
Language ecology and photographic sound in the McWorld

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The unique sounds of the world's small-scale languages are being extinguished at an alarming rate. This article explores links between acoustic ecology and language ecology and outlines an approach to the creation of archive material as both source for and useful by-product of sound art practice and research. Through my work with endangered click-languages in the Kalahari Desert, it considers the boundaries between language and music and discusses the use of flat speaker technology to explore new relations between sound and image, portrait and soundscape in a cross-cultural context.

*To the field then! With notebook and pencil, record, record, record.*¹ (Kroeber in Brady 1999: 67)

The claim, as reported in a *New York Times* article in 2003, that the click-languages spoken by the Khoi and San peoples of southern Africa '... hold a whisper of the ancient mother tongue spoken by the first modern humans' (Wade 2003) is compelling and would have been a convenient hook for an essay on the themes of the present publication. Unfortunately, linguistics is a relatively young field which can estimate with reasonable certainty what some languages may have sounded like 5 or 6,000 years ago, but guessing what forms human utterance took 50 or 100,000 years back is clearly in the realm of speculation. Although recent genetic and archaeological research can be interpreted as pointing to such a conclusion, 'the blood and the stones can't talk' (Austin in Wynne 2005), so we will never know with certainty what protolanguage our earliest ancestors used.

What we do know, however, is that the linguistic diversity of the world is under threat: of the approximately 6,000 languages in the world, it is variously estimated that between fifty and ninety per cent will be gone by the end of this century. With the exception of Nama, all of the indigenous languages of the Khoi and San – the politically sensitive terms for groups otherwise known as Hottentot and Bushman – are classified by linguists as either endangered or moribund. Contrary to the implications of the Biblical story of the Tower of Babel, in which the multiplicity of languages

in the world is delivered to mankind as a punishment, it is clear that, just as biological diversity is necessary for a healthy ecosystem, linguistic and cultural diversity contribute to the long-term stability of human development. If language is one of the primary repositories of culture and history and if 'our success at colonising the planet has been due to our ability to develop diverse cultures which suit all kinds of environments' (Crystal 2000: 33), it follows that 'any reduction of language diversity diminishes the adaptational strength of our species because it lowers the pool of knowledge from which we can draw' (Bernard in *ibid.*: 34). Typically, one of the few instances in which *traditional knowledge* is perceived to be of value in the North is when it has commercial applications: recently, a plant used by the San to stave off hunger has been seized on by US pharmaceutical giant Pfizer as a potential source for a new anti-obesity drug. Losing a language means that the potential complexity of our understanding of the world is reduced, and the domination of a few global languages is no more likely to foster peace and stability than replacing highly diverse rainforests with huge swathes of single crops is to improve the global ecosystem. One of the greatest pressures on the linguistic diversity of the world is from what have been called the *killer languages*.²

The language of the global village (or McWorld, as some have called it) is English: not to use it is to risk ostracisation from the benefits of the global economy. It is at least partly for this reason that many newly independent countries have opted to use the language of their former colonisers. . . . Moreover, the elite in these countries generally acquire languages through schooling, and use this knowledge to retain their positions of power. . . . (Nettle and Romaine 2000: 31)

²The use of anthropomorphic terms like *killer language*, *language murder*, and even *language suicide* to describe what happens as the globalising languages spread can potentially promote a misleading oversimplification of the varying social, political and economic causes of language loss. It is not the fault of the English language itself that other languages are dying: as Professor Peter Austin of the Endangered Languages Project at the School of Oriental and African Studies in London put it in an interview with the author, 'English is not *doing* anything. It is speakers of languages who are *doing* things' (Austin 2005).

¹Theodora Kroeber, describing in 1977 the attitude inspired by anthropologist Franz Boas in the early twentieth century

Recorded documentation is essential if the sounds of local languages are to be preserved for future generations; it can also provide an important resource for both linguists and communities engaged in the struggle against their decline. It can also form the basis for creative sound practice.

My initial interest in click-languages was aroused primarily by the sound itself: on my first trip to South Africa I watched a Zulu newsreader on TV, fascinated by the seemingly effortless explosions (see figures 1 and 2) which occasionally emanated from his mouth as part of what otherwise seemed pretty much like just another of the myriad of foreign languages encountered by travellers and inhabitants of multi-cultural societies. Apart from a now extinct language called Damin, which was used only during male initiation rites by the Lardil in Australia, languages with complex, integral systems of click consonants have only ever been found in southern Africa. Many of the Bantu languages (including Zulu and Xhosa) spoken by more recently arrived inhabitants of this region have almost certainly borrowed their click sounds from the indigenous Khoisan languages. There are many different click-languages within a relatively small geographical area (now primarily defined by the Kalahari Desert), and most of them are mutually unintelligible: this is understood to be the result of hunting

and gathering in small groups which moved around a great deal, sometimes not having contact with others for long periods of time.

Languages that are used primarily for communication within small groups often display great complexity; by contrast, most of the spreading global languages such as Chinese, English, Spanish and Arabic have tended to become 'grammatically streamlined' (Nettle *et al.* 2000: 12) through expansion and contact with other languages in a process reminiscent of Lucy Lippard's description of how American radio stations changed in the 1960s:

When I was a child [travelling by car] with my parents . . . , you could tell where you were geographically and culturally by listening to the radio. By the late 60s, a bland generic mediaspeak was replacing local accents in broadcasting, just as chain stores and national franchises have all but replaced local enterprises and their down-home names. (Lippard 1999: 9)

Whilst the acquisition of a national or international *lingua franca* may help members of indigenous communities to communicate with others and to pursue economic benefits only available beyond their community, it cannot offer a real replacement for the distinctive cultural identity embedded in their mother tongue which, once lost, can never be fully recovered.

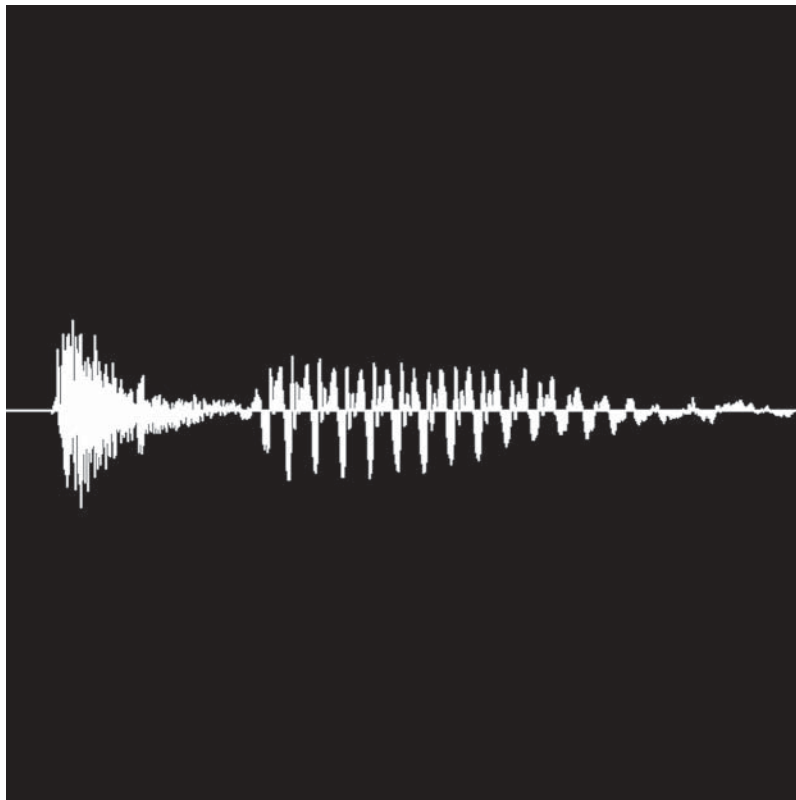


Figure 1. The English word 'to'.

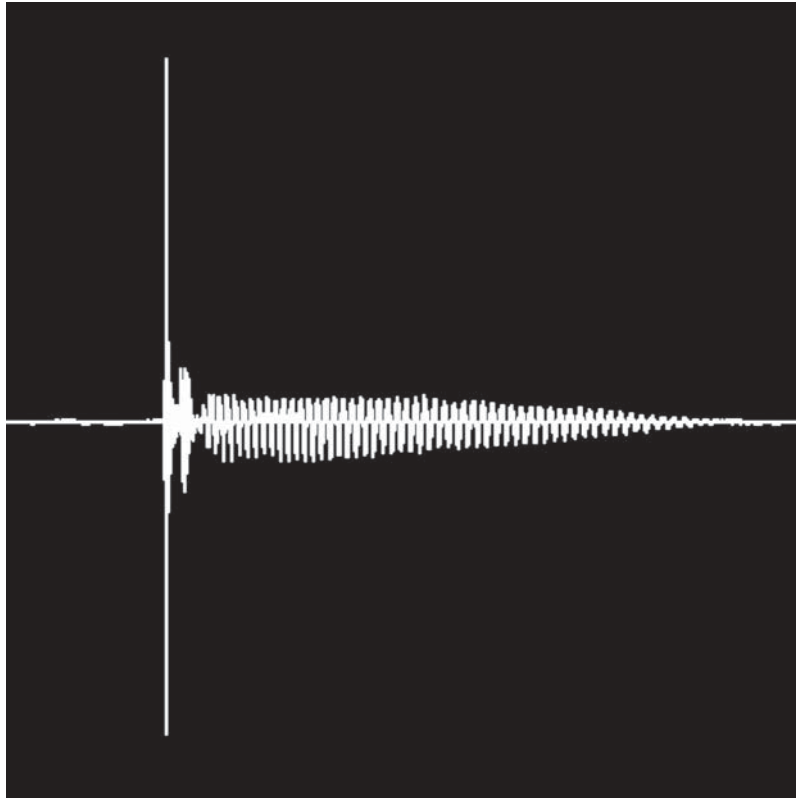


Figure 2. A bilabial click consonant followed by a vowel in !Xóǎ, spoken by Gosaitse Kabathlophane. Clicks differ from English consonants in that they are produced with a double stop rather than a single closure within the mouth, and are ingressive, i.e. produced with an inhaling breath.

Language shift is . . . symptomatic of much larger-scale social processes that have brought about the global village phenomenon . . . About 100 languages are [now] spoken by around 90 percent of the world's population . . . This radical restructuring of human societies, which has led to the dominance of English and a few other . . . languages, is not a case of *survival of the fittest*, nor the outcome of competition or free choice among equals in an idealised market place. It is instead the result of unequal rates of social change resulting in striking disparities in resources between developed and developing countries. (Nettle *et al.* 2000: 14)

The Kalahari Desert is one of a few fragile and dwindling 'pockets of residual diversity' (Nettle *et al.* 2000: 38), but the decline of indigenous languages here has been vastly accelerated by the multifarious 'challenges of modernity and modernisation' (Chebanne in Wynne 2005). One product of modernisation which powerfully represents both its opportunities and its problems for indigenous communities is the Trans Kalahari Highway which made my own journey to the village of D'kar significantly less arduous than it would have been only a decade earlier; the sounds of speeding cars and vultures picking at the remains of roadkill which I recorded on this diagonal slash across the desert are used as transitional elements in some of the work which developed from my trip, symbolising

this incursion of technology and its pronounced impact on the cultural, linguistic and acoustic ecology of the region.

Khoisan languages are highly complex: 'in grammatical and structural terms, [they] are world class competitors in structural complexity' (Andersson and Janson 1997: 168). One of the most phonetically varied of these is !Xóǎ, of which there are currently about 6,000 speakers, mainly in Botswana. With its forty-eight distinct click variations and some eighty-three different ways of starting a word with a click, this language represents 'something like a maximum for human linguistic behaviour' (Andersson *et al.* 1997: 140). This sort of complexity is cited by some as one reason to doubt the theory that clicks were characteristic of a human *Ursprache*:

It would be particularly odd to assume that early phoneme systems were similar to those of the Khoisan languages, since these systems are the most elaborated of all on Earth. A primitive protolanguage could not have sustained as many phonetic distinctions as these languages offer in their click accompaniments, phonation types and tones. (Traunmüller 2003: 3)

Such conjecture also begs the question why, if they were part of a common first language, clicks are confined to such a limited geographical area: there

are plenty of examples of languages acquiring clicks from others, but none of languages losing them. Other objections to this theory arise from a justifiable reluctance to encourage a return to the attitude that Bushmen are ‘. . . not fully developed, being lower on the evolutionary scale’ (Stopa 1979: 18). In *Clicks: Their Form, Function and their Transformation OR How Our Ancestors were Gesticulating, Clicking and Crying*, Roman Stopa spends several pages delineating the primitiveness of the Bushmen’s ‘anatomical build’, their economic system, their technology, their social structure and their ‘infantile attitude’, and concludes ‘Finally, the language itself shows features that cannot be characterised otherwise than as extremely primitive’ (Stopa 1979: 19).

Despite the widespread notion that there are some languages which are somehow incapable of dealing with abstract philosophical thought or complex technical concepts, David Crystal reminds us, in *Language Death*, that ‘. . . there is no such thing as a primitive language . . . Every language is capable of great beauty and power of expression’ (Crystal 2000: 30). According to most linguists, *anything* can be said in *any* language: if there is no existing word for something they want to talk about, speakers of a healthy language can invent or borrow one.

A language like English has a very complex technical vocabulary in terms of science and technology and so on, but that’s all very recent and most of it has been developed in the last couple of hundred years; much of it has been borrowed and put together by using words from Latin, Greek and other European languages. Languages are complex in the areas that are significant and important and culturally relevant to those who use them. (Austin in Wynne 2005)

The effects of primitivist assumptions are more pernicious than simply as examples of political insensitivity amongst academics: they seep into more widespread assumptions such as the following description of click-languages recently posted on a History forum . . .

- It’s very basic, no consonants, no vowels.
- Easily [sic] distinguished in the savanna environment.
- Apparently [sic] not perceived, or only barely, by savanna animals.
- Successful method – used even today by Hoisan [sic] tribes.

This was the first step, more advanced forms of languages were developed as our needs evolved. (‘altjira’ 2005)

If there are no words in the Naro language for *broad-band* or *morphological string*, it is because its speakers have historically had no use for the terms, not because the language is somehow inherently weak or deficient – or primitive. Considering the subtle and complex ways they have of describing their natural environment, such languages can make some parts of the

vocabulary of a Londoner who can barely distinguish one kind of tree from another seem positively impoverished by comparison. However, one characteristic of an unhealthy, dying language is ‘limited productive capacity’ (Nettle *et al.* 2000: 54): there are not enough fluent speakers to allow the language to adapt to change, to invent words which are relevant to contemporary life and to borrow without eroding its own foundations.

The political and social history of the Khoisan is comparable to that of other indigenous peoples around the world. Since their traditional lifestyle has been made virtually impossible by the fencing off of land for cattle owned primarily by the Bantu-speaking majority in Botswana, the earmarking of vast areas of the Kalahari as game reserves, and the demands of the diamond mining industry to which Botswana largely owes its modest wealth, most have endured marginalised lives, including forced evictions and near slave-labour conditions in jobs that have little or no connection to their indigenous culture (see figure 3). Poverty, alcoholism and AIDS are rife and their social and economic marginalisation further erodes the status of their various cultures and languages.

The name Hottentot (now replaced by Khoi, meaning *person*) was a derogatory European invention, derived – according to one early English visitor – from their language, which sounded like ‘the clucking of hens or the gobbling of turkeys’ (Terry in Gall 2001: 53). A similar and appallingly dismissive attitude to linguistic difference was shown by an early European visitor to Papua New Guinea who spoke of the ‘hideous, snapping, barking dialect that passes for speech’ and noted that ‘noises like sneezes, snarls and the preliminary stages of choking – impossible to reproduce on paper – represented the names of villages, people and things’ (in Nettle *et al.* 2000: 58). The word *barbarian* is derived from the Greek *barbarus*, ‘one who babbles’: a barbarian was anyone who could not speak Greek, and speak it *properly*. Historically, as Nettle and Romaine put it, ‘Being linguistically different condemns the Other to being savage’ (*ibid.*).

Self-esteem amongst speakers is an important factor in the maintenance and continued development of small-scale languages. The first person I recorded, and the subject of the first work I made when I returned to London, was Gosaitse Kabathophane, a seventeen year old !Xóǝ speaker with whom my collaborator Dr Andy Chebanne, a linguist at the University of Botswana, was working to develop an orthography of this language (see figure 4). Although the written form can never satisfactorily replace the complex oral traditions that are integral to indigenous cultures nor accurately reflect languages which have been ‘brought to their polished and idiosyncratic perfection of grammar and syntax without benefit of a single recording scratch of stylus on papyrus or stone’ (Brady 1999:



Figure 3. Thamae Sobe outside the kind of dwelling typically provided by the government after eviction from land appropriated for game reserves or diamond extraction. D'kar, Botswana, 2003. Photo by Denise Hawrysió.



Figure 4. Gosaitse Kabatlhophane, a seventeen-year-old !Xóð speaker, and Dr Andy Chebanne at the University of Botswana in Gaborone. Photo by the author.

67), and although an orthography is no guarantee of a language's survival, this process is an important step in promoting the continued transmission of languages which have never been systematically written down. As well as aiding in the documentation of the language, helping a young speaker like Gosaitse to become literate in her own first language also benefits her, both in terms of her general education and the esteem in which she holds her language and culture.

In an interview with sociolinguist Dr Herman Batibo, he told me of the pride and excitement with which the launch of the first Naro dictionary was greeted by the leader of the Naro community in Botswana who said, 'From now on, I can see that my language is as good as any other languages' (Batibo 2004). Once written material becomes available, speakers are often anxious to learn to read and write in their own language. All too often, though, 'children's acquisition

of an endangered language may be interrupted at the very stage when . . . grammatical complexity is being acquired' because they are schooled only in the dominant national language (Nettle *et al.* 2000: 50). Another significant indicator of language decline is an increase in the average age of speakers as the active domain of minority languages shrinks and young people move away to places where their language is of little use.

Rather than searching for existing archives of click-language recordings, I sought collaboration with someone in Botswana who could both facilitate the project and make use of the field recordings for other purposes. I declined an offer to collaborate with someone working with a focus on oral history: I was interested in exploring the complex layers of distancing involved in observing/recording a social scientist observing their subjects. And I was also wary of what Rosaldo has called 'imperialist nostalgia' and of contributing to the Northern mythology of the Other, of participating in what Michael Taussig has described as the methodology of a great deal of ethnography: 'Telling other people's stories – badly' (Taussig 2003). My field recordings immediately took on a double life, as they were donated to the University of Botswana for use in teaching, research and grassroots literacy projects aimed at slowing the decline of the click-languages I recorded.

Nevertheless, a form of collective oral history undoubtedly emerges from the nexus of voices stored on my DAT tapes and from the work which arose from them, a kind of "secondary orality" in which the voice becomes newly alive and significant through electronic media' (Brady 1999: 73). The subjects spoke repeatedly of displacement and the struggle to survive on government handouts, and of problems with AIDS, alcohol and road accidents, but some also described life before the imposed alienation from their natural environment or told stories or jokes which originated in those times. The recordings provided me with material for a body of work which includes a half-hour composed documentary commissioned by BBC Radio 3,³ an electro-acoustic piece and a photographic sound installation entitled *Hearing Voices*. Early in the development of the installation, it became apparent that there was a potential conflict between the bulk of the accumulated voice recordings, interviews and research materials and the minimal, contemplative work I wanted to make. The weight of the *issues* threatened to smother the work, denying me the artistic freedom with which I wanted to approach it, or at least turning it into something closer to documentary. The radio piece, also entitled *Hearing Voices*, investigates the threshold between documentary and

abstraction, using voice recordings, interviews and environmental recordings alternating between raw and manipulated form to present the listener with 'a capricious sound world where aural objects shift and surprise, and conventions are undermined or mutated' (Drever 2005) (audio example 1). The installation was intended to be much simpler in form, though I also felt a responsibility to disseminate and publicise my research materials. The solution was to develop, in conjunction with the Hans Rausing Endangered Languages Project at SOAS, a CD-ROM which would act as catalogue, archive and research document.⁴

The resulting disc holds my recordings of eight speakers of five endangered languages (Naro, Jun]'hoa, ||Gana, |Gwi and !Xóǝ), as well as interviews, information about the languages and about language endangerment, and recordings of two click-language choirs (the Bokamoso Pre-School Training Project Choir and the Naro Language Project Choir). It will be used by the Working Group for Indigenous Minorities in Southern Africa (WIMSA) as part of their campaign for rights and improved self-respect, but it made the Botswana government distinctly nervous when I arrived to exhibit *Hearing Voices* at the National Museum in Gaborone. Although the disc is not directly part of the sound installation, it was designed to be available to visitors at a computer kiosk: I refused to withdraw it from the exhibition and consequently the opening was delayed while the Permanent Secretary examined it. They were particularly concerned by the recordings I'd made of Roy Sesana, a ||Gana speaker and founder of the First Peoples of the Kalahari, a group which is currently taking the Botswana government to the High Court to challenge the legality of the forced evictions of Khoisan from the Central Kalahari Game Reserve, land they have occupied for thousands of years. Eventually, permission was granted for the exhibition, but the wait made the museum director and curator – both civil servants – distinctly uncomfortable, and I was asked by the British Council (whose logo was on the publicity material in recognition of their assistance with the nightmare of Customs regulations) not to go to the press because they didn't want to appear anything other than neutral.

The eight-channel installation *Hearing Voices* makes use of new flat speaker technology to personalise the source of the sound, though the images from which the sound emerges – photographs taken for me by Denise Hawrysió during the recording sessions – are composed to simultaneously reveal the

³*Hearing Voices* won the Silver Award at the 2005 Third Coast International Audio Festival and competition in Chicago.

⁴The CD-ROM *Hearing Voices: Speakers/Languages* is distributed through the website of the Hans Rausing Endangered Languages Project at <http://www.hrelp.org/publications/multimedia/>. A portion of any proceeds will go to the Working Group for Indigenous Minorities in Southern Africa.

process, symbolise my own presence and disrupt, frustrate, or at least question, the ethnographic gaze (see figures 5 and 6). As David Toop puts it:

The portraiture integrated into the playback system of this installation counters the shift towards a detachment from human agency, yet also engages with the mediating effects of recording technology. Faces are obscured; voices are extended, or filtered, until their meaning is abstracted. These faces, and voices, are both highlighted by the wider world of digital communications, and with conscious irony, absorbed by its power. (Toop in Wynne 2005)

Joram |Useb, a representative of WIMSA who spoke at the opening of *Hearing Voices* at the National Art Gallery of Namibia, noted that the bleached-out printing of the images was a fitting analogy for what is happening to Khoisan languages and cultures. Another aim of the images is to counter the visual dominance of the gallery site, to encourage the audience to focus on the sound, and to reflect the importance of the *aural* in oral culture.

Unlike early ethnographers, for whom ‘purging the messy means by which information was acquired’ was perceived as necessary for maintaining the apparent of objectivity and authority of their work, I wanted to highlight the ‘inevitable artificiality of the encounter’ (Brady 1999: 60), to question the assumption that ‘Technology comes to presence . . . in the realm where revealing and unconcealment take place, where *alétheia*, truth, happens’ (Heidegger 1962: 13), and to convey a sense of simultaneous movement towards and away from the eight subjects. I can still vividly recall my exhilaration at the privilege of not only hearing these languages in person but, with the

large-diaphragm microphone close to the speakers’ mouths, being able to hear every nuance as though they were speaking directly into my ear. These are arguably the most exotic languages in the world, if by exotic we mean different from our own and beautiful. They are a tribute to the creativity of the human intellect: ‘. . . if Khoisan languages had all died out before linguists described them, it is unlikely that we would ever have guessed that human beings would use such an apparently minor feature of sound production to such complex effect’ (Crystal 2000: 53). The gallery visitor can likewise put their ear up to the speaker/images, and the sounds coming from each are derived from the voice of the individual depicted, but just as the photographs problematise the voyeurism of visual exotica, the treatment of the sound paradoxically promotes and frustrates the audience’s curiosity. The un-manipulated voices emerge only fleetingly amidst a choir of resonated click consonants and elongated vowels. The work aims to create a space in which my presence as an artist co-exists with the otherness of the subject rather than either subsuming it or presenting it under the guise of objectivity, ‘the ideology of those who are alienated and politically homeless’, as Alvin Gouldner puts it (Gouldner in Kosuth 1991: 110).

The vowels of each of the subjects’ voices have been ‘massively extended into shimmering drones’ (Bell 2005) through a painstaking process of editing and granular synthesis to give a sense of suspension in time which matches the physical suspension of the speaker/images. These drones carry the personal characteristics of the voice from which they are derived, but are also, at times, severely filtered, thinned out to take on the sinuous fragility of lone sine waves weaving

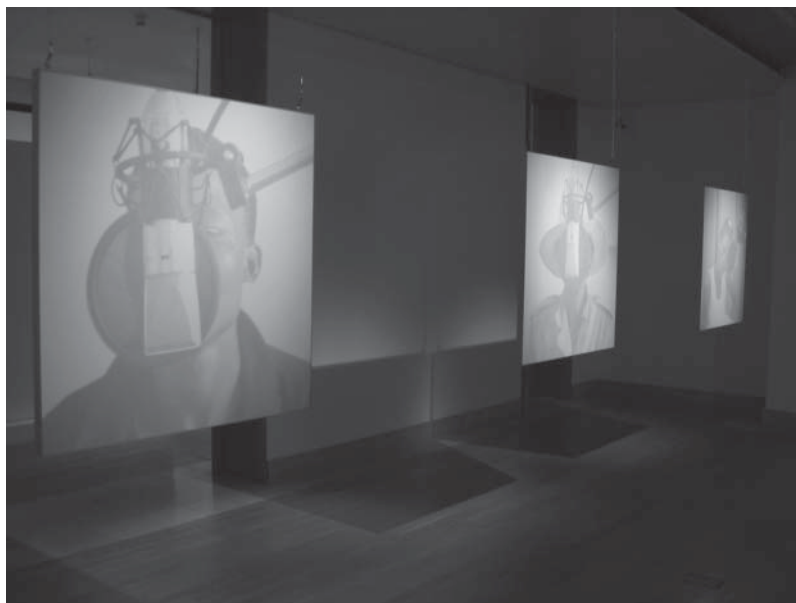


Figure 5. *Hearing Voices*, an eight-channel photographic sound installation at the Brunei Gallery, SOAS, London, 2005.



Figure 6. Thamae Sobe, as printed on one of the eight flat speakers in the installation *Hearing Voices*. Photo by Denise Hawrysió.

amongst the other voices surrounding the visitor in the space (audio example 2). As each brief un-manipulated voice in turn recedes, its clicks become modulated into bell-like tones, with their rhythmic placement, characteristic of each speaker and his or her language, preserved. Some of the languages, such as Naro, have only one or two clicks in an average sentence; others, such as !Xóó, have at least one click in nearly every word. The result is a shifting, syncopated soundscape which retains linguistic cues but also merges into the realms of music and environment.

As with my previous sonic portraiture work based on recordings from Kenya, it took a great deal of time to develop a means of working with the voices (and in this case also the images) which was sensitive and respectful but also performed a kind of aesthetic translation which I would find interesting to engage with as a digital artist. Of course translating my subjects' words into something between language and music is itself a process permeated with issues of power, and I am always uncomfortably aware of the power of the computer, particularly in cross-cultural practice: to quote Katharine Norman, '– it is a certain kind of power – to *orchestrate* sampled sounds from the *real world*, and to use sophisticated wizardry to cajole them

into new forms, frequencies and fantastic documentaries' (Norman 1996: 1). I was striving to achieve a kind of meaningful minimalism in which the problematics of the process became part of the work, to 'alert the perceiver to the beauty of language and its potential as a plastic medium, to specifics and generalities, to political and economic realities, and to the troubled, yet fruitful connections that can be nurtured in spite of an intimidating geographical, linguistic, cultural, and technological divide' (Toop in Wynne 2005), but to do so by creating a thoughtful, even meditative ambience rather than bombarding the audience with information. The CD-ROM archive was both a by-product of this process and an invaluable means to an end.

Listening to languages we can't understand facilitates a kind of abstract or musical listening, and this is particularly true of click-languages.

According to the Modulation Theory (Traunmüller 1994), speech arises when speakers modulate their voice with conventional linguistic gestures. The voice as such is still used for conveying paralinguistic information about the speaker and his state and attitude. This is characteristic of all human speech. However, voiceless fricatives and clicks do not convey such paralinguistic information. Out of context, they do not even identify themselves as human sounds. Listeners who are not familiar with click

languages tend to perceive the clicks as extraneous noise even within the context of a stream of speech. The property of fricatives and clicks not to disclose themselves as human sounds appears to be exploited in cooperative hunting. (Traunmüller 2003: 3)

I'm not entirely convinced by the theory that click sounds are particularly useful for communication while hunting – for one thing, they may not sound human to non-click-language speakers, but they obviously do to those who speak them and, presumably, to the animals who live around them. And a click certainly resembles a dry twig snapping underfoot more than any English consonant could. Their percussive energy is astounding. Nevertheless, the experience of playing my recordings to people outside of the Kalahari (including people in Gaborone, the capital of Botswana, just on the edge of the desert) is that explanation is often required to make it understood that the clicks are actually *part* of the speech in the same way as the phonemes of other languages.

Much experimental sound work in the past century or so has dealt with the 'purposeful confusion' of categories of sound and the exploration of the 'transitional zones between them' (Dunn 1999: 83). A couple of years ago, I banged my leg on the street in Barcelona and, as the result of an unfortunate combination of heat, hypoglycaemia and loss of a large quantity of blood, I passed out. As I started to come to, but before I opened my eyes, I could hear a voice. It seemed garbled and unintelligible, but in that twilight before consciousness I didn't even remember that I was in Spain: my first thought was that I must have fallen asleep in my studio, working on one of my manipulated language pieces. It turns out to have been a Spanish policeman, leaning down and speaking very close to my face. *Hearing Voices* probes the boundaries between speech and sound, language and music, but it also attempts to explore new relationships between sound and image and to present alternative ways of approaching portraiture through sound.

Language ecology bears an obvious relationship to acoustic ecology, itself an interesting example of an area in which the work of sound artists can take on a dual life, providing materials for both creative practice and more practical/social applications. The acoustic environment, like human languages, will inevitably evolve over time, but it is important to document it along the way and to understand how and why it changes if we are to manage this evolution thoughtfully rather than standing by in idle ignorance while the economy of scale flattens everything in its path. Language itself can both facilitate and act as a barrier to communication, and the role of technology is similarly contradictory. Both within my African projects and in the broader context of relations between the North and the South, technology can be an important

ally in the maintenance, documentation and understanding of threatened languages and cultures, but it is also inextricably linked with the expansionist pressures of the developed world which cause their decline. The technologised North and the small-scale local cultures of the South have much to learn from each other, but the 'ethnographic impulse' (Foster 1999: 181) amongst artists must carry with it a recognition such that, as Steven Feld puts it,

The politics of being an engaged and responsible researcher are now bound up with giving voice to people whose validity, indeed whose humanity, is denied or silenced by the world's dominant cultures. (Feld 1994: 285)

The demands of nation-building in the *developing* world and the desire to participate in the global economy need not be mutually exclusive with the survival of small-scale indigenous languages and cultures. Unfortunately, the slowly developing awareness of the importance of ecology and the interconnection of its various realms – environmental, biological, linguistic, even acoustic – is, for some, too little, too late. Just as a busy highway will blanket the natural sounds which might otherwise be heard nearby, leaving none of the acoustic niches⁵ animals naturally locate for themselves, globalising languages and cultures are drowning out minority voices at an ever-accelerating rate. We should be listening all the harder.

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⁵For an interesting examination of this phenomenon in the natural world, see Bernard Krause, *The Niche Hypothesis: Creature Vocalizations and the Relationship between Natural Sound and Music*, <http://www.naturesounds.org/Win97NicheHypothesis.html>

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