade of the discovery of ideophones in Western linguistics. The findings attracted some interest at the time; for instance, August Pott cited many Yoruba ideophones from Crowther’s dictionary in his *Doppelung (Reduplikation, Geminatio)*, the first large-scale typological study of reduplication (Pott 1862: 276f.). However, in the same period, the Oxford philologist Max Müller, working from a more limited language sample, could still confidently declare that imitative words “constitute a very small proportion of our dictionary” and that “they are playthings, not the tools of language” (Müller 1861: 346). Müller’s words, spoken from the authority of an Oxford chair in philology and published in a popular collection of lectures that saw four decades of reprints during his lifetime, contributed to an intellectual climate in which imitative words were seen as insignificant and unworthy of scholarly attention (Moore 2015).

2.1 Scattered attestations in Africa and beyond

As language description in Africa continued, ideophones began to be noticed more often, especially in the Bantu languages of Sub-Saharan Africa. For example, grammars by McLaren (1886) on Nguni (southern Bantu, present-day South Africa), Junod (1896) on Ronga (southeastern Bantu, present-day Mozambique), and Whitehead (1899) on Bobangi (northwest Bantu, present-day DRC) all devote at least some pages to ideophones. Carl Meinhof, in his comparative grammar of Bantu languages (1906), described them as “word images that are used to evoke many ideas, not just imitative of sound”. Still, for

every early grammar that does mention ideophones there are several that keep silent on the matter.³

Some of the early treatments stand out because of their attention to everyday language use. For example, in the following description by Whitehead we recognise not only the depictive nature of ideophones and their rich meanings, but also their common occurrence in everyday speech:

These words are the most graphic in the language, they are the “colouring” words, the stories and common speech of the people are full of them, and often they have such force that sentence after sentence can be constructed by means of them, without the use of a single verb, the verb being indicated by these indeclinable adjectives. (Whitehead 1899: 18)

This period also saw a spate of new descriptive work outside of African linguistics, most of it by scholars with a strict regional focus. Aston (1894), writing on “Japanese onomatopes”, provided some observations on the sensory properties of ideophonic words, noting that “this element of onomatopoeia has not received the attention which its great importance demands” (Aston 1894: 343). Grammont (1901) published a comparative study focusing on Indo-European languages which introduced the term *expressifs* for this phenomenon in the Francophone literature. Leskien (1902) produced a lexical and grammatical description of *Schallnachahmungen* (sound imitations) in Lithuanian, a Balto-Slavic language. Winkler-Breslau (1907) described *Klangfiguren* (sound pictures) in Caucasian languages and was convinced their prevalence in these languages was quite unique. Urtel (1919) drew attention to a large number of imitative and reduplicative words in Basque. Based in part on descriptions of ideophones, the psycholinguist Wundt (1900: 313) observed that imitation in speech need not be limited to sound but can also recruit articulatory gestures and repetition to depict movement and visual features. To cover such phenomena, he proposed the broader term *Lautbilder* (picture words), which would later be adopted more widely in German linguistics.

3 The significance of ideophones: Junod and Westermann

Throughout the second half of the 19th century we see a gradually accumulating body of knowledge that helped form the foundation for more sophisticated accounts of the meaning and use of ideophones. Around the turn of the century, a number of accounts appeared that would decisively shape ideas about ideophones in linguistics and beyond. Two of them were written by the linguist-ethnographer-missionaries Henri Alexandre Junod (from Switzerland, working in Southern Africa) and Diedrich Hermann Westermann (from northern Germany, working in West Africa).

3.1 Henri Junod on Ronga

It is perhaps not a coincidence that Junod should be one of the first linguists to offer a balanced assessment of the significance of ideophones, for he was an extremely prolific and wide-ranging field worker, publishing a Ronga grammar and quadrilingual vocabulary (1896), a translation of the Bible, a collection of chants and texts, and an ethnography, the English translation of which would become an early anthropological classic (*The Life of a South African Tribe*, 1912). In his Ronga grammar, Junod described *adverbes descriptifs* as

³ Surprisingly, Mchombo (2004) shows that it is still possible to publish a work billed as a “comprehensive study” of the syntax of a Bantu language —Chichewa spoken in Zambia— without a single mention of ideophones, a major lexical class in the language. This despite important prior work detailing the syntactic properties of ideophones (Watkins 1937; Kulemeka 1996).

highly salient words that evoke a spectacle, a sound, an idea, a movement, an appearance, or a noise. Like others before him, he noted that ideophones went far beyond the imitation of sound, and his characterisation ticks all the boxes of the crosslinguistic definition of ideophones, recognizing their markedness, depictive nature, and sensory meanings.

Junod, with his contemporary Whitehead, was among the first to point to everyday conversation as an important locus of ideophone use: “One only needs to attend some conversations of [the Ronga], in a natural and unrestrained context, to note the prodigious number of expressions of this kind which they have at their disposal” (Junod 1896: 196). Acutely aware of differences in language ideology, he preempted an objection that is still all too common (Nuckolls 2004):

One might say: “This is an childish way of speaking; it is not worth the trouble.” Quite the contrary! The versatile and spontaneous mind of the people is reflected in this picturesque talk. It enables these words to render nuances which a more restrained language could not express. (Junod 1896: 196f.)

Junod contested the ideologically charged assumption that ideophones represent a “childish” way of speaking far removed from the sophistication of civilised languages. He showed they were widely used in everyday conversation as well as in songs and tales, and drew attention to their semantic specificity and poetic potential. He implored other linguists to study them, observing that “many of these words are truly integrated in the language, understood by everyone, and their knowledge and use must be investigated” (Junod 1896: 197).

3.2 *Diedrich Westermann on Ewe*

Diedrich Westermann started his scholarly career in West-Africa working on Ewe, a language spoken in present-day Ghana and Togo. In his first dictionary and grammar of Ewe (Westermann 1905; 1907), he drew attention to a class of words that he called *Lautbilder* (“picture words” in the 1930 English version). His writings, mostly in German, offer some of the most compelling early observations on ideophones.

Westermann started by explicating the link between sensory perception and ideophones. He observed that ideophones often occur as adverbs modifying verbs of perception like look, feel and sound, and contribute highly specific sensory meanings. In support of this, he noted that “the more the meaning of a verb is removed from the sensory domain, the more these special adverbs disappear and make place for more general ones like *ɲutɔ* ‘very’, *geɖe* ‘many’, *kakáka* ‘to a great extent’, etc” (Westermann 1907: 83). Where prior scholars were bewildered about the abundance of words that seemed roughly equivalent to intensifiers like “very”, Westermann saw that ideophones were not generic intensifiers but specific depictions of sensory scenes. This is especially clear in characterisations like the following:

Ewe has two dialectally separated words for duck (...), *kpakpa* after its quacking and *ɖaboɖabo*. When I asked a local whose dialect does not have the latter why it is that other people would say *ɖaboɖabo*, his answer was, “Well, because...”, and he used his upper body to imitate the waddle of a duck.

Ideophones describe a process or object as a whole, not focusing on a single aspect but highlighting primarily its living, moving features. Asking for the meaning of an ideophone often leads to the objection: “You cannot just describe it, you have to see it.” It is the total impression, the whole Gestalt, or the movement of the whole Gestalt, which is important. (Westermann 1937: 159)

In a few broad strokes, Westermann and his Ewe consultants captured what is perhaps most distinctive about ideophones: the fact that they are not prosaic words but rather poetic performances, depictions that use verbal and visual means to enable others to imagine what it is like to perceive the scene depicted.

To illustrate the abundance of ideophones in Ewe, Westermann compiled a list of about forty ideophones that can be used with the verb *ɔ* ‘to go/walk’, including such examples as *ɔ hlóyihloyi* ‘walk with many objects dangling about’, *ɔ kpúdukpuđu* ‘rapid walking of a small person’ and *ɔ vɛvɛ* ‘gait of a fat and stiff person’ (Westermann 1907: 84). This collection of carefully glossed expressions —concrete examples that vividly illustrated the direct appeal to the senses made by ideophones— made a wide impact. It was quoted word for word by philosopher Lévy-Bruhl (1910) and even today it is cited in a broad range of fields, for example in Geurts’ (2002) study of the cultural construction of sensory perception and in Slobin’s (2004) typological study of motion verbs.

In two pioneering studies Westermann (1927; 1937) compared ideophones in half a dozen West-African languages and described how features like reduplication, tone, vowel quantity, vowel quality and muscle tension appeared to be systematically related to some aspects of the meanings of ideophones (Table 2). This made Westermann one of the first to outline a range of recurrent iconic associations in lexical items across languages.

Westermann charted how ideophones use different aspects of speech to create perceptual analogies between form and meaning. Two important facts arise from his data. The first is that iconic associations often rely on systematic iconic contrasts across groups of words: low tone achieves its significance in relation to high tone, and semantic associations involving vowels are best expressed in terms of contrasts between “dark” and “light” classes of vowels. Ideophones often show this type of relative iconicity, with related forms mapping onto related meanings. The second insight is that from a cross-linguistic perspective, the possible associations are many-to-many, not one-to-one (Werner & Kaplan 1963). Low tone does not have one single inherent meaning but can evoke multiple possible meanings, including large size, slow speed and darkness. Conversely, size can be expressed in multiple ways, from tone to vowel quality. It follows that sound-meaning associations are probabilistic, not deterministic. The iconic mappings attested in a given language are only a subset of a much wider range of possible mappings, and they are shaped and constrained by linguistic history as much as by the affordances of sounds and meanings. This underlines the need for cross-linguistic and typological approaches to lexical iconicity.

Westermann’s paper appeared alongside work on cross-modal associations by von Hornbostel (1927), and was contemporary with experimental studies of sound-symbolism

Table 2: Some iconic associations and oppositions attested by Westermann (1927; 1937).

Formal feature	Associated meanings
tone	
low	big, slow, dull, dark, unpleasant
high	small, fast, sharp, light, pleasant
vowel quality	
“dark” (u, o, ɔ)	heavy, thick, plump, bloated, dark
“light” (i, e, ε)	light, thin, tall, fine, bright
consonant voicing	
voiced	heavy, soft
voiceless	light, hard

by Köhler (1929) and Sapir (1929). In an allohistory yet to be written, this experimental work would have benefited from Westermann's cross-linguistic observations. Studies of pseudowords like *maluma* and *taketa* (or the more recent *bouba* and *kiki*) might have avoided reductive attempts to locate simple meanings in single sounds, cognitive scientists would have had early access to a rich palette of iconic associations attested in natural languages, and sensory scientists could have used ideophones to explore universality and diversity in cross-modal correspondences. In reality, ideophone studies and experimental work on sound symbolism continued in splendid isolation for at least another half century, like ships passing in the night (see Levelt 2013: 180–1, 438–45 for the experimental psycholinguistic side of this history). Only recently there has been a rapprochement (Vigliocco & Kita 2006).

3.3 A turning point

In hindsight, we can see Junod's and Westermann's perceptive analyses as a turning point in ideophone studies: far more than a mere adverb class grown out of scale, ideophones were shown to be worthy of study in and of themselves. Through this work, ideophones emerged as fertile ground for the investigation of a wide range of topics fundamental to linguistic inquiry: iconicity and sound symbolism in natural language, the typology of property-denoting expressions, and ideologies about what constituted 'proper' language.

Testimony to the significance of Junod and Westermann's accounts is the fact that both are quoted at length in the influential book *Les Fonctions Mentales dans les Sociétés Inférieures* by the philosopher Lucien Lévy-Bruhl (1910). Lévy-Bruhl however had his own ideological axe to grind. To him, this kind of imitative language use, intimately tied to perception, was evidence of a so-called "primitive mentality" that thinks always in singularities and never in abstract concepts. Citing Westermann's list of Ewe ideophones for ways of walking, he claimed that "for the minds in question, the general concept of walking in general never presents itself in isolation; it is always a certain way of walking which is depicted in sound" (Lévy-Bruhl 1910: 186). To make this argument, Lévy-Bruhl had to gloss over the inconvenient fact that a mere ten pages later, Westermann's grammar describes several productive ways of deriving abstract concepts in Ewe, the first example being *zɔzɔ* 'the going, the walk', derived from *zɔ* 'go/walk' (Westermann 1907: 94).

Lévy-Bruhl's work reached a broad audience and influenced thinking about language and mind far beyond African linguistics. Artists were fascinated by these accounts of exotic forms of language. This was the period in which Tristan Tzara wrote his ideophone-inspired *Poèmes Nègres* (Tzara 1996 [1918]) and Hugo Ball turned to primitive chants in search of "the innermost alchemy of the word" (Ball 1971 [1916]). A little later, the Modernist poet Ezra Pound spoke of "Lévy-Bruhl's account of primitive languages in Africa" which "records languages that are still bound up with mimicry and gesture" (Pound 1934: 21). And so, while Junod's and Westermann's perceptive accounts stood at the base of the scholarly study of ideophones, Lévy-Bruhl's racially charged version of them as signs of primitive mentality came to dominate outside the field. Coupled with Max Müller's pontifications half a century before, this helped ensure that ideophones remained a topic few in general linguistics dared to broach.

4 Grammar and performance: Doke and Kunene

Clement Martyn Doke was a linguist working mainly on South African languages. He was concerned with describing Bantu languages on their own terms and developed a unified framework for grammatical description in his *Bantu Linguistic Terminology* (1935). As he wrote in the preface to that volume, "Do we realise how much our accepted grammatical standards are dependent on historical heritage?" (Doke 1935: 2). In this context, he

introduced the term “ideophone” as a label for a distinctive word class that before then was known under a wide variety of terms.

Doke argued the ideophone was a part of speech on a par with better known categories like nouns, verbs and adverbs. Writing for an audience of traditionally schooled grammarians, he noted that only a limited proportion of ideophones were imitative of sound and therefore “it is not wise to use the term [onomatopoeia] for that part of speech” (Doke 1935: 183). Doke’s insistence on the ideophone as a word class was arguably one of the most influential moves in ideophone studies. It implied that a study of a Bantu language would not be complete without a description of its ideophone system. In the next decades, this launched a flowering of studies of ideophones in Bantu. In the longer term, it helped bring a measure of respectability to the study of these words in general.

Although immensely important for the emancipation of ideophone studies, Doke’s towering figure over the field also led to a narrower perspective. Where Whitehead and Junod had noted the importance of ideophones in everyday speech, for Doke and his contemporaries it was a “rhetorical vehicle” that was mainly of use in narrative (Burbridge 1938). Whereas Westermann drew connections to sensory language and pioneered research into iconicity in ideophones, Doke recommended classifying ideophones according to the number of syllables or tonal melodies, without explaining why this would be informative or useful (Doke 1931: 221; 1948: 300). As a consequence, the next decades saw relatively little work on the meaning and use of ideophones.

An innovative article by Paul Newman (1968) argued that Doke’s insistence on ideophones as one part of speech may be appropriate for Bantu, but should not be taken to be definitional of the ideophone systems of other languages. As he noted, “while one may speak of ideophonic words in Hausa as a single class from a phonological/semantic point of view, one must syntactically separate them into at least three grammatical classes: adjectival-intensifiers, verbal-intensifiers, and descriptive-adverbs.” (Newman 1968: 111). Newman’s analysis showed it was possible to speak of ideophones as a lexical class while recognising that their morphosyntactic functions might be more multifaceted and language-specific.

Research on ideophone-like phenomena now began to pick up pace around the world. Following Hoffkann’s (1952) study of ancient Indian languages, Emeneau (1969) published an overview of “onomatopoeics” in the Indian linguistic area. Uhlenbeck (1952) and Carr (1966) drew attention to iconic and expressive words in Austronesian languages like Indonesian and Malay. Several studies appeared of expressive words in Mon-Khmer languages (Durand 1961 on Vietnamese; Banker 1964 on Bahnar; Henderson 1965 on Khasi; Watson 1966 on Pacoh). A dissertation by Thun (1963) discussed reduplicative words in English. Jendraschek (2001) mentions a literature on ideophones in Turkic languages, of which Marchand (1953) on Turkish and Householder (1962) on Azerbaijani are exponents in Western academia (though a larger portion is in Russian and Turkish). Judging from Akita’s (2009b) bibliography of Japanese studies of mimetics, the 1960s were a fruitful period in this tradition too, with a five-fold increase in the number of studies compared to prior decades.

4.1 Ideophones as depictive performances

While Doke’s work allowed ideophones to be described as part of the grammar of a language, a key question remained: what made them so different from other words that they seemed at times hardly part of language? An answer emerged in work on Shona and Sesotho, two Bantu languages of southern Africa: perhaps ideophones were fundamentally different in semiotic terms, as words that show rather than tell.

Adopting Doke's focus on narrative, Fortune (1962) noted that ideophones seemed to be associated with a dramatic style of speaking, and were "particularly susceptible to the overlay of expressive features of pitch and length that accompany heightened emotional description" (1962: 33). The notion of dramatisation was made explicit by Daniel Kunene, who highlighted the similarity of ideophones to performances. A native speaker of Sesotho, he proposed that whereas verbs "tell about" some action or state, ideophones "present a picture" of it (1965: 22). He described this process as follows: "The ideophone attempts to bring before the listener, for first-hand perception, actions or states (...) It is an attempt to make the audience *see for themselves* what happened — or will happen" (1965: 35; emphasis in original). Ideophones emerged as multimodal performances, inviting the listener to imagine what it is like to perceive the scene depicted.

Kunene supported his take on the depictive nature of ideophones with attentive observations of language in face-to-face interaction. He found that "ideophones are often accompanied by gestures imitating the action or state conveyed by the ideophone, more so in the case of actions than of states" (1965: 36). He found that ideophones could sometimes even be substituted by a gesture, carrying dramatisation to its logical extreme. He noted that the vocal realisation of ideophones had gestural properties. Using a metaphor from dramaturgy, he saw ideophones as performances that required a "stage" (Kunene 2001), arguing this could explain their relative grammatical independence in Sesotho.

Analysing ideophones as dramatic performances allowed Kunene to make headway on the relation between ideophones and intensification. Recall that Vidal in the 1850s noted an equivalence between Yoruba ideophones and English intensifiers like "very", leading to puzzlement over why hundreds of forms in one language would correspond to one intensifier in another. For Kunene, intensification simply arose as a side effect of the depictive quality of ideophones. As he pointed out, it is "the presentation of the action or state, the illusion that we are having a sensual perception thereof, which gives the ideophone its inherent ability to intensify a situation" (Kunene 1965: 22).

5 The crosslinguistic encounter: Samarin and Diffloth

Up to the late 1960s, the different threads of ideophone studies were effectively insulated from each other: there was essentially no interaction between the geographical subtraditions of sub-Saharan Africa, Japan, South-East Asia, India, and Turkey.⁴ It was the work of William Samarin and Gérard Diffloth in the early 1970s that would bring together many of these fields.

In a wide-ranging overview article, Samarin (1970b) identified African ideophones with the "onomatopes" of Azerbaijani (a Turkic language) and Malagasy (an Austronesian language), the reduplicated adverbs of Mon-Khmer languages (Austroasiatic), the "impressionistic adverbs" of Korean, and with similar phenomena in Tamil (a Dravidian language of India), Thai (Tai-Kadai, mainland South-East Asia) and the American Indian languages Yokuts (Yokutsan, California) and Waiwai (Karib, Brazil and Guyana). As he noted:

Elsewhere in the world [...] we find similar classes of words. What is striking about them, as with African ideophonic words, is that (1) they display a great deal of play with sounds, that (2) they are predominantly reduplicative, that (3) their phonology is in some respects different from that of all other words, and finally,

⁴ I have found only two isolated and largely forgotten exceptions from before the 1970s: one is Prietze's (1908) study of "intensifying adverbs" in Hausa and Kanuri, which noted a parallel with Turkish reduplicative alliterative forms like *qap qara* 'pitch black' and *kup kuru* 'completely dry' (Prietze 1908: 317). The other is a study of Middle English ideophones by Smithers (1954), who took the term "ideophone" from Doke and linked the phenomenon to Bantu ideophones and to the Ewe *Lautbilder* described by Westermann.

that (4) they have very specific meanings sometimes difficult to define. (Samarin 1970b: 160)

In the same period Gérard Diffloth (1972) published his *Notes on Expressive Meaning*, a rich article focusing on some of the semantic and morphosyntactic challenges posed by ideophones. He noted parallels between the ideophone systems of Bantu, Chadic, Indo-Aryan, Dravidian, the Munda and Mon-Khmer branches of Austroasiatic, Austronesian, Japanese and Korean, adding:

Such a wide geographic and historical distribution indicates that ideophones are a characteristic of natural language in general, even though they are conspicuously undeveloped and poorly structured in the languages of Europe. (Diffloth 1972: 440)

5.1 New methods and findings

The crosslinguistic perspective breathed fresh air into studies of ideophone systems. Samarin placed ideophony in the wider context of the expressive use of language, noting parallels to other linguistic phenomena such as expressive intonation, language games and ritual language, which all share an *aesthetic* element: “the property of speech forms to attract attention primarily to themselves rather than to the message they convey” (citing Garvin & Mathiot 1960: 787; Samarin 1970b: 165). Noting a need for more precision in semantic description, Samarin developed a battery of methods for investigating the meanings of ideophones (Samarin 1967; 1970a). These included ways to study lexical relations (synonyms and antonyms) in ideophones, investigating phonosemantic correlations, and devising questionnaires to measure consistency and variability of the forms and meanings of ideophones. Samarin’s work set an example in its insistence on definitional and methodological rigour in ideophone studies.

With the crosslinguistic significance of a lexical class of ideophones more or less settled, the Dokean focus on the word class status of ideophones lost its urgency. Other topics gained in prominence, chief among them iconicity and expressive phonology, themes that had been virtually untouched since Westermann’s pioneering work half a century before. Diffloth (1972; 1976) drew attention to a number of widespread acoustic and articulatory iconic patterns in South–East Asian ideophone systems. For instance, small phonological changes often come with analogous changes in meaning, as in the following series of ideophones depicting chewing noises in Semai, an Aslian language: *grĩ:p* ‘of chewing small, brittle things’, *grũ:p* ‘of chewing large, somewhat soft things’, *grã:p* ‘of chewing large, hard things’ (Diffloth 1976: 260). In contrast, nouns and verbs are lexically discrete: change a single phoneme and you get an unrelated word or not a word at all (as in dog/dig/deg). Diffloth noted that the iconicity and gradience of ideophones posed problems for models of language that rely on a strict dichotomy between meaning and phonological form.

The momentum created by the work of Samarin and Diffloth led to a spate of new studies on form-meaning associations in ideophones, along with theoretical proposals about their linguistic composition. Marion Johnson defined Bantu ideophones as “lexical items in which semantic representation of perceptual qualities are mapped directly onto phonological strings, without passing through the morphological component of the grammar” (Johnson 1976: 241). Several authors independently catalogued how speech sounds and syllable structure in ideophones provided perceptual analogies of event structure (Wescott 1973 for Bini; Collins 1979 for Malay; Awoyale 1983 for Yoruba).

5.2 Impact in general linguistics

In the 1970s and 1980s, the increased prominence of ideophones began to make an impact on broader linguistic theory and practice. One sign of this was their appearance in *The Sound Shape of Language*, a wide-ranging review of phonetics, phonology and sound symbolism by noted linguists Jakobson and Waugh (1979). They surveyed work on ideophones by Samarin, Diffloth, Westermann and Wescott, drawing instructive parallels to synaesthetic associations (Reichard, Jakobson & Werth 1949), verbal art, and poetic performance. As they noted, “Closer attention to the extent and display of the *Lautsinn* in these varied types of ideophones is a timely pursuit for the science of language” (Jakobson & Waugh 1979: 198). Indeed, ideophones would turn out to have important theoretical consequences for a number of key areas in general linguistics (Table 3).

Observations of phonosemantic patterns in ideophones had important implications for theories of phonology and morphology relying on a strict distinction between formal features and meaningful elements. An analysis of vowel harmony in Korean ideophones in terms of phonosemantically based features influenced theories of autosegmental phonology (Kim-Renaud 1978; McCarthy 1983). Japanese ideophones played an important role in McCawley’s (1968) seminal account of generative phonology, and later in Mester and Itô’s (1989) theory of feature predictability and underspecification. In each of these cases, the crucial point was that ideophones were different from other words, but in systematic ways. They presented phonological patterns and processes not observed in other strata of vocabulary, and so played an important role in “stress-testing” formal theories.

One of the earliest accounts of nonconcatenative morphology, long a formidable theoretical puzzle, relied heavily on evidence from Korean ideophones, Semai ideophones, Hta echo-words, Hengxian reduplicatives and related sound-symbolic phenomena. As McCarthy wrote, “these exotic phenomena pervade the world’s languages with a regularity and complexity that makes them both essential and ideal for testing any theory of morphology” (McCarthy 1983).⁵ The gradient properties of ideophones described by Diffloth were also observed in North American languages by Mithun (1982). She showed that analysing ideophones as iconic helped explain apparent irregularities in their synchronic and diachronic behaviour, for instance their resistance to processes of regular sound change. In a study of the intonational system of English, Liberman (1975) adopted Diffloth’s distinction between “ideophonic and morphemic modes of lexical structure”,

Table 3: Some examples of the impact of ideophones on general linguistics in the 1970s and 1980s.

Topic of study	Key examples
nature of phonological features	Kim-Renaud (1978), Mester & Itô (1989)
nonconcatenative morphology	McCarthy (1983), McNally (1991)
aesthetic and expressive functions of language	Samarin (1970a), Jakobson and Waugh (1979)
lexical discreteness and the nature of words	Diffloth (1976), Mithun (1982)
gradience and iconicity in prosody	Liberman (1975), Bolinger (1985)
psychological reality of lexical iconicity	Fischer-Jørgensen (1978), Fordyce (1988)
expressive vs. prosaic levels of structure	Diffloth (1980), Zwicky & Pullum (1987)

⁵ That ideophones could be described as “exotic phenomena” and as “pervading the world’s languages with regularity” in one sentence is a perfect illustration of the viewpoint dependence of notions of marginality (Dingemanse 2017).

with the former being iconic and the latter arbitrary. Liberman used this distinction in the service of an analysis of intonation as similarly two-faced, with iconic and arbitrary aspects.

Around the same time, scholars began to start experimental testing of the iconic associations found in ideophones. Fischer-Jørgensen (1978) put some of Westermann's proposals to the test in a forced choice task with 99 Danish students. The students were presented with his "dark" and "light" vowel groups and had to match Danish adjective pairs to them. Fischer-Jørgensen found that "79 to 98% of the Danish students were in agreement with the West Africans" for most of the sound/meaning associations, and concluded these may be universal. Fordyce (1988) carried out several "meaning-guessing experiments" with ideophones from Yoruba and Korean and provided suggestive evidence that English speakers were able to match aspects of form and meaning in Yoruba and Korean ideophones at above chance levels.

In short, it was clear that ideophones could no longer be ignored; indeed their growing prominence threatened the watertight distinction between form and meaning presupposed by many theories. An influential account tried to stem the tide by arguing that ideophones were best analysed as falling "in a domain orthogonal to the grammar" (Zwicky & Pullum 1987: 338), with their own rules and regularities of expressive morphology. This was reminiscent of Diffloth's proposal of a distinct expressive phonology, in which "the structural elements necessary for prosaic language are deliberately re-arranged and exploited for their iconic properties" (Diffloth 1980). Overall, the picture in this period was one of theories in flux, with ideophones contributing crucial data and motivating theoretical innovations. The situation was radically different from even two decades before, when ideophones were the remit of only a small set of area specialists and anthropologists.

With an inevitability that brings home the cyclical history of ideas, there soon followed a Max Müller-esque counterpoint to the growing appreciation of ideophones in general linguistics. Without reference to empirical data, a paper in *Language* recycled a century-old philosophical argument by Whitney to claim that "the number of pictorial, imitative, or onomatopoeic nonderived words in any language is vanishingly small" (Newmeyer 1992: 758). Though only an introductory note setting the tone of a paper focusing on iconicity in syntax, this was another highly visible argument from authority denying lexical iconicity any typological or theoretical significance.

However, by now, the flood of work was virtually unstoppable and scholars working on iconicity began to be more outspoken. Linda Waugh delivered a presidential address to the Semiotic Society of America entitled "Let's take the "con" out of iconicity" (Waugh 1992) and Janis Nuckolls made "the case for sound symbolism" (Nuckolls 1999). A seminal volume on *Sound Symbolism* (Hinton, Nichols & Ohala 1994) brought together work on ideophones and iconicity by a range of prominent linguists and showcased its relevance across the language sciences, from the biological bases of sound symbolism to its cultural and linguistic elaboration in languages worldwide.

6 Recent developments

Work since the 1990s has been rich and varied. Reflecting the increasing body of work on the topic, some important consolidations of ideophone research appeared. In the wake of the *Sound Symbolism* volume, Kulemeka (1995) offered a useful comparison of the African and Asian subtraditions in ideophone studies, noting that in Africa, the focus has been predominantly on the word class status of ideophones (the legacy of Doke and Newman), while in Asia the focus had been more on iconic patterns in ideophones (following the lead of Uhlenbeck and Diffloth). A major milestone was the first world-wide conference

on ideophones in Cologne in 1999, which was followed by an edited volume *Ideophones* (Voeltz & Kilian-Hatz 2001a) presenting 27 descriptive and typological studies of ideophones from languages around the world, though with a strong focus on Africa.

A steady stream of descriptive studies continued to favour topics like word class status and iconicity (Awoyale 1989; Kulemeka 1996; Hamano 1998; Black 2003; Beck 2008), but this period also brought novel lines of work made possible by new methods and the increased availability of cross-linguistic data. This included work on gesture (Kita 1997; Klassen 1999), sociolinguistics (Childs 1994b; Lydall 2000), translation (Noss 2003; Toratani 2009), neuroimaging (Osaka 2006), and word learning (Yoshida 2004; Imai et al. 2008). Since much of this material has been reviewed elsewhere (Vigliocco & Kita 2006; Akita 2009a; 2015; Armoskaite & Koskinen 2017; Ibarretxe-Antuñano 2017), here I draw attention only to two areas where the implications of ideophones have received less attention.

6.1 Typology: Ideophones as a major lexical class

A recurring observation in work on ideophones is the sheer size of the lexical class they make up in many languages. Describing ideophones in Gbaya, Samarin noted, “[t]he number of members which constitute this class make it almost as important as the class of nouns or verbs” (1966: 186). Similarly, in Aslian languages, “expressives constitute a third major form-class comparable in magnitude to nouns and verbs” (Matisoff 2003: 50). Many grammatical descriptions characterise ideophones as an open class (Childs 1994a) and when specific numbers are mentioned, they often run into the thousands (Table 4). The precise numbers are less important than what they imply about grammatical significance and functional load. While minor word classes may be dismissed by some as marginal or of limited importance to linguistic analysis, it is much harder to make such arguments for languages with thousands of ideophones. As Kakehi et al. note in a dictionary of Japanese mimetics, “When we examine the occurrence of iconic words in both spoken and written Japanese, we must conclude that such words enjoy a position in the language that is anything but marginal. Such forms are indispensable to daily communication” (Kakehi, Tamori & Schourup 1996: xi).

A key feature of ideophones is that they evoke sensory qualities like motion, manner, texture, and colour, often as modifiers of noun and verb phrases. This puts them partly in the same business as adjectives and adverbs, and renders them relevant to typologies of manner and property-denoting expressions. In an influential typological treatment of such modifying expressions, Dixon (1982) proposed a continuum from strongly adjectival to strongly verbal languages. Ideophones do not figure in this typology, nor in most later comparative work on adjectival classes (Dixon & Aikhenvald 2004). One could argue

Table 4: Reported magnitude of some well-documented ideophone inventories.

Language	Reported magnitude of ideophone inventory
Basque	“more than 4,500” (Ibarretxe-Antuñano 2006: 150)
Gbeya	“over 3,000” (Samarin 1971: 161)
Japanese	“4,500” (Ono 2007)
Korean	“several thousands” (Sohn 2001: 96)
Semai	“same order of magnitude” as nouns and verbs (Diffloth 1976: 249)
Turkish	“one to two thousand” (Jendraschek 2001: 39)
Zulu	“3,000” (von Staden 1977: 200)

that as a consequence, the typology can only be partially valid. Indeed, as Ameka (2001) points out based on data from Ewe, the inclusion or exclusion of ideophones has major implications for the typological generalisations that can be made. It affects the placement of Ewe on the verbal versus adjectival continuum: if ideophones don't count, Ewe is more on the verbal side of the typology, whereas if they do, Ewe becomes the adjectival type. It also affects the analysis of the adjective class as open or closed: if ideophones don't count, Ewe has a very small class of a handful of basic adjectives, like many African languages (Welmers 1973); but if they do, it has a large open class of underived adjectives. As Ameka notes, “the kind of data considered in the analysis affects the characterisation of the adjective class in a language” (2001: 40).

A similar development can be seen in typological studies of motion expressions. Languages have long been divided into verb-framed and satellite-framed types based on how the path of a movement is expressed (Talmy 1985). Work on this topic by Ibarretxe-Antuñano (2004; 2015) showed that in Basque, ideophones play an important role in motion expressions. In a manner reminiscent of Westermann's observations on Ewe, Ibarretxe-Antuñano lists large numbers of Basque ideophones lexicalizing aspects of motion event. A number of these —like *plisti-plasta* ‘motion on water’, *ttaka-ttaka* ‘walking in small and short steps’, and *tirriki-tarraka* ‘walking with difficulty, dragging the feet’ (Ibarretxe-Antuñano 2015)— consistently recur in narratives elicited using the “Frog story” stimulus, a widely used tool in the typology of motion events.

Ibarretxe-Antuñano's work led to broader recognition of the importance of ideophones in motion event typology. In subsequent typological work, manner of motion was recognised as an important dimension covarying only partly with the original path-based typology. As Slobin noted, “The availability of ideophones thus adds a further revision to the V-language/S-language typology” (Slobin 2004). Recent work on Quechua ideophones raises further challenges for motion event typology (Nuckolls 2014). Classical motion event typology privileges the finite verb, but in Quechua, ideophones are at least as important (sometimes even replacing the verb). Moreover, as Nuckolls points out, the idea that the typology is a result of optimising the expenditure of communicative effort is hard to square with the elaborate and energetic use of ideophones in motion expressions.

Cases like these raise the question to what extent our typological generalisations are skewed by a priori assumptions and limited language samples. If a careful description of Ewe ideophones can unsettle a neat binary typology of adjective classes, and if observations of Basque and Quechua ideophones can lead to key revisions in motion event typology, one wonders how many more surprises are held in store by the ideophone systems of the world's languages.

6.2 Linguistic anthropology and language ideologies

Although Junod and Westermann did important early work on cultural aspects of ideophone use, much of it was overshadowed by Lévy-Bruhl's view of ideophones as signs of primitive mentality. The late 20th century saw the return of ethnographically informed approaches to ideophone studies. Philip Noss produced an insightful series of studies on ideophones and verbal art in Gbaya, an Ubangi language of central Africa (Noss 1989; 1999; 2001). Janis Nuckolls initiated a fruitful line of ethnographically grounded work on ideophones in a lowland Ecuadorean variety of Quechua, culminating in the books *Sounds Like Life* (1996) and *Lessons from a Quechua Strongwoman* (2010) in which she documented the linguistic and cultural ecology of ideophones. Building on Nuckolls' work on the “neglected poetics of ideophony” (2006), Anthony Webster analysed the aesthetics and semiotics of iconicity in Navajo poems written by the renowned Navajo poet Rex Lee Jim (Webster 2008).

Language ideologies — metalinguistic attitudes and judgements about ideophones — are a recurring theme in anthropological work. Language ideologies exert an influence on speakers as well as on scholars. For speakers, they help explain when and why people use ideophones. Noss (1989) shares metalinguistic commentary by the Gbaya poet Dogobadomo, who presents ideophones as cultural heritage to be “found” and “arranged in order” for aesthetic effect. Nuckolls (1995) shows how the use of ideophones by Quechua speakers is influenced by their ecological and aesthetic orientations. Webster (2006) highlights the “feelingful iconicity” that may lead Navajo speakers to maintain ideophony in their poetry against the tide of ongoing language shift to English.

As we have seen, language ideologies have also deeply influenced the scholarly treatment of ideophones. A deeply rooted dismissive attitude towards iconic modes of communication is one of the prime reasons for the traditional marginalisation of the ideophone in Western linguistics.⁶ Linguistic anthropologists have played an important role in interrogating and contesting the language ideologies at play. As Nuckolls noted, “It is not surprising that some of the most articulate defenders of sound symbolism have been linguists with a deep interest in poetics and non-Western poetic traditions” (1999: 244).

Indeed, some of the most insightful treatments of ideophones have come from scholars steeped in native or native-like knowledge of ideophonic languages. Especially the last five decades of ideophone studies have seen great influence from the work of native speaker linguists. Examples include Daniel Kunene (1965) on Sotho, Shoko Hamano (1998) and Sotaro Kita (1997) on Japanese, Omen Maduka (1988) on Igbo, Yiwola Awoyale (1983) on Yoruba, Andrew Kulemeka (1996) on Chichewa, Azeb Amha (2001) on Wolaitta, Francis Egbokhare (2001) on Emai, Felix Ameka (2001) on Ewe, Adams Bodomo (2006) on Dagaare, Young-Key Kim Renaud (1987) and Seokhoon You (1992) on Korean, Iraide Ibarretxe-Antuñano (2006) on Basque, and many more.⁷

Ideophones appear to be quite unique in this respect: it is hard to find another linguistic phenomenon that has seen so much sustained scholarly input from linguists who are also native speakers. The native speaker sensibilities of these scholars has enabled them to highlight key properties of ideophones, while their scholarly instincts helped them to see gaps and biases in traditional coverage. It has been argued that the most productive situation in language description and theory is when native and non-native speakers join forces (Ameka 2006). This seems to be well exemplified in the field of ideophone studies.

6.3 Redrawing the margins

In the introduction to an incomparable illustrated dictionary of Japanese ideophones, illustrator Taro Gomi writes:

“So linguists do not deal with onomatopoeic expressions. Or perhaps I should say, they are unable to deal with them. And this is not surprising; onomatopoeic expressions are not the kind of subject matter that expert linguists can take up as a separate topic and study academically. After all, onomatopoeic expressions are

⁶ Though this is now uncommon in most quarters of linguistics, it is not hard to find examples in neighbouring disciplines, where Lévy-Bruhl’s legacy lives on. A recent literary study describes ideophones as “ancient strata of onomatopoeic words”, which are “particularly characteristic of children’s speech or languages with no literary tradition” (Eloeva & Sausverde 2016: 103).

⁷ This partial listing of key scholars and publications is limited in at least the following ways: (i) it includes only academic publications, (ii) it includes only work published in English, and (iii) it lists only one or two scholars per language (particularly for Japanese and Korean linguistics, many more could be mentioned). To the list we might also add language consultants like Dogobadomo for Gbaya (Noss 1989), Luisa Cadena for Pastaza Quecha (Nuckolls 2010), Rex Lee Jim on Navaho (Webster 2014), and Odime Kanairo and Ruben Owiafe for Siwu (Dingemans 2014). Through their eloquence and metalinguistic awareness, they have made important contributions to the scholarly study of ideophones.

not really language; they are, in a sense, raw language. [...] Linguists, who are always described by such orthodox adjectives as *kashikoi* (wise), *tadashii* (right), *erai* (great), or *rippana* (respected), cannot handle them. If they handle them carelessly, they will run into problems.” (Gomi 1989: iii)⁸

This must be one of the most eloquent expressions of ideophone exceptionalism in print. While I have argued that exceptionalism can be unproductive, there is something deeply insightful about the characterisation of ideophones as “raw language”, resisting assimilation to “orthodox” linguistic perspectives. Linguistics, with its roots in the study of written materials and a penchant for imagined sentences instead of everyday language use, is in some respects ill-equipped to deal with ideophones.

However, as we have seen here, a redrawing of the margins has long been underway, though the uptake has at times been uneven and some territories remain contested or unclaimed. The idea that ideophones can be a class of words on a par with nouns and verbs has become widely accepted in grammar-writing, though still less often practiced than preached (Ameka, Dench & Evans 2006). The hybrid nature of ideophones as the most gesture-like of spoken words led to crucial innovations in phonology and morphological theory, and currently enables a productive convergence with research on gestural expressive resources (Okrent 2002). The cross-linguistic prevalence of ideophones has contributed to a growing realisation that the lexicon combines arbitrariness and iconicity (Perniss, Thompson & Vigliocco 2010). Today, research on ideophones is well-placed to contribute to several current methodological and theoretical questions (Table 5).

7 In conclusion: Challenges and opportunities

This review has presented a chronological narrative to bring out intellectual lineages and historical developments in the research history of ideophones. Throughout, we have seen patterns that recur in different times and places. Some of these cyclical phenomena are metalinguistic ideologies that keep reappearing with remarkable stubbornness. Others are empirical findings that were mined as rough diamonds by early scholars, cut and polished by the next generation, and worked into more complex pieces by later scholars. Let me select some of the most salient patterns in the form of pointwise summaries at three levels of abstraction.

Table 5: Some current questions for which ideophones provide critical evidence.

<ul style="list-style-type: none"> • How can we incorporate arbitrariness and iconicity in formal theories of language? (Schlenker, Lamberton & Santoro 2013; Wilcox & Xavier 2013; Davidson 2015) • What are the roles of iconicity in language learning and communication? (Imai & Kita 2014; Laing 2014; Perniss & Vigliocco 2014) • Which cognitive and perceptual processes underlie iconic associations? (Bankieris & Simner 2015; Sidhu & Pexman 2017) • What is the role of iconicity in the cultural evolution of language? (Verhoef, Kirby & de Boer 2015; Tamariz et al. 2017; Pleyer et al. 2017) • How are new vocal depictions created and interpreted? (Assaneo, Nichols & Trevisan 2011; Dingemans 2014; Perlman, Dale & Lupyan 2015) • Which words are most iconic, and why? (Winter et al. 2017) • How universal or language-specific are iconic form-meaning mappings? (Dingemans 2012; Occhino et al. 2017)
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⁸ This quote is from a bilingual edition produced for a general audience, in which the translation ‘onomatopoeic expressions’ was probably chosen to avoid the technical term “mimetics” more common in English work by Japanese linguists. Sound imitatives are in the minority in the dictionary.

At the first and most proximal level, there are three common misconceptions that recur through the history of ideophone studies. It is worth being aware of them, if only to unmask the questionable assumptions behind them.

THREE MISCONCEPTIONS ABOUT IDEOPHONES

1. *Ideophones are “playthings, not tools”*. Some have considered any imitative use of language childish, based on unreflective adoption of Standard Average European language ideologies. Questionable assumption: one’s own language ideologies offer a good guide to those of others.
2. *Ideophones are just onomatopoeia*. Some have taken all ideophones to be imitative of sound, based on the fact that onomatopoeia are the most obvious example of imitative words. Questionable assumption: speech can depict only sound.
3. *Ideophones are just intensifiers*. Some have thought ideophones are essentially intensifiers, because pragmatically equivalent translations in European languages tend to include “very”. Questionable assumption: pragmatic equivalence implies semantic and semiotic identity.

As often, it is easy to see where the misconceptions come from. Being used in playful contexts is one of the affordances of vivid sensory words, so their appearance here is entirely expected — but it is neither necessary nor sufficient to explain the genesis and maintenance of larger inventories of ideophones. Onomatopoeia do occur in all known spoken languages, and they can be analysed as the subset of ideophones imitative of sound (so the reverse is accurate: onomatopoeia are ideophones). Yet speech is more than just sound, and can be used depict other aspects of sensory scenes by means of diagrammatic iconicity. Finally, intensification is an expected pragmatic implicature of any depiction of content also referred to by descriptive means, making ideophones a possible source domain for expressive intensifiers; but their formal diversity and semantic specificity strongly suggest that in most languages, they are more than just intensifiers.

At a higher level of abstraction, ideophone research has generated a number of novel insights about the integration of iconic lexical resources in language. Here are three of the most salient ones:

THREE LESSONS LEARNED FROM IDEOPHONES

1. *Depiction is one of the major modes of communication*. Ideophones show how vocal depictions may become lexicalised as vivid sensory words, and how speech and iconic gesture can be tightly linked and mutually reinforcing in multimodal acts of depiction.
2. *Lexical iconicity is not deterministic but probabilistic*. Language provides a multi-dimensional possibility space for iconic associations between aspects of form and meaning. Ideophones offer existence proofs of many iconic associations beyond those known from pseudowords.
3. *Ideophones reshape the typology of language*. Our power to formulate meaningful typological generalisations in domains like phonology, motion events, adjectival concepts, and sensory language is strongly affected by the inclusion or exclusion of ideophones.

One thing suggested by the ubiquity of ideophones in everyday conversation in the world’s languages is that depiction — a mode of communication relying on perceptual analogies — is one of the central affordances of human language (Donald 2005; Zlatev 2007; Clark 2016). This should not surprise us. Natural languages are the result of aeons

of cultural evolution in the hands and minds of language users, so it would be remarkable if the depictive affordances of verbal material had remained unused (Perlman et al. 2015). What is typologically remarkable about ideophone languages is that in them, the depictive potential of speech has taken on a life of its own, in the form of a sizable lexical class of conventionalised depictions, with implications for the nature of phonological systems, the relation between form and meaning in language, and the functional load of major lexical categories.

Applying the lessons learned from ideophones to linguistic research more generally, the work reviewed here motivates a re-evaluation of traditional conceptions of language and linguistic structure. We can frame these as challenges, though it is useful to recall that every challenge represents an opportunity for innovation.

THREE CHALLENGES PROVIDED BY IDEOPHONES

1. *How can we account for depiction in grammar?* As multimodal depictions, ideophones defy dichotomies like language versus paralinguistic or word versus image. Linguistic theory needs to be enriched to account for the phonology and morphosyntax of lexicalised depictions.
2. *How can we make linguistic diversity accessible to the cognitive sciences?* Ideophones provide fertile ground for empirical work on the roles of iconicity in cognition and communication. Linguistic studies must be combined with experimental work for broader impact.
3. *How can we avoid perpetuating language ideologies in linguistic practice?* Biases can only be overcome through awareness and diversity in scholarship. As ideophones show, native speaker linguists can offer a powerful antidote against unquestioned ideologies.

Ideophone research has already begun to make headway on these challenges. It has shown how vocal depictions may be combined with gestures (Kita 1997) and incorporated into utterances (Kunene 2001), demonstrating an interplay between morphosyntax and mode of representation (Dingemanse 2015). Increasingly, insights from work on ideophones are used in experimental studies, for instance in the study of iconicity in word learning in children and adults (Imai et al. 2008; Lockwood, Hagoort, & Dingemanse 2016). More of this is needed in order to ensure the relevance and ecological validity of experimental findings, and to remedy psychology's overreliance on Western languages and societies (Henrich, Heine, & Norenzayan 2010). The most fundamental challenge may be to decouple language ideologies and linguistic practice. Ideophones offer one of the most vivid examples of how linguistic inquiry can vacillate between data-driven and ideology-driven approaches. Yet ideophone research also shows by example how diversity in scholarship can help offset eurocentric biases and correct subjective notions of marginality.

A good deal of the work reviewed here can be understood as part of a larger project of putting the study of language in its proper context. From this perspective, it is merely a historical accident that the study of language has focused for so long on isolated sentences and monologic texts, foregrounding a view of language as an arbitrary vehicle for the disembodied and decontextualised transmission of ideas. To the extent that ideophones motivate a redrawing of the margins of language, it is an operation that has long been overdue — one that will only result in a stronger and more comprehensive science of language. If engaging with ideophones means coming to terms with semiotic diversity in grammar, studying iconicity alongside arbitrariness, and overcoming scholarly biases, we will gain a better understanding not just of ideophones but of language as a whole.

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Competing Interests

The author has no competing interests to declare.

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