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The Fundamentals of Sonic Art & Sound Design

Tony Gibbs

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Sonic Art & Sound Design

An AVA Book
Published by AVA Publishing SA
Rue des Fontenailles 16
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Switzerland
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Distributed by Thames & Hudson (ex-North America)
181a High Holborn
London WC1V 7QX
United Kingdom
Tel: +44 20 7845 5000
Fax: +44 20 7845 5055
Email: sales@thameshudson.co.uk
www.thamesandhudson.com

Distributed in the USA & Canada by:
Watson-Guptill Publications
770 Broadway
New York, New York 10003
USA
Fax: +1-646-654-5487
Email: info@watsonguptill.com
www.watsonguptill.com

English Language Support Office
AVA Publishing (UK) Ltd.
Tel: +44 1903 204 455
Email: enquiries@avabooks.co.uk

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ISBN 2-940373-49-3 and 978-2-940373-49-9

10 9 8 7 6 5 4 3 2 1

Design by Karen Wilks

Production by AVA Book Production Pte. Ltd., Singapore
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Fax: +65 6259 9830
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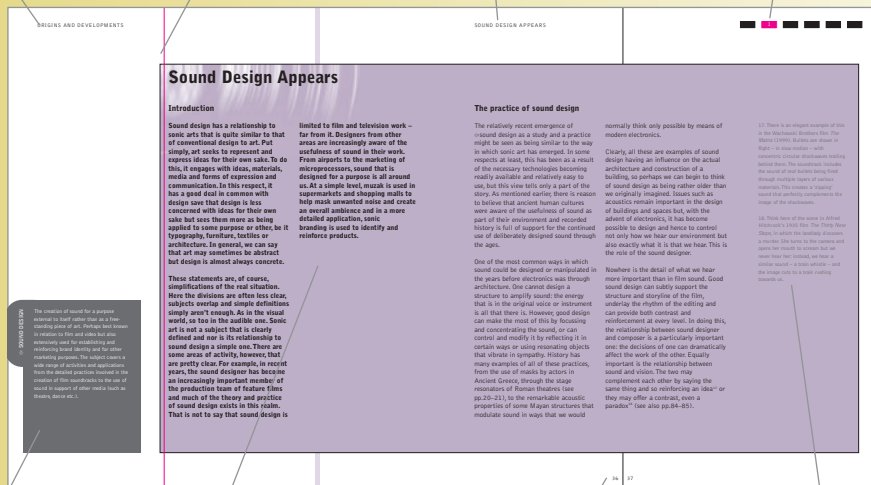
How to get the most out of this book


Chapter titles are shown in the top left-hand corner of each spread.

Pink vertical lines indicate the beginning of each new essay.

Essay titles are shown in the top left-hand corner of each right-hand page.

Chapter numbers are shown in the top right-hand corner of each spread.



'Amplifications' of terms identified in the text with an amplification symbol  can be found in dark grey boxes.

Introductions to each essay appear in bold.

Page numbers are shown at the bottom of each right-hand page.

Footnotes are referenced numerically and appear in grey. There are no footnotes in Chapter 2.

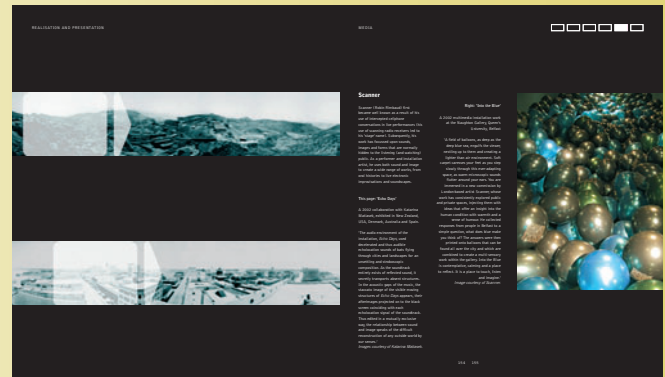
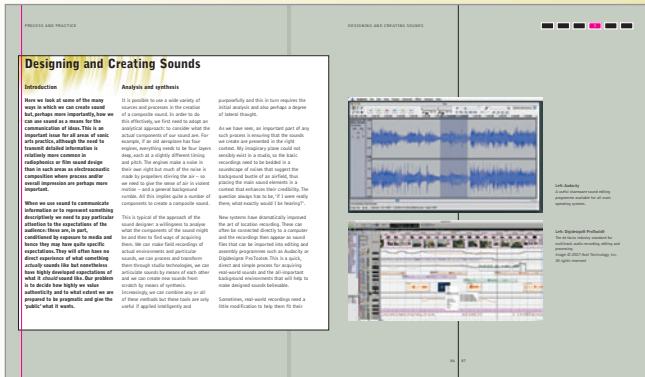
Chapter 1.

Discusses the origins and development of the subject. The text is supported by artists' quotations and features a timeline of events important to sonic art and sound design.



Chapter 2.

Features illustrated artist interviews, outlining their biographies and their approach to their work, thus demonstrating the broad scope of the subject.



Chapter 3.

Discusses the processes used for making and creating works of sonic art and sound design, and is illustrated by diagrams, screengrabs and equipment, which will familiarise the reader with the available tools.

Chapter 4.

Discusses the processes used to show and display work. Each essay is followed by a selection of photographs of artists' work. Accompanied by extended captions, it is hoped that these displays will inspire the reader in his or her own work.

Introduction

Looking for a definition

Sonic art is a new art form, or rather, forms. As we shall see, it can encompass a wide range of activities, perhaps wider than almost any other art form. It is an unusual case, based upon a medium that has traditionally been regarded as inferior and subservient to other creative or expressive forms. To many composers, sound is simply a means whereby ideas of musical structure and harmony may be expressed: it has little intrinsic value. Likewise to many filmmakers, sound is merely an adjunct to plot and photography and has only a supportive role. However, times have changed and sound now asserts itself as a viable medium in its own right. It can no longer be relegated to a subordinate role, and now demands to be seen as one amongst equals: as a new and distinct medium and potential art form.

Finding the definition of a newly emerged art form is rarely an easy process. There are a number of reasons for this. Firstly, the form itself is often unclear: its advocates usually know where the central focus of the subject lies, but its borders – the points at which it contacts and overlaps other more established forms –

are often far harder to define. Secondly, our new form may encounter resistance to the idea of its own very existence. This can come from a number of sources and for a number of reasons.

Often, the new form originates elsewhere, grows as part of a more established one and, after acquiring an identity of its own, now demands to be recognised independently. The parent genre is often reluctant to let its offspring go its own way, maybe believing that the child is not yet grown up enough to survive the rough-and-tumble of the outside world. Perhaps we should be fair to this point of view; in the case of sonic art, some would say that the child is still a rather difficult adolescent and so the parent's view is understandable even if, from the inside, we believe it to be misguided. Less sympathetic outsiders may take this view further by simply dismissing the fledgling genre as an immature sub-set of something larger and better recognised and by saying that it has no real identity of its own.

Sonic art has encountered all these problems and more besides. The



epiphanous moment when the English composer, Trevor Wishart, declared 'Electroacoustic Music is dead – long live Sonic Art'¹ over-simplifies the issue by appearing to suggest that sonic art is simply the offspring of a highly specialised musical activity. In itself, this may be true but his statement tells only a small fraction of the whole story. Sonic art covers a huge range of creative activities, many of which have absolutely nothing to do with music save that, like music, the audience experiences the finished work by hearing it. In some respects it would be perfectly reasonable for our difficult child to round upon its parent (music) and to reverse the argument: all music is sonic art but (as we shall see later) not all sonic art is music! (See Simon Emmerson's comment on p.64.)

These then are just some of the difficulties that we encounter in trying to define what we mean by 'sonic art' or 'sound design'. We can at least make a convenient distinction between these two subjects, however, since we have the existing and well-understood distinctions between visual art and visual design to guide us, and the fact that our work is in

a different medium, makes relatively little difference here (see also p.38). To define sonic art in general is, unfortunately, a far less tractable issue. How, for example, can we distinguish between a 'conventional' artwork that happens to make a sound and a work of sound art, and will such a distinction be broadly applicable? I suggested earlier that we might be able to define the centre of our new subject but, since it comes from so many diverse disciplines, it seems to me that sonic art has not one but many centres. So can we give a useful answer at all?

Perhaps the best way to find out about our unruly adolescent is to observe what he does, study the company that he keeps and find out about his background, his parents and siblings. One of the most exciting things about sonic art is the huge size and diversity of the family: from fine art to performance, from film to interactive installations, from poetry to sculpture and, of course, not forgetting music, all these can be part of the multicultural society that is sonic art.

1. Wishart, T. (1996) 'Die elektroakustische Musik ist tot – lang lebe Sonic Art' in *Positionen* (No.29) pp.7–9 (tr. Gisela Nauck).

'THERE IS NO SUCH THING AS AN EMPTY SPACE OR AN EMPTY TIME. THERE IS ALWAYS SOMETHING TO SEE, SOMETHING TO HEAR. IN FACT, TRY AS WE MAY TO MAKE A SILENCE, WE CANNOT.'

JOHN CAGE, 'SILENCE'



What forms can sonic art take?

When we encounter a piece of sonic art, we may find ourselves in front of one of many types of work. Some will be highly interactive and possibly extremely technology-intensive whereas others will be relatively simple and, in a very broad sense, static. However physically static it may be, sound art cannot by its very nature be passive; with rare exceptions it must actively emit sound or at least have sound (which is itself active by definition) as its conceptual basis. Its active emission of sound can, as we shall see later, create problems in the presentation of the work, but it remains an inescapable aspect of the medium and this distinguishes it in some measure from more traditional art forms.

So does it follow that any artwork that has sound as its main 'outcome' will, by definition, be a work of sound art? There are many possible ways in which we can examine this problem and they lead to a variety of conclusions. My personal preference is to take the view that we should define the work by its intentions and by the conceptual thinking that informs it. Thus a work that seeks to communicate with its audience through

sound or be informed by ideas that are based upon sound would be a work of sonic art; by contrast, a work that happens to make sounds as a by-product of another activity (as many kinetic works do) or that has no conceptual reference to sound would not.

This is, of course, a very simple definition and has many potential flaws but will hopefully provide us with a useful starting point from which to consider the context in which the presentation of our work takes place. Most importantly, it begins the process of understanding the way in which an audience will experience and comprehend a type of work that may be, in some ways, physically familiar but which is conceptually new and different from other forms.

No single work can hope to provide a comprehensive and detailed approach to a subject that is so diverse and that has so many facets. In this book, we set out to introduce enquiring readers to the subjects of sonic arts and sound design, to show some of the activities that they embrace and, hopefully, to kindle an interest in these new and exciting areas.

Unlike many academic (and even artistic) subjects, there is no fixed 'syllabus' for our work. It will become apparent to readers that, while the centre of our subject is clear, its edges are less well defined: sonic art spills over into fine art, music, performance, ecology and many other areas. This means that what you have in your hands is not a textbook in the conventional sense; rather it could be thought of as a catalogue of ideas or a menu of possibilities. Above all, it is an invitation to enter and become part of a new and exciting world – one that *you* can help to define.



Origins and Developments



The relationship between art and technology is a fascinating and many-sided one. For some, the technology merely provides the tools with which to create the art while, for others, it suggests new possibilities and even provides the fundamental inspiration that drives and informs the entire creative process. Most works of sonic art use technologies to a greater or lesser extent although, as we shall see, the widely held presumption that this whole art form is critically dependent upon high technology (and computers in particular) is far from being universally true. What is certain, however, is that the evolution of sonic art as a distinct form has been very closely linked to the development of audio technologies and, in the following section, we will begin to explore this evolving relationship.

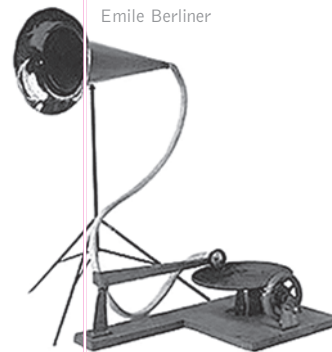
Greek amphitheatres designed to maximise audibility (see p.20)



Francis Bacon writes *New Atlantis* (see p.21)



Disk recording invented by Emile Berliner



Timeline

c. 25–45000 BC

c. 500 BC

c. 25 AD

1626

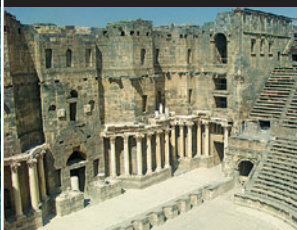
1877

1887

1896



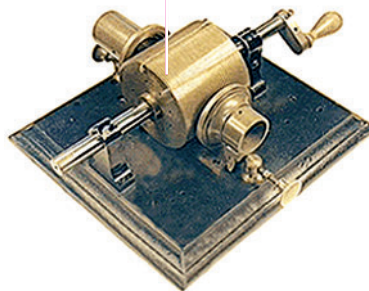
c. 25–45000 BC
First probable musical instruments



Roman theatres use acoustic technologies (see p.20)

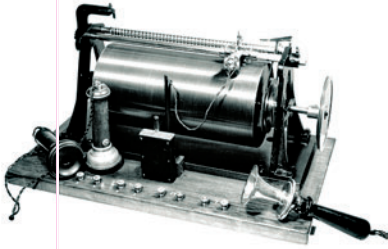


Marconi patents the radio transmitter



The Edison Phonograph – the first recording system (see page 24)

Valdemar Poulsen invents the 'Telegraphone' – the first magnetic recorder



Lev Termen (Leo Theremin) develops the Theremin



Talking pictures – premiere of *The Jazz Singer* (see p.25)



Invention of the jukebox

Russolo writes the *Art of Noises* manifesto (see pp.22–23)



First commercial radio station – KDKA in Pittsburgh USA (see p.25)



1898

1906

1913

1914

1920

1925

1927

1931

1933



The Edison Multiphone – the forerunner of the jukebox



First concert of *Intonarumori* in Milan (see p.23)

Electrically recorded disks appear



Abbey Road Studios open

ORIGINS AND DEVELOPMENTS

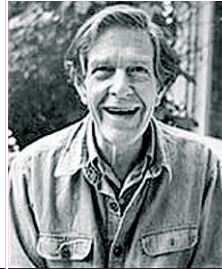
The LP record is marketed by Columbia



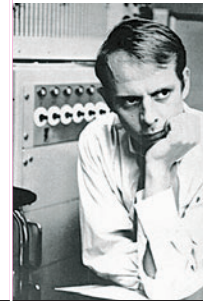
Robert Beyer and Werner Meyer-Eppler propose 'electronic music'

Pierre Henry and Pierre Schaeffer found the 'Groupe de Recherche de Musique Concrète' (see p.26)

Premiere of John Cage's '4'33"' given by David Tudor (see p.34)



Karlheinz Stockhausen composes *Kontakte*



1935

1947

1948

1949

1951

1952

1958

1959



AEG 'Magnetophon' – the first practical tape recorder premiered at Berlin Radio Fair (see p.25)



Pierre Schaeffer creates early 'Musique Concrète' work, *Étude aux chemins de fer* (see p.26)

West Deutsche Rundfunk opens electronic music studio in Cologne



The video recorder is developed by Ampex



Edgard Varèse's *Poème Électronique* multimedia work at Brussels World Fair (see pp. 30–31)

The stereo record is marketed



Robert Moog develops the Moog synthesiser



1964

The Beatles release *Revolver*



1966

'Cybernetic Serendipity' exhibition brings computer art to the UK public

1968

The laserdisk is announced by Sony



1972

1963

1965

1967

1969

Steve Reich composes tape works *Come Out* and *It's Gonna Rain* (see p.32)

The audio cassette is announced by Philips



The Beatles release *Sgt Pepper's Lonely Hearts Club Band*



John Cage creates *HPSCHD*, a five-hour multimedia work

French president Georges Pompidou initiates IRCAM under the direction of Pierre Boulez