DOCTOR OF PHILOSOPHY

A Portfolio of Original Compositions (Andrew Dolphin)

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4.3 Skewing sound image

Impure Carbon (11:24)

Impure Carbon is a multichannel fixed media work for 8 channels, (8.0). The piece has also been realised in 5.1 and stereo formats.[137]

Programme Note

Fragments emit, glint trace and spit. Modulating levels of impurity.

Overview of Work

Impure Carbon presents transformed, recontextualised and abstracted representations of original source recordings of burning charcoal.[138] The naturalistic burning process generates patterns of impulses, crackles, and pops that are integral to the work. These are transformed and structured, creating varying degrees of modulating perceptual abstractions of the source. The piece explores "the possible relation of the sounds to associated or evoked images in the mind of the listener".[139] The explicit identification of the primary source materials is only provided here as an insight into the compositional process and the composer's intentions. The identification of the original source is absent from the programme notes provided for the piece to enhance and encourage abstraction from the source for the listener. This is significant as the piece's structural concern is its movement within a continuum between aural and mimetic discourse,[140] and the subsequent varying perceptions and interpretations of the piece's sound materials by the listener.

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[137] A studio reduction and binaural version are included in the portfolio.

[138] *Impure Carbon* could be to some degree aligned with Xenakis' piece *Concret PH*, due to the primary recorded source materials being burning charcoal. According to Di Scipio's (1997) description of Xenakis' compositional methods, the compositional focus of *Impure Carbon* is distinctly different to *Concret PH*. The restructuring of materials by Xenakis is undertaken very much on a micro level, with detailed editing of each impulse, and subsequent reconstruction. In *Impure Carbon* the intrinsic rhythms of the source recordings are retained, developed, extended and abstracted. See Di Scipio (1997), pp. 168. Also Xenakis, I. (2000), *Concrete PH* (1958). On "Electronic Music". EMF Media.

[139] As described by Emmerson (1986), pp. 17.

[140] Terms discussed by Emmerson (1986), and extended in 4.2.

By deliberately removing the visual clues as to the cause of the sounds, indeed by removing or reducing visual stimulation of any kind, the composer is almost challenging the listener to re-create, if not an apparent cause, then at least an associated image to 'accompany' the music.[141]

The removal of not only visual cues regarding the sound source, but also explicit reference to the primary sound source in the programme notes is an attempt to heighten the level of ambiguity, and allow varied representations of the materials, offering differing listening perspectives and interpretations.

Impure Representations

John Young's identification of three perspectives on the effects of sound transformation on sound image are particularly relevant to the work. These are:

(1) The potential via signal processing to stimulate alterations to our perception of sound image. This includes the way a listener might interpret the physical nature and behaviour of sound sources.

(2) The potential for transformation processes to offer a means to mediate between purely 'spectromorphologically' based and 'referential' discourse carrying with them the potential for hybrid sound designs in which sound identities may interact with and influence each other.

(3) The capacity of a sound image to function as a structural catalyst and formal anchor.[142]

Reference to the term 'impure' in the title of the piece relates to a number of sonic and aesthetic qualities of the work. The modulating levels of impurity, varying degrees of abstraction, and shifting ambiguities and perspectives of the sonic materials are explored as key features of the piece. The perceptual distortion of the materials is intended to dislocate them. The modulating levels of impurity discussed can be directly related to Emmerson's theories and discussion on the continuum between the poles of aural and mimetic discourse, and ideas presented in 4.2.

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[141] Emmerson (1986), pp. 18.

[142] Young (2007), pp. 28-29.

Impure Carbon presents the listener with a variety of perceptual distortions of the source materials, yet allows some insight into their origins and environmental context.[143] Shifts in discourse and changing relationships of the materials are structural features of the work. The piece explores the skewing of the sound image[144] and therefore the listener's perceptual experience. The term *skew* having interpretations and connotations relating to obliqueness, being distorted or biased in meaning or effect, and the placement of an object at an angle.[145]

The piece allows its primary source to reveal itself in varying degrees as the structure unfolds, with the raw materials being explicitly revealed during the middle section of the work. This attempts to enhance the listener's awareness of both the source and environment, encouraging source bonding,[146] suggesting renewed relationships between the transformed ambiguous materials and the unprocessed abstracted materials. These shifts in perspective and relationships between the real and imaginary are evident throughout the piece. Extremities are presented, but a "point closer to reality" reveals itself later in the work. This approach is relevant to Barrett's (2002) comments on "extremities" (or perceptual contrast), but differs in its structural form.

> From a compositional point of view one can regard sound development as limited by the extremities of a possible sound transformation. If the transformations are based on the distortion of real-world images, a starting point closer to reality will expand the extremities of the transformation.[147]

Trevor Wishart's definition of the term *landscape* is also useful here. He defines landscape within the context of electroacoustic music as "the source from which we *imagine* the sounds to come".[148] The gradual unveiling of the burning charcoal and following departure into an abstract realm plays with this idea of a mental image of the source.

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[143] Analysis and positioning of *Impure Carbon* within any perceptual continuum may be more successfully achieved by the listener, with only their personal perceptual aural experiences of a work influencing interpretation and classification within a perceptual continuum. The composer is influenced to some degree through inherent knowledge and understanding of the source, the compositional process and treatment of the materials. Therefore as the composer, comments on positioning and movement within any perceptual continuum can only be from the perspective of intention, not reception. See Weale (2006).

[144] Sound image is defined by John Young as "a term used to define both the associative and referential aspects of sound, including recognition of realistic objects and actions as well as illusory figures and forms associated with electroacoustically transformed or re-shaped sound materials." Young (2007), pp. 25.

[145] The term therefore seems particularly apt in describing the perceptual preoccupations of the piece.

[146] Paul Rudy agrees with Jonty Harrison in the assertion that "the beauty of sound is not only in its spectral qualities, but also in its recognition, ripe with associations." Rudy (2007), pp. 12.

[147] Barrett (2002), pp. 318.

[148] Wishart (1986), pp. 43.

The environment in which the primary materials were recorded is also significant to the spatial and sonic landscape.[149] Bird song, bird flight and reverberation contribute to the aural landscape, and provide a sense of depth and space that contrasts the close proximity of the burning charcoal. The spatial richness of the source recording provided by the sense of distance between the foreground and background materials is further enriched by sparks and propelled matter energetically moving in multiple directions in imaginary space.

The sharp rhythmic qualities of the burning charcoal, and its disintegration provide rich percussive syncopations that are a feature of the work. Punctuating percussive burning materials, and the sounds of birds beating wings are used as structural transition devices.

The raw and transformed charcoal materials are augmented with additional materials, some of which are from purely electronic sources. These are on occasion suggestive of the natural sounds heard in the work, establishing and reinforcing the more abstract and ambiguous elements of the piece. The acoustic and electronic derived resonant tones recontextualise the mimetic elements, on occasion transporting the sonic space to a semi-musical realm. The juxtaposition of the resonant tones with the charcoal materials provides an added dimension of ambiguity through context.[150]

Notes on Technique

A close microphone technique was adopted for a close proximity perspective. The intimacy of the recording allowing the capture of minute details of the burning charcoal, as well as accentuating the sense of depth and space from the distant, yet still quite prominently heard birds. The surface that the stereo microphone was placed upon has a notable effect on the sonic qualities of the recording, with the microphone being placed upon a metal grill close to the burning charcoal. As a result, lower metallic resonances are heard that respond to the physicality of the burning materials.

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[149] John Young's comments are relevant here: "The recorded 'scene' provides a low-level reference – a window on a real event which has a documentary connection with lived experience that in a sense cannot be reduced, although it can be influenced by, for example, details of recording focus determining the rhythm of presentation and perspectives on how we are being offered the scene. So then if a more abstracted sound world is developed around this using electroacoustic transformation tools, we have in the real-world sound event a groundwork for meaning." Young (2004), pp. 9.

[150] As discussed by Rudy (2007).

Final Comments

The piece presents the sound materials within an imaginary space, and does not attempt a *pure* representation of the primary source abstracted from the environment in which sound was captured. During the composition process, the treatment of sound is significantly influenced by the composer's individual responses to the materials at various stages of composition. This occurred from the outset, from the conception and recording of the source, material selection, transformation processes, and structuring of the work.