Acoustemology

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Word count - 3200

Abstract for online version of encyclopedia

'Acoustemology' conjoins the words 'acoustic' and 'epistemology' to refer to a sonic way of knowing and being in the world. The term was introduced by anthropologist and ethnomusicologist Steven Feld following his fieldwork among the Kaluli of Papua New Guinea. He sought to describe the highly developed practices of listening, hearing and sounding that characterised Kaluli engagement with their rainforest environment. Feld also used 'acoustemology' to expand upon existing vocabulary for the anthropological discussion of human engagement with sound. The term has been taken up by other anthropologists, ethnomusicologists and researchers from a variety of disciplinary backgrounds whose work contributes to what has become known as Sound Studies, and 'acoustemology' has become a key word in the conceptual lexicon of contemporary research on auditory culture.

Keywords

Selected from list: acoustic, music, ecology,

Author supplied: epistemology, listening, hearing, sound, Sound Studies, auditory culture

Main Text

An overview

'Acoustemology' is a portmanteau word combining 'acoustic' and 'epistemology' to foreground sonic experience as a way of knowing. The term was coined by anthropologist and ethnomusicologist Steven Feld in 1992 through reflections on his research among the Kaluli of Papua New Guinea. Feld observed that the Kaluli had a sophisticated understanding and appreciation of their sound-rich rainforest environment; sound was 'central to making sense, to knowing, to experiential truth' (1996: 97). Forest sounds were closely bound up with Kaluli notions of place and emplacement, but were also integrated into local cosmology, poetry and song. Building upon and critiquing existing vocabulary for theorising human engagement with sound (such as Murray Schafer's 'soundscape' and 'acoustic ecology'), Feld used acoustemology to describe an accumulated set of hearing, listening and sounding practices consolidated as culture. Numerous sound researchers from anthropology, ethnomusicology and a variety of other backgrounds have found 'acoustemology' to be a relevant and constructive concept and it is recognised as a key word within the burgeoning interdisciplinary field of Sound Studies. It has been applied to forms of acoustic knowledge identified in numerous cultural and historical

contexts from Shakespearian England to contemporary Mombasa. Recent work has sought both to modify the term and to diversify the contexts in which it is applicable.

The origins of acoustemology

Thanks to Feld's own writings, we know a great deal about the origins of the term 'acoustemology'. In 1976, Feld went to live with the Kaluli, a small group living in the forests of the Great Papuan Plateau in the Southern Highlands Province of Papua New Guinea. He returned to this area, called Bosavi, several times during the 1980s and 90s. Like other anthropologists who had studied the peoples of the area, Feld observed that the Kaluli had an acute acoustic sensitivity to their rainforest environment. Because the density of vegetation in the forest meant that much of the Kaluli's surroundings was visually hidden, sounds were relied upon as primary indicators of presence. At the same time, the rainforest was sonically rich, the sounds of insects, birds and other wildlife as well as those of running and falling water combining to create a particular density of sound. Shifting sonic presences and dynamics could communicate a great deal to knowledgeable Kaluli listeners. As Feld writes, in Bosavi, 'sounds are heard as time of day, season of year, vegetation cycles, migratory patterns, forest heights and depths' (1994:11).

Listening and sonic knowledge were of great value in practical tasks such as orientation, navigation and hunting. However, during his fieldwork Feld also learned that the Kaluli had a particular ethno-ornithology in which they regarded birds as spirits and interpreted their calls as the voices of ancestors. Bird-calls were sometimes echoed in melodic patterns in Kaluli songs and, importantly, the voice of the singer was heard as that of a bird, which, being in turn the voice of an absent relative had the power to produce strong emotions of sorrow and melancholy in the listening audience, often moving them to tears. Song lyrics frequently charted the imagined paths of birds/spirits through the forest, passing through places linked to a particular ancestor, triggering affective memories and causing relatives to weep. Hearing birds as spirits and singers as birds meant music became a reflection of the local ecology. This was also true of the Kaluli practice of singing with and to waterfalls, where songs narrated a 'flow' of water through a landscape, once again passing through emotionally significant places. The Kaluli perceived a kinaesthetic resonance between the flow waterways through the landscape and the flow of the voice through the body. At the same time, Feld detected a parallel between the materiality of sound in the Kaluli environment and the group's preferred style of musical performance. Just as the rainforest sound was dense, with layers overlapping and interweaving and one sound only standing out momentarily before receding back into the sonic mix, Kaluli tended to sing in a way in which single voices were only heard briefly before falling back into a vocal polyphony. Clearly one could understand little of Kaluli culture without understanding their relationship to sound. The importance of sonic knowing and experience for this group could hardly be overstated and Feld introduced the term 'acoustemology' to describe the distinctive way of knowing place through sound that he found in Bosavi.

It is important to bear in mind that the auditory culture of the Kaluli has been affected by wider changes. Feld himself has observed the influence on local musical practices of Western instruments and songs, which were brought to Bosavi by missionaries, by men returning from labour contracts elsewhere in Papua New Guinea or abroad, or heard over the radio and on cassette. While some songs may now be played with ensembles of guitars and ukuleles, and sung in both Bosavi and Tok Pisin

with gender-specific vocal harmonies introduced by church singing, Feld maintains that continuity with traditional Kaluli musical styles is distinctly audible. There is still, for instance, a preference for creating a particular layered, overlapping density of musical sound accompanying lyrics in which places and place-names are a notable feature. The Kaluli sound-world may be one in which 'sensibilities have collided', but Feld urges that sound nonetheless remains integral to Kaluli notions of knowing and being (2003: 237). He suggests that Kaluli acoustemology should be understood as a layered history in which Church and popular music listening, singing and playing lie on top of a history of intimate interactions with and sensitivities to the forest and its multiple sonic presences.

Intellectual underpinnings

'Acoustemology' can be understood as part of a deliberate effort 'to argue the potential of acoustic knowing, of sounding as a condition of and for knowing, of sonic presence and awareness as potent shaping forces in how people make sense of experiences' (Feld 1996: 97). It constitutes a reaction to a perceived sensory bias, a tendency in western thought to prioritise a visual epistemology and a related propensity in anthropological practice to assume vision to be the dominant sensory modality cross-culturally both in engagement with the environment and in social life as a whole. Acoustemology points to the existence of alternative ways of engaging with the world, and to the possibility of hearing other realities.

The introduction of the term 'acoustemology' also represents an effort on Feld's part to expand the existing vocabulary available for the description and study of human engagement with sound. It constitutes a simultaneous development and critique of Schafer's (1977) 'soundscape' concept. Like 'soundscape', 'acoustemology' emphasises the importance of sound in human experience, particularly in relation to place and notions of emplacement. However, through its derivation from and association with the 'landscape' concept, 'soundscape' arguably conveys a sense of a sound environment that is static and in some sense arrayed before a detached observer. Feld, like other critics of 'soundscape', suggests that the term fails to capture the experience of sound as one produced by movement through, participation in or interaction with an environment that is dynamic and continually in flux. At the same time, 'soundscape' substitutes the ocularcentrism of 'landscape' (through its association with the landscape genre of painting) with an audiocentric term, whereas Feld suggests that, despite its emphasis on the importance of sonic knowing, 'acoustemology' allows for recognition of the manner in which sonic knowledge develops through interplay between hearing and the other senses. This is illustrated in his work in Papua New Guinea where he stresses that, for the Kaluli, place is heard and felt synaesthetically, kinaesthetically and affectively as they move through the environment, seeing, smelling and feeling the textures and contours of the ground underfoot and responding to the forest in song.

The acoustemology concept also both builds upon and critiques the concept of 'acoustic ecology', also associated with Schafer (1977). Acoustic ecology is concerned with the relationship, mediated through sound, between living beings (primarily humans) and their sound environments. In this sense, 'acoustic ecology' and 'acoustemology' have much in common. However, at the level of practice, acoustic ecology tends to prioritise analytical activities such as mapping the variety of

sound sources in an environment and measuring the frequency, volume and duration of detected sounds. Charting a soundscape in this way creates data which in turn support assessments of the quality of the studied (generally urban) sound environments, and allows for the identification of ways in which that sonic quality is being eroded by man-made noise or might be improved through 'soundscape design' (Schafer 1977). Acoustemology encourages an approach that is reflexive, not preoccupied with an evaluation of sound environments but sensitive to sonic ways of being and the manner in which they are shaped by environmental, cultural and historical factors. An acoustemologist might ask, for example, how the processes of mapping and evaluating sound environments associated with acoustic ecology might be contextualised by reference to cultural-historical attitudes that give value and salience to those activities.

In outlining these critiques of 'soundscape' and 'acoustic ecology', Feld also details how 'acoustemology' is grounded in canonical sociological, anthropological and philosophical literature. It is informed, for instance, by Mauss and Bourdieu, Feld describing his interactions with Kaluli adults and children in the rainforest as 'a daily lesson in listening as habitus, a forceful demonstration of routinized, emplaced hearing as an embodied mastery of locality' (2015: 18). Sonic knowledge is exercised often unconsciously through historically accumulated and socially acquired interpretive frames and attitudes. At the same time, in emphasising that Kaluli acoustemology is both a form of embodied knowledge and felt experience, Feld acknowledges the influence of Merleau-Ponty's work on embodiment and Don Idhe's (2007) phenomenological approach to sound and the voice. 'Acoustemology' is also informed by ideas of 'relational ontology', which draw attention to connectedness as a condition of and for being. Relational ontology allows sonic knowledge to be understood as emergent and contingent, unfolding through interplay between humans but also a wider ecology of environments, materialities, technologies and non-human forms of life.

Multiple acoustemologies

Feld has applied the idea of acoustemology beyond his Kaluli research to more recent projects. He refers, for example, to European village acoustemologies revealed through his work on bells in Greece, Italy, France, Finland, Norway and Denmark. He also points to the urban acoustemology of Accra that he encountered through his work on contemporary jazz in Ghana. The term 'acoustemology' has been taken up by scholars from a variety of disciplinary backgrounds to describe the culturally particular ways of knowing and experiencing through sound that they have identified in their own research settings. Musicologist Suzanne Cusick (2013), for instance, refers to an 'acoustemology of detention' in her investigation of uses of sound, music and silence in the detention camps of the so called 'global war on terror', while cultural geographer Katie Hemsworth (2015) identifies 'carceral acoustemologies' in her work on prison sound. Professor of English Bruce R. Smith (1999) presents 'an acoustemology of early modern England' in his work on Shakespearian soundscapes, invoking a wider field of what historian Mark M. Smith calls 'historical acoustemology' which prompts researchers 'to investigate whether people heard things – and remembered what they heard – in ways different from today' (M. Smith 2015: 55-6, B. Smith 1999: 48).

Multiple acoustemologies may also co-exist within a given social setting. In the hospital, for instance, patients, nurses and doctors know through sound in markedly different ways (Rice 2013). Patients' auditory perspectives on wards, which they often experience as noisy and even frightening, differ from those of nurses, who draw on sound cues from patients and medical technologies as well as shifts in the general ward sound level in identifying priorities when allocating care and attention. These ways of knowing the ward differ in turn from more formal applications of acoustic knowledge by doctors in their diagnostic work, for instance in stethoscopic listening or cardiac ultrasonography. Here specialist knowledge is focused on the patient body, and doctors arguably enact an acoustemology of the body, a notion that shifts 'acoustemology' away from its original grounding in engagements with place, diversifying the spatial reaches and possibilities of the concept. In his work on Mombasa Old Town, anthropologist and sound researcher Andrew Eisenberg also identifies acoustemological multiplicity, but emphasises contestation: he points to 'acoustemological disjuncture', or 'competing acoustemological commitments' within this multiplicity (2013: 187). Within the Old Town, the Islamic call to prayer (*adhān*) and Friday sermon (*khutbas*) are regularly broadcast over loudspeakers. Muslim residents and religious leaders consider these broadcasts both sacred and sacralising, but their generalised audibility creates tension with the widely held, broadly liberal-democratic logic of urban public and private space in Mombasa.

Developing acoustemology

Influenced by work on the social construction of technology and technoculture, Thomas Porcello (2004) introduces a complementary term to acoustemology: 'techoustemology', in order to emphasise the increasing importance of technological mediation in the production of sound and particularly music. Technological mediation, Porcello argues, almost invariably shapes our expectations of how sounds should sound, and is rarely absent from what he calls 'the sonic signal chain' in all parts of the modern world (2004: 270). Acoustemologies, then, can seldom be extricated from the processes of technological mediation that make them possible. Growing recognition of the importance of technology in sonic and musical practice points to potentially fruitful avenues for future acoustemological investigation.

By underscoring the importance of technology in the production of acoustic knowledge, Porcello points to the influence of theories of relational ontology on Feld's formulation of 'acoustemology'. Feld suggests that 'acoustemology' emerges at the interface of environments, materialities, *technologies* and non-human forms of life (my italics). The inclusion of non-human forms of life in this list is also an interesting one in terms of the possibilities it suggests for future acoustemological research. Feld draws on human engagement with the sounds of non-human animals (particularly birds) in his work on the Kaluli. In his later work in Ghana he examines the importance of toad sounds in the sonic knowledge of Accra. However, the acoustemologies of non-human animals themselves are not explored. The ways in which animals know through sound and in which non-human animal acoustemologies intersect (or not) with human ones represents a promising terrain for future enquiry and points to the possibility of an expansion of acoustemology into new disciplinary fields, most obviously bioacoustics.

In their discussion of points of productive overlap between Sound Studies and Deaf Studies, Friedner and Helmreich (2012) propose a further simultaneous development and critique of 'acoustemology'. They consider how, for instance, signing and other non-spoken communicative practices might undo phonocentric models of speech. They also point to the way in which the experience of exposure to infrasound or low-frequency vibration complicates the boundary between hearing and feeling. By describing these phenomena, Friedner and Helmreich seek to confuse deaf-hearing dichotomies and to demonstrate the need for an acoustemology that 'expands beyond a limited definition of the auditory' (Friedner and Helmreich 2012: 75). Purely audiological conceptions of sound and hence purely auditory acoustemologies might be unhelpfully and unrealistically restrictive. Friedner and Helmreich call for less sonocentric acoustemologies, thereby widening the scope of the acoustemology concept. In doing so, however, they attack one of the principles behind the original introduction of the idea of 'acoustemology', namely that it was designed to draw intellectual attention specifically to sound, hearing and sonic knowledge in an intellectual environment where these tended to be overlooked. Acoustemology positions hearing as a distinctive kind of experience that generates distinctive orientations to the world. Nonetheless, the fact that Feld has emphasised the need to acknowledge the interplay between sound and the other senses suggests an open-mindedness to the notion that 'acoustemology' might expand beyond 'a limited definition of the auditory'.

There is a sense in which the term 'acoustemology' implies an additional 'ology', because the identification or recognition of an acoustemology requires the study (how ever close or cursory, formal or casual) of that sonic way of knowing. A reference to 'acoustemology', then, suggests both a sonic way of knowing and the study of a sonic way of knowing. At the same time, as has been explained in this entry, acoustemology is an analytical term with a particular intellectual and social history. One of the intellectual threads which gives rise to the formation of the concept is a growing sense within anthropology and across the social sciences and humanities more generally that more attention should to be paid to the role(s) of sound in social and cultural life. This growing academic consciousness of the significance of the study of sound has led to a corresponding increase in writing about sound, recordings of sound, and, slowly but surely, an increasing use of sound in the presentation of data and ideas through audio illustration, composition and documentary. Importantly, then, Feld's formulation of 'acoustemology' has contributed to the emergence in anthropology and Sound Studies of multiple but complementary *academic acoustemologies,* ways of knowing, thinking and sharing ideas about studied worlds through sound.

See also: acoustic; Anthropology; Bourdieu, Pierre; ecology; emotion; Ethnography; missionaries; music; fieldwork

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