
Book reviews

Christopher Cox and Daniel Warner (eds.), *Audio Culture: Readings in Modern Music*. Continuum, New York, 2004. xvii + 454 pp. ISBN 0-8264-1615-2. \$19.95/£12.99

Audio Culture is a book of selected writings from musicians, music theorists, and the occasional slightly unexpected guest specialised in other fields. Many of the selections are pertinent to the subject areas of *Organised Sound*. After its introductory matter, the book quickly settles into a pattern of sections that commence with two pages of intriguing, relevant short citations, intellectual soundbytes, as it were. This is followed by a two-page editorial introduction to the section and then anywhere between four and eleven texts relevant to the section's theme. There are two parts, theory and practice, that create a framework for the volume's nine sections.

What is fascinating about such books of collected writings is the inevitability that some readers will contemplate whom the book's editor(s) left out, by intention or lack of acquaintance. I shall spare you my choices. Once one gets over this initial detour, there's much to enjoy in this volume. *Organised Sound* readers might have already read some of the fifty-seven texts included here. However, I would think that only a few will have encountered the majority. All but one have been previously published. Hats off to the editors who were able to gain permission to print so many pre-published texts whether in their original or abridged form.

The nine sections bear the following titles: Music and its Others; Noise, Sound Silence; Modes of Listening; Music in the Age of Electronic (Re)production; The Open Work; Experimental Musics; Improvised Musics; Minimalisms; DJ Culture; and Electronic Music and Electronica. Themes concerning music technology can be found in all sections, although obviously in some more than others, as the book concerns a wide breadth of contemporary musics (to use the editors' plural).

This breadth is a very good thing. In the style of David Toop, Mark Prendergast and others, what makes this volume particularly satisfying is its ability to look across the pop/art music hi/lo cultural divides casually. Several authors have no difficulty in writing about artists associated with both musical worlds. I have often wondered whether some of these developments might call for a rethink in terms of musical/sonic art categorisation. This book offers many contributions that illustrate this combination of vision and eclecticism. In the editors' introduction, this point is made quite clear: 'It will have been noticed that what we are calling "contemporary music" or "modern music" has a peculiar character. Though it cuts across classical music, jazz, rock, reggae, and dance music, it is resolutely avant-gardist in

character and all but ignores the more mainstream inhabitations of these genres' (p. xvi). This takes place within the following context: 'Over the past half-century, a new audio culture has emerged, a culture of musicians, composers, sound artists, scholars, and listeners attentive to sonic substance, the act of listening, and the creative possibilities of sound recording, playback, and transmission. The culture of the ear has become particularly prominent in the last decade' (p. xiv).

The compilers have looked into some interesting corners for their selection of authors, including the likes of Jacques Attali, Marshall McLuhan, Glenn Gould, Umberto Eco, László Maholy-Nagy and Jacques Barzun. Those targeted for short citation include more unexpected figures, demonstrating profound understanding of the theme at hand. This leads to many surprises and, in some cases, humorous discoveries.

All themes include music criticism as well as artists' statements, providing a well-balanced approach. I can imagine how difficult it must have been in some cases to (heavily) reduce original material to fit the scope of this volume; nevertheless, all original sources are found at the beginning of the book. The end matter includes a very useful discography and bibliography, as well as a glossary and chronology. These are clearly not hugely rigorous compilations as befits a volume of this nature. Still, they will prove useful to most readers given the breadth of subjects present.

To provide a brief example, the section on Minimalisms commences with Susan McClary's 'Rap, minimalism, and structures of time in late twentieth-century culture'. In this article she takes a fairly good swipe at Adorno (who is present elsewhere in the volume). This is due to her support of Christopher Small's view concerning people's inherent appreciation of recycling in Black music history. In this way, she makes a strong statement in support of repetition in music, a view that is distant from Adorno's desires. The remainder of this section contains a useful definitional contribution by Kyle Gann, 'Thankless attempts at a definition of minimalism' – more a summation than an attempt to define this body of work in a sentence, which is followed by a statement by Steve Reich, a small part of Wim Mertens' key text in this area, Tony Conrad's discussion of Reich's *Four Violins* and finally Philip Sherburne's 'Digital Discipline: minimalism in house and techno'. One clearly sees how scholarly and artistic writing are conjoined, how art and pop move seamlessly across borders.

Only one text has been specially translated for this volume and is worthy of note. Pierre Schaeffer's 'Acousmatics' is an extract from his famous *Traité des objets musicaux*

(Paris: Seuil, 1966), one of few English translations from this important treatise, not to mention author. The only other translation included, from Stockhausen, will form part of a new series of his texts to be published shortly; this text has previously appeared in another translation.

As this publisher was new to me, I took a look at its current list. They seem to represent for book publishers what *The Wire* does for music journals, be it with more scholarly clout. I therefore not only recommend this book to people looking for think-alikes, historical precedents and/or texts for their students, the Continuum catalogue might be of use to several *Organised Sound* readers as well.

Leigh Landy

Peter Utz, *Introduction to Audio*. A-R Editions, Middleton, WI, 2003. xii + 268 pp. ISBN 0-89579-512-4. \$36.95

Introduction to Audio is written by Peter Utz and published as part of the A-R Editions Computer Music and Digital Audio Series. It is written in a light-hearted and jaunty style with plenty of jokes and funny drawings that may help some readers to bear the otherwise difficult process of reading about basic audio principles. The book is 263 pages long and covers topics from basic acoustics, through the principles of recording and mixing equipment to production techniques and editing processes. It is claimed that it is aimed at readers such as music students who will eventually be recording or performing their own music, students taking their first course toward a career working in a TV or audio studio, or 'hobbyists who enjoy diddling with gadgets', among others.

The book gives an introduction to a number of different aspects of audio. I found myself quite concerned, however, about the number of places where technical inaccuracy crept in. These probably arose through attempts at presenting simple explanations, but the results are quite unsatisfactory in places. This is not to say that everything in the book is unsatisfactory – far from it, there is quite a lot of useful material here for the person who comes to the topic as a novice, who simply wants to get some equipment to work, for example. My dissatisfaction lies with an oversimplification that verges on the unacceptable, or perhaps it is just the excessive generalisation in some instances.

On page four, for example, there is a reference to the topic of harmonics under the section on 'audio frequency'. Here it is suggested that 'another kind of frequency is called a harmonic, which is a multiple . . . of the original frequency'. The text in the following sentences is written in such a way as to imply that the hissing of air coming from a singer's mouth and the 's' sounds from her teeth are harmonics, whereas in fact they are mainly noise, having little or nothing in the way of tonal components. This is a relatively trivial matter but there is worse to come in the following section on loudness, which thoroughly confuses the terms 'loudness', 'power', 'level' and 'volume', each of which should have a specific meaning. First of all it is said that 'when you go up three decibels in sound level, you are doubling the volume of the sound' (here the author is really talking about *power*). A few sentences later it is said that 'it takes a 6 dB to 10 dB increase in sound . . . before your ear perceives a doubling in volume' (here he is really talking about perceived *loudness*). A short

while later it is correctly stated: 'just remember this: three decibels doubles the power of the sound'. Over the page things get quite confusing again with a table strangely entitled 'Loudness in sound volume compared with decibels', in which a column labelled 'comparative power of the sound volume' shows a factor of ten corresponding to a change of 20 dB. In fact this relates to sound pressure level, not power (where a factor of ten is equivalent to a change of 10 dB, as the author stated on the previous page), so the student that really wanted to understand these things would be more than a little baffled by now.

Technically there are further problems, such as the suggestion on page forty-nine that FM wireless microphones (in contrast to UHF and VHF models) are primarily toys. I think I can see what the author is trying to say by the context: he is suggesting that systems operating in the FM radio band – probably Band II – are often not much more than toys (and probably illegal in many countries), but the text is misleading in its effect. It confuses a modulation method with a radio frequency band. FM (frequency modulation) is a modulation method that most high quality wireless microphone systems use, including those that operate in the UHF and VHF ranges, so it is not FM that is the problem at all.

Operationally, there are some rather sweeping statements, such as the one on page ten that claims professionals go to great lengths to record direct sound ('wheat') without reverberation ('chaff'), adding the reverberation later to 'make things sound natural'. While this might be true for some kinds of pop recording, what about classical recordings? A lot of classical recording aims to achieve precisely the opposite to what is claimed, in other words a judicious blend of natural reverberation and direct sound, picked up by a small number of microphones at some distance from the sources.

A further statement on page seventy-one concerns the use of meters for controlling mixing levels, saying that the meter serves to guide you to the 'perfect' volume (itself a worrying statement). 'Most of the time', it is said, 'you should try to keep the meter up as close to the 100% mark as possible'. While that might be good advice for heavily compressed *Motorhead*-style guitar tracks, it is unlikely to be good advice for broadcast level control where the important point is to achieve the appropriate relative levels between programmes, or many other types of music recording where a VU meter's needle will spend substantial proportions of its time near the bottom of the scale. Again, while the basic idea behind what is stated in this section is probably reasonable enough (maximum levels should not peak so high that they cause distortion, or so low that noise is a problem), some of the statements are just too sweeping for comfort. A lot depends on the context and application of metering.

Things don't improve very much in the chapter on digital audio either, with the process of sampling shown in an example in Figure 11.2. If the numbers on the horizontal axis are supposed to represent the sample instants (they are labelled 'number of samples' which makes this unclear), then it is very hard to see why the samples should have the values shown. Perhaps the sample instants are in the centres of the gradations, but that would still lead to a different answer from the one shown. It's also said that MPEG is used primarily for video and comes in 'three flavours', MPEG-1

having high compression and being used for low-quality audio and video, MPEG-2 having low compression and MPEG-4 having very high compression, all of which is bunkum in relation to the audio parts of the standards. It's nothing like as straightforward as that for audio (the topic of the book), because all the MPEG standards offer a range of audio data rates and MPEG-2 introduced the option for substantially *lower* audio data rates than MPEG-1 by enabling reduced sampling rate modes, as well as higher rates for surround sound encoding. MPEG-4 covers the whole range of data rates from the very lowest rate forms of speech coding to very high quality modes using AAC (advanced audio coding), with scalable options. MPEG-1 is in fact used widely for high quality audio, in applications such as digital radio.

'Audio is fun', the author says in the Preface, 'Life should be fun. Books should also be fun. Although audio is a subject worthy of some serious heavy thinking, this book is written with a light-hearted, humorous style (at least, I thought my jokes were funny)'. This sets the tone for the whole book. There is no particular reason why books on audio should have a serious style, although I have a personal preference for student textbooks being written in a serious manner. What is hard to accept, however, is a book that in the process of attempting to be simple, approachable and fun proceeds to relate quite a lot of inaccurate and confusing explanations. Fun is no excuse for inaccuracy (at least not in this context). Unfortunately, there is just too much of both, in my opinion, for the book to be placed high on the reading lists of university courses in music technology or audio.

Francis Rumsey

Stéphane Roy, *L'analyse des musiques électroacoustiques: Modèles et propositions* (preface by J. J. Nattiez). L'Harmattan, Paris, 2003. 589 pp. ISBN 2-7475-5609-3

This substantial volume is the long-awaited publication of Stéphane Roy's dissertation: his second doctorate, as one discovers in the preface written by his supervisor in Montreal, Jean-Jacques Nattiez. The Anglophone world will only be acquainted with Roy's article in the first issue of *Organised Sound* (1(1): 29–41) analysing *Points de fuite* by Francis Dhomont that includes some of his dissertation results, and a second analytical article in the themed issue of the *Journal of New Music Research* (27(1–2): 165–84) investigating François Bayle's *Ombres blanches*.

Roy works very much within the frameworks of his masters, focusing on acousmatic works influenced by Schaefferian theory more than others. He uses this terminology to describe the works, and profits by Nattiez's recent discoveries to find appropriate ways of studying electroacoustic music from the poietic, neutral and aesthetic levels. Roy's approach is one based on *l'analyse au niveau neutre* (abbreviated ANN – analysis at the neutral level). All analyses in the second part of this book, following a description of their context, commence with the creation of a score, something often identified with the neutral level. Please note: this neutral level is one based on reduced listening. The identification of sound sources takes place most rarely in the book and is never treated as part of his analyses.

An aspect that is perhaps unexpected here is Roy's rejection of the sonogram or acousmographie as a point of departure at the neutral level. This is somewhat at odds with much of today's analysis literature, as was discussed in a recent book review concerning the Thomas Licata analysis volume (*Organised Sound* 9(1): 115–16). Roy's reasoning is that acoustics or psychoacoustics-based research tends to base itself on the isolation of parameters. In his view, sound parameters interfere with one another too much in a complex synergy to be treated separately as far as electroacoustic music analysis is concerned (p. 61). Roy leaves the impression that a sonogram can be used to verify a score, as it is a form of dictation. As with Nattiez, Roy believes that ANN research can inform a better understanding of the production of a work, its poietic side as well as the listening, that is, aesthetic experience.

The book is clearly divided into two parts. After the preface, the first part focuses on the pros and cons of a variety of analysis methodologies from the author's perspective. It consists of five chapters, and all but the final one introduces a number of analysis methodologies for context. The first of the chapters does an excellent job summarising Schaeffer's theory in *ca.* twenty pages; however, given the enormous amount of theory he is filtering – it took Michel Chion (*Guide des objets sonores*) an entire volume to introduce Schaefferian terminology alone – one ends up with the key principles Roy will return to and just a selection of the huge pool of terms that Schaeffer introduced, particularly in his *Traité des objets musicaux*. Chapter 2 investigates four analytical approaches that are either based on 'conduits of production' or 'conduits of listening', focusing on the analysts' articles that have specifically treated electroacoustic works as examples. What holds these approaches together is their interest at the sound event level more than macro-level analysis. These include Nattiez's treatment of Bernard Parmegiani's *De Natura Sonorum*, a poietic description based on the composer's observations of the piece. Nattiez's essay seemed quite unusual to me at the time it appeared, as he seemed to place his highly respected knowledge of semiotics aside to an extent. Christiane ten Hoopen's approach is based on 'polarised listening strategies' (basically a confrontation between reduced listening analysis in which source and causality are taken into account). She demonstrates this approach in an analysis of Parmegiani's *Aquatisme*. François Delalande is one of the best-known spokespersons for aesthetic analysis. His discussion of *Someil*, part of *Variations pour une porte et un soupir* by Pierre Henry, which appeared in the same JNMR issues as Roy's article mentioned above, forms the point of departure here. The final entry of the four is based on the wonderful CD-ROM prepared by the Groupe de Recherches Musicales in collaboration with Éditions Hyptique.net, called *La musique électroacoustique*. In this unique publication, separated into three sections, *faire*, *connaître* and *entendre*, there is an analysis of François Bayle's *La langue inconnue*, a collaborative effort of Jean-Christophe Thomas, Annette Vande Gorne and Philippe Mion. They approach the same work from very different angles (poietic, semiotic-aesthetic, aesthetic). As stated, Roy presents all of these approaches, along with others in the following two chapters, and includes his comments on their pertinence as far as ANN is concerned.

Chapter 3 continues with four cases that Roy considers to be inspired by phonology: first he discusses Henri Chiarucci's structural analysis of Karlheinz Stockhausen's *Carré*. This is followed by an examination of Robert Cogan's image approach to musical sound involving, as Nattiez, several binary oppositions. Roy chooses Cogan's discussion of Milton Babbitt's *Ensembles for Synthesizer* as a case in point. Wayne Slawson's study in sound colour follows, which relies heavily on formant analysis and, finally, Francesco Giomi and Marco Ligabue's aesthetic-cognitive analysis is introduced here, including a discussion of Franco Evangelisti's *Incontri di Fasce Sonore*. Their methodology involves a five-phased analysis evolving from the intuitive score to sound material, behaviour, coherence and particular events. Chapter 4 continues with three more structure-based approaches. John Dack's approach involves the use of Schaefferian typo-morphology terminology at the point where composers' intention and listener reception meet. Dack's study includes an investigation of Stockhausen's *Kontakte*. Denis Smalley's well-known theory of spectromorphology is introduced quite separately from Schaeffer, even though the one led to the other. This is followed by Andrew Lewis's statistical analysis of morphologies and profiles focusing on Francis Dhomont's *Novars*. Part 1 concludes in chapter 5 with Roy's comparative analysis of all of these approaches in terms of their potential use from his chosen ANN point of view.

Part 2 is where Roy's analyses take place. There are five in total, all treating Dhomont's *Points de fuite*. It is interesting to note that not only electroacoustic analysis methodologies are placed under the microscope here, but a small number of methodologies specifically created for tonal music are as well. Roy writes: 'The ANN provides an inventory of information concerning the work whereby the analyst is provided with means through which both poietic and aesthetic analysis can take place. The ANN represents a veritable methodological bridge between the two poles' (p. 199). The first analysis is based on his constructing his main score, one founded in Gestalt theory. His goal is to cut the work into morphological units from which he can generate his transcription. The following four analyses are taken from existent methodologies, half of which were developed for tonal music and have perhaps never been applied to the electroacoustic field. The first, informed by what Roy calls Nicolas Ruwet's 'paradigmatic analysis', involves the identification of several types of transformation which take place within the work using what Ruwet calls parametric and non-parametric elements. Again, a score is generated solely based on this system that uses notation that goes beyond that which was used in Roy's own score. The functional analysis that follows seems to be primarily Schaefferian although the influences of Delalande and Smalley can also be detected. The last two generative and implicative analyses are based on the work of Fred Lerdahl and Ray Jackendoff on the one hand, and Leonard Meyer on the other. It is here where protocols from the world of tonal music have been called upon and projected onto a timbral field. Again, using notation relevant to these two extremely different approaches, two new scores are generated. The final chapter makes the grand comparison finding relevant aspects from each approach in terms of connecting the ANN with poietic and aesthetic analysis.

Roy is therefore able to apply each of these approaches to one and the same pieces whilst identifying how aspects of each can be used to contribute to an ANN, therefore suggesting that not one analysis approach offers sufficient breadth in terms of further poetic and/or aesthetic application. That said, readers will be aware that analysis can also be executed at detail level. This is not Roy's key goal. He is more interested in demonstrating the complexity of analysis for more general purposes.

The paragraphs above hardly do justice to this massive project of Roy's, but at least offer the reader an overview of the various sources of contextual and analytical inspiration he takes forward. The book is consistent from beginning to end, but it reminds me of my first impression of the great books by Iannis Xenakis. If you don't accept the premise of the author – namely that music = drama + numbers in the case of Xenakis; ANN on the basis of reduced listening is the key to electroacoustic music analysis in the case of Roy – the rest does seem to sink or swim with your solidarity with these views. As someone very strongly supporting source recognition and context, I am uncertain whether this massive comparative methodology is sufficient. Perhaps someone should pick up where Roy leaves off, as he has certainly covered his area as completely as possible. This post-Roy analyst would then include the opposite of reduced listening: heightened listening as part of the analytical experience.

Leigh Landy

Timothy Warner, *Pop Music – Technology and Creativity*. Ashgate, Aldershot, 2003. 172 pp. ISBN 0-7546-3131-1. RRP 27 Euros

The subject of *Pop Music – Technology and Creativity* is in one of my own fields of interest: the creative mechanisms behind the production of pop music, and especially the role of technology in this. The book limits itself to the work of Trevor Horn, and includes seven vast analyses of productions of Horn from the period 1979–1985. The writer, Timothy Warner – Lecturer in Popular Music at the University of Salford, UK – states in his introduction that he aims primarily at the artistic aspects of pop music, not particularly the sociological or historical ones. This suggests an insight into the creative processes seen from the viewpoint of the producer of pop music.

Warner starts off in the first part by defining the methods he will use for analysing the productions of Horn other than through traditional text-oriented treatment. People who produce pop music usually skip the score, and listen during the creative process directly to the sounding result through the use of studio technology, therefore he chooses to focus on the record. The question is whether this leads to a substantial insight into the creative aspects of the production of pop music and its relation to technology, as this is essentially a process. In the context of producing pop music, technology is often used, consciously or unconsciously, to set up a production process which leads more or less in the direction of where one wants to end up. Useful musical material which pops up during this process is incorporated in the work, and frequently even defines the musical identity of it – the genesis of the gated reverb sound of Phil Collins is a famous

example. The production processes themselves are therefore an important factor in the eventual sounding result. Furthermore, Warner defines a distinction between pop music and rock. He acquires this on the basis of authenticity, among other things by means of live performance. This distinction occurs to me as rather forced; even Warner himself states that it is typically English, since American writers hardly let this distinction play a role. I think this also changes with time, especially nowadays where the distinction between pop music and rock is weak. Warner uses his distinction to prove the creative influence of producers on pop music, but it does not seem to be a strong assumption.

In the second part of the book, Warner describes an important part of the repertoire of Horn and the context within which Horn operates, his production company ZTT. Warner analyses the sounding result of several songs as they appear on different records, consistently following his original setup, i.e. without transcriptions. The link between the sounding result and used technology is explained here, Horn was, for example, one of the first who worked with Fairlight and Synclavier systems. Next to that Warner makes vast descriptions of the context within which the productions came about, the relation of ZTT to acts such as Frankie Goes to Hollywood and Malcolm McLaren. However, in the seven analyses the relation between the

creative *processes* and technology in the studio never really becomes explicit. This generally stays at a level of 'the recording studio (. . .) enables producer, engineer and musicians to go over the material again and again, until the ideal timbre, performance and context is found for each element'. The question which then immediately rises is: What is 'ideal'? How is the decision made whether something is 'ideal'? What is the role of technology in making those decisions? How do they escape the loop of going over the material again and again? The planning of the production process, and the way assessments are made within those processes: there lies a large part of the creative aspects of pop music production. Unfortunately, these processes are not worked out in the analyses or conclusion of Warner's book.

In the final conclusion, Warner mainly deals with Trevor Horn's repertoire in relation to technology, and the context of the works. The processes involved play a minor role, so the promise of insight into the creative aspects of music production in relation to technology is not fully delivered. Although this is a pity, the book contains many insights concerning the work of Horn. And luckily the Appendix, a transcription of Warner's interview with Horn, still opens up a lot of information on the creative processes of Trevor Horn in the studio.

Jeroen van Iterson