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THE REFERENTIAL IN ACOUSMATIC MUSIC

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Acousmatic music, referential sound, sound recording, sound theory

ABSTRACT

Music is often considered to be concerned primarily with internal references, requiring nothing "extra-musical" to create coherence. Acousmatic music, on the other hand, often uses sound material which is easily identifiable, and which is thus still distinctly bonded to its original source cause. This paper discusses the nature of such documentary sound material and the consequences of its use.

Acousmatic music is both explicitly concerned with and exploits the aesthetic potential of, the acousmatic listening situation – a listening experience devoid of any visual references to the original sound cause. It actively engages with the creative potential afforded by the construction of both sound and sound space. Indeed, the sound-material used in acousmatic music is often deliberately developed in ways which increase its "artificiality", distancing it in particular from what may be considered to be recorded sound's documentary mode. Thinking of the relationship between a sound and its cause, Denis Smalley coined the useful term "source bonding" to "encapsulate the natural tendency to relate sounds to supposed sources and causes, and to relate sounds to each other because they appear to have shared or associated origins"[1].

Source bonding, nevertheless, may be obfuscated through, among other things, the use of sound processing, which can augment or diminish various attributes of the original sound, or can mutate it to such a degree that the result is essentially synthetic. Such processes may be quite simple: the cutting away of a sound's attack, for example, or recording a sound with the microphones placed very near the sounding object, can hide very effectively a sound's true origins. In such ways recorded sound can be dislocated from its real-world origins.

Such dislocation potentially encourages the listener to concentrate fully on the

1 Denis Smalley, "Defining Timbre: Refining Timbre", *Contemporary Music Review* 10.2 (1994): 37.

sound material of the composition. As an aside, it is worth noting the similarity that this approach to sound has to an approach to vision advocated by the *Cinéma Pur* (pure cinema) movement during the 1920s. This comprised several different experimental approaches to the visual image which were intended to achieve the aim of producing a "pure" cinema: cinema which did not scorn, in Germaine Dulac's words for example, "the purely visual, the image, in favour of merely reproducing forms of expression where the image may perhaps have a role, but not the most important [one]"[2].

Pure cinema is a cinema divested "of all elements not particular to it", in order that its "essence in the consciousness of movement and visual rhythms" may be sought.[3] As Henri Chomette argued,

> the cinema is not limited to the representational world. It can create. It has already created a sort of rhythm …
>
> Thanks to this rhythm, the cinema can draw from itself a new potentiality, which, leaving behind the logic of events and the reality of objects, engenders a series of visions that are unknown – inconceivable outside the union of the lens and the moving reel of film. Intrinsic cinema – or if you will, pure cinema – since it is separate from all other elements, whether dramatic or documentary – that is what certain works by our most personal directors enable us to foresee … the "visual symphony".[4]

Various methods were explored which would enable the viewer to concentrate purely on the visual material of the film for its own sake, ignoring the other elements for which the visual is normally a vehicle, such as those which are narrative or representational. For example, Henri Chomette's two films *Jeux des reflects et de la vitesse* (1923–1925) and *Cinq minutes de cinéma pur* (1925), utilized a number of distorting and disorienting techniques, such as camera speed changes, visual distortion and the use of inverted images. Visual processes such as these were used in an attempt to distance the viewer from the ordinary and automatic creation of references, naturally induced in him or her in reaction to what was being seen on screen.

When the listener ignores those elements for which sound is normally a vehicle, he or she can be said to be adopting an attitude of "reduced listening", a special mode of listening suggested by Pierre Schaeffer whereby the listener transcends all

2 Germaine Dulac, "From 'Visual and Anti-visual Films'", in *The Avant-garde Film*, ed. P. Adams Sitney (New York: New York University Press, 1978), 32.

3 Germaine Dulac, quoted in David Macrae, "The Sensory Screen: Phenomenology of Visual Perception in Early European Avant-garde Film" (PhD diss., University of Edinburgh, 2003), 38.

4 Henri Chomette, quoted in Ian Christie, "French Avant-garde Film in the Twenties: From 'Specificity' to Surrealism", in *Film as Film: Formal Experiment in Film, 1910–1975*, ed. Phil Drummond (London: Arts Council of Great Britain, 1979), 38.

references to the sound's source and its (original) context. Reduced listening can be considered to be a cognitive transformation, from the sounding object to how the object is experienced. This constitutes a shift away from a "natural attitude" in which the world's existence is assumed, to one where this "general thesis of the natural attitude" (as Edmund Husserl describes it) is lodged between brackets. The listener's aural understanding of the world is not denied, but he or she (temporarily) no longer makes use of it, taking instead an attitude of phenomenological epoché (or suspension of belief). This is an abstinence from our engagement with those various theses with which we understand the world's existence and our place within it. In doing so, the sound becomes detached, as David Macrae expresses it (when talking of early avant-garde film) "from the conventions of recognised representation, in order to reveal the sensory nature of the process of perception"[5].

Yet, even in its nascence, acousmatic music has also utilized source material whose identity has been preserved, and thus carries with it much referential force. As Simon Emmerson has pointed out, "the composer must take into account audience response; he [or she] may intend the listener to forget or ignore the origins of the sounds used and yet fail in this aim"[6].

It should also be remembered that this is also certainly in keeping with Pierre Schaffer's thinking, who (quoted by Michel Chion) states:

> Nothing can stop a listener from varying [this hearing intention] passing from one system to another or from a reduced hearing to one that is not.... [It] is this swirl of intentions that creates connections or exchanges of information.[7]

With more "documentary" sound, given our natural modes of listening, and our ordinary use of audio information, we cannot expect to be able to put completely to one side our ordinary understanding of sound and what it means to us. Rather, the spectromorphological and the referential forces of sound must exist in parallel and therefore are liable to interact. For example, structurally they can be to a greater or lesser degree mutually constructive or destructive.

From what has been said so far, it would seem to be common sense, as John Young has suggested, to create a distinction

> between sounds of recognisable real-world origin and processed or synthetic

5 David Macrae, "Painterly Concepts and Filmic Objects: The Interaction of Expression and Reproduction in Early Avant-garde Film", in *European Avant-garde: New Perspectives*, ed. Dietrich Scheunemann, Avantgarde Critical Studies 15 (Amsterdam: Rodopi, 2000), 137–54.

6 Simon Emmerson, "The Relation of Language to Materials", in *The Language of Electroacoustic Music*, ed. Simon Emmerson (Houndmills: MacMillan, 1986), 18.

7 Pierre Schaeffer, quoted in Michel Chion, "Guide to Sound Objects", trans. John Dack and Christine North, Ears: ElectroAcoustic Resource Site – Online Publications, Section 1: 27, http://www.ears.dmu.ac.uk/spip.php?page=articleEars&id_article=3597, accessed July 18, 2011.

> sounds which appear disassociated from known physical contexts, thereby setting up a continuum between Reality and abstraction.[8]

Yet the nature of the sonically real (and conversely indeed, the nature of the sonically abstract) requires some further consideration. Real-world sound material used in acousmatic music, which is documentary in character, appears to comprise an aural record of particular and historical, pro-phonographic events. Prima facie, phonography, like photography, may offer what can be considered to be an automatic means of recording the real, the result of which – the reproduction – is objective and accurate and may therefore be generally considered to be essentially scientific. In order to investigate the nature of the sound record, however, it is important to first make a clear distinction between what will be termed here "sound reproduction" and "sound representation". It is perhaps above all the framed nature of both the photograph and cinematic projection that continually acts as a reminder of their inherent artificiality, comprising merely images of real-world objects. Sound reproduced over loudspeakers, on the other hand, is invisible and unframed (at least in a traditional sense): it fills the volume of the listening space and, furthermore, seeps out through its cracks. To record a sound event and recreate it identically sometime in the future might therefore seem to be purely a matter of both artful recording and competent reproduction. This is certainly a view of recorded sound that a number of film and sound theorists took in early discussions of sound recording. Béla Balázs, for example, declared during the 1970s that

> what we hear … is not an image of the sound, but the sound itself which the sound camera has recorded and reproduced again … there is no difference in dimension and reality between the original sound and the recorded and reproduced sound.[9]

Statements such as these suggest there is a linear, dyadic relationship between the pro-phonographic event and its reproduction as it is heard at the point of reception. The sounding object propagates acoustical waves through a physical medium, which are then captured by the recording device, constituting a transformation from, as it were, the domain of the real to the domain of the recording medium. On replay, the recording is transformed back to sound waves, which are (at least in this idealized scenario) identical to those of the recorded sounding object. If this were possible, sound would be reproduced not only legibly but also literally. Indeed, the ideal of a recording/reproduction process is often discussed in terms of its ability to create transparency between input and output. After all, the notion of "fidelity", which is sometimes particularly used to describe sound reproduction

8 John Young, "Imagining the Source: The Interplay of Realism and Abstraction in Electroacoustic Music", *Contemporary Music Review* 15.1 (1996): 73.

9 Bela Balázs, *Theory of the Film: Character and Growth of a New Art* (New York: Dover, 1970), 216.

equipment ("hi-fi" = high fidelity), has very much to do with the perceived need for sound reproduction equipment to be faithful to the pro-phonographic event. This view of sound reproduction is similar to early realist thinking concerning the relationship of the photograph to the real. For example, when discussing the photograph, André Bazin declared

> only a photographic lens can give us the kind of image of the object that is capable of satisfying the deep need man has to substitute for it something more than a mere approximation, a kind of decal or transfer. The photographic image is the object itself the object freed from the conditions of time and space that govern it.[10]

Similarly, in a reproduction theory of sound, there is a perceived inherent automatism in the idealized process of recording, which appears to guarantee an easily understood, causal association between the pro-phonographic object that is recorded onto a particular medium, and what is heard at the point of reception. The realistic, and what might at first sight seem quite intuitive, suppositions pertaining to the relationship of the sound recording to the real, essentially rely on the presumed existence of an indexical relationship between that which is recorded and that which is reproduced.

This assumes contiguity between the reproduced sound object and its pro-phonographic referent, in a manner that almost suggests some prior contact between the referent and the recording medium, the former leaving, as it were, an audible trace on the latter's support. Such a suggestion is particularly vivid where sound is inscribed onto the tabula rasa of the wax cylinder, for example. Within our modernist society where, as Susanne Holmström observes, "rational progress is conceived of as a process of demystification"[11], we are still very much in the thrall of both scientific and technological thinking. Therefore, the combination of those electrical, electronic and mechanical processes on which particular methods of sound recording rely, appears to validate instinctively sound recording's status as an objective medium, the sound image produced without human intervention. As Bazin has said of photography, "between the originating object and its reproduction[,] there intervenes only the instrumentality of a nonliving agent"[12].

However, records in their many forms, for example, those which are photographic, sonic and even written, are de facto historical: they are instantiations representing now absent originals, mediated through the initial act of recording, the recording

10 André Bazin, "The Ontology of the Photographic Image", in *Film Theory and Criticism,* ed. Leo Braudy and Marshall Cohen, 6th ed. (Oxford: Oxford University Press, 2004), 169.

11 Susanne Holmström, "Co-evolution of Society and Organization", in *Organizational Legitimacy and the Public Sphere*, ed. S. Holmström, vol. 1 (Roskilde: Roskilde University, 2006), 56.

12 André Bazin, "The Ontology of the Photographic Image", 168.

medium, the recording's reproduction (or replay) and the final human engagement with the sound record at its point of reception. The connection between recording and recorded is contingent: the significance and ultimately the use of any recording being dependent on many things such as personal and collective memory, social mores, socio-legal conventions, and so on. As James Lastra has remarked sound is

> spatio-temporally specific or in a broad sense of the term, historical. Given that a sound is inseparable from the time and space of its production, each sound becomes an essentially unrepeatable event – an event distinguishable from all others.[13]

It is axiomatic to observe, for example, that even in the simplest recording situation there are technical issues which influence the sound at its ultimate point of reception. Sound recording and playback systems, and indeed the acoustics of listening spaces, are not perfect and alter a number of audible parameters in a non-linear fashion. Indeed, the technical characteristics of recording/reproduction equipment are often chosen to conform to current normative practices and expectations, with certain sorts of techniques and equipment being used for particular recording markets. For example, despite changes in visual perspective, in narrative-driven cinema the audio perspective of the dialogue tends to remain fixed, in order to guarantee the straightforward comprehension of the film's story. Even during the very early days of film sound, Carl Dreher suggested that

> since the reproduction of sound is an artificial process, it is necessary to use artificial devices in order to obtain the most desirable effects. For example, it is normal procedure to reproduce dialog at a level higher than the original performance. This may entail a compromise between intelligibility and strict fidelity.[14]

Eventually, such conventions, or "formalised sonic landscapes" (thinking of Trevor Wishart's terminology),[15] become historically mediated references in themselves. Like the grain of a black and white film, for example, or the colour-characteristics of three-strip Technicolor, the *manner* in which something has been recorded can reference more than merely *what* has been recorded. Such characteristics may be quite pronounced, such as the crackle and frequency response of an old phonograph recording, or they can be very subtle, such as the use of a particular microphone or type of artificial reverberation.

13 James Lastra, "Reading, Writing, and Representing Sound", in *Sound Theory Sound Practice*, ed. Rick Altman (New York: Routledge, 1992), 67.

14 Carl Dreher, "Recording, Re-recording, and Editing of Sound", *JSMPE* 16.6 (1931): 756.

15 Trevor Wishart, "Sound Symbols and Landscapes", in *The Language of Electroacoustic Music*, ed. Simon Emmerson (Houndmills: MacMillan, 1986), 45–47.

Not only is sound mediated by the environmental/contextual parameters and technologies of both its recording and realization but also by the influence of human mediators, which are naturally subjective. What is heard on reproduction is a representation or phonographic "image" of the original sound event. Through the act of recording, the pro-phonographic event is sampled and contextualized and through the act of reproduction, is re-contextualized and "framed". The sound recording (in a similar manner to Roland Barthes' famous press photograph) is something which "has been worked on, chosen, composed, constructed, treated according to professional, aesthetic or ideological norms which are so many factors of connotation"[16], and yet at the same time is "not only perceived, [and] received, it is read, connected more or less consciously by the public that consumes it to a traditional stock of signs"[17].

The sound recordist must resort to the use of artifice to create the impression of such things as realism, naturalness and authenticity and to allow sound recordings to become intelligible within the framework of the recordist's representational intent. Documentary sound, to paraphrase Stephen Prince when talking of digital cinema, may be viewed as being a discourse coded for transparency such that the indexicality is replaced by a "reality-effect" produced by codes and discourse.[18]

Even where sound appears documentary in nature, what is heard at the point of reception has been constructed, and as such is divorced from our actual experience of the real: the real experience is inferred, yet absent. Furthermore, the codes that comprise these constructions are not monolithic: they are socially and historically modulated and dependent on what might broadly be termed the sound recording's purpose. As Lastra points out, "the act of representation, by selecting only certain objects or objects in a certain form, or from a certain point of view, pre-structures its objects for the device"[19].

The denotation of realism in a radio documentary, for instance, is likely to be distinct from that for an historical drama. The purpose of this denotation may be different too, for example, serving to authenticate a particular argument or view in documentary, or to serve the narrative in drama by aiding the suspension of the viewer's disbelief.

Our understanding of the real, especially in those sound recordings coded for documentary, often (if not always) relies on our memory, both personal and collective. The referential nature of such sound invokes our recollection of previous similar sound events, and as Barbara Misztal explains, "in recollection, we do not

16 Roland Barthes, *Image, Music, Text* (London: Fontana Press, 1977), 19.

17 Ibid.

18 Stephen Prince, "True Lies: Perceptual Realism, Digital Images, and Film Theory", *Film Quarterly* 49.3 (1996): 31.

19 Lastra, "Reading, Writing, and Representing Sound", 75.

retrieve images of the past as they were normally perceived, but rather as they fit into our present conceptions which in turn are shaped by the social forces that act on us"[20].

Although the spectomorphological "forces" of the sound of a distant British diesel train evoked in Jonty Harrison's *Hot Air*, or the sound of Northumbrian Pipes in Denis Smalley's *Pentes*, are independent of our knowledge of the identity of their sources, their referential (or almost dramatic) force is dependent upon it. Such sounds act as catalysts to remembering, the absent originals unverifiable apart from through some process of social consensus. As Ian Hacking writes concerning the photograph, but which is in many ways equally relevant to the known sound object, "[t]here is no canonical way to think of our own past. In the endless quest for order and structure, we can grasp at whatever picture is floating by and put our past into its frame."[21]

Finally, in terms of *how* we remember, labelling is an important way of inducing an interpretation of what we hear. The titles of acousmatic compositions, their discussion in programme notes and elsewhere, and the context of their hearing, can, unsurprisingly, push us to interpret the sound we hear in a particular way. We are drawn to try and use any means at our disposal to disambiguate sound, which can often appear ambiguous in an acousmatic listening condition.

In conclusion, it is clear that the use of known sounds in acousmatic music continues to be an important and exciting area of exploration for the composer. In particular, the marrying of referential sound material with sound material which is more detached can create an expanded creative palette. However, the oft-cited idea that sound material must somehow lie somewhere between the "real" and the "unreal" requires careful critical evaluation. This binary opposition is somewhat similar to that of the equally problematic system of labelling films as being either documentary or fiction, something which many films, for example, those of Agnès Varda, simply do not fit well within. The difference between sounds which appear to us to be known and those which appear to be unknown is equally less clear cut, and the manner in which our understanding of the real is invoked through listening to sound is certainly contingent.

20 Barbara A. Misztal, *Theories of Social Remembering* (Maidenhead: Open University Press, 2003), 53.

21 Ian Hacking, *Rewriting the Soul: Multiple Personality and the Sciences of Memory* (Princeton: Princeton University Press, 1995), 89.

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SUMMARY

Whereas many art forms commonly, openly and indeed necessarily generate references to concepts and contexts which are external to themselves, music, prima facie, appears to be more concerned with the establishment of internal references, requiring nothing "extra-musical" to create musical coherence. Even a considerable body of acousmatic music attempts to distance itself from the referential potential of the recorded sound material from which it has been assembled. Sound transformation processes may be used to destroy what Denis Smalley has termed "source bonding": the natural formation of a connection between a sound which is heard and what is understood to have been its cause.

Yet an expanded musical experience, such as acousmatic music provides, can also exploit the creative possibilities of sound's more documentary mode and its referential power. The use of such sound material, the identity of whose source has been, to some extent, left intact, cannot be considered to be simply "extra-musical" in nature. Rather, the external references to which the sound material alludes, are very much integral to our understanding of the music: the spectromorphological (Denis Smalley) and referential forces act in parallel to synthesize an artistic whole.

This paper will discuss the multi-functional nature of referential sound in acousmatic music and consider the possible interactions between its comprehension in parallel listening modes.